

# Cancer in Thailand

*Vol. X, 2016-2018*

MINISTRY OF PUBLIC HEALTH

National Cancer Institute

Lampang Cancer Center

Ubon Ratchathani Cancer Center

Udon Thani Cancer Center

Lop Buri Cancer Center

Chon Buri Cancer Center

Surat Thani Cancer Center



MINISTRY OF HIGHER EDUCATION, SCIENCE,  
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# Cancer in Thailand Vol.X, 2016-2018



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ผลงานนี้ ใช้สัญญาอนุญาตของครีเอทีฟคอมมอนส์แบบ แสดงที่มา-ไม่ใช้เพื่อการค้า-อนุญาตแบบเดียวกัน 4.0 International

# Foreword



*The monograph “Cancer in Thailand Vol. X”, contains the available data on incidence and distribution of different cancers during 2016-2018, this monograph was published behind planning schedule because we received the mortality data quite late, and our country have the problem of Covid-19 pandemic.*

*This volume contains the data from 14 cancer registries including, Bangkok, Chaiyaphum, Chiang Mai, Chon Buri, KhonKaen, Lampang, Lamphun, Lop Buri, Rayong, Songkhla, Suphan Buri, Surat Thani, UbonRatchathani and Udon Thani, this account around 35.3% of population coverage. In addition, in this volume, we also provided the projection data of common cancers.*

*On behalf of the NCI and editors, I would like to thank all our collaborators for their help in providing the data presented in this volume. I would also like to express my gratitude to the devoted cancer registry staff in all cancer registries for the immense amount of work that has been done in preparing the statistics and graphics.*

*We do hope that the current volume provides a picture of the cancer situation in Thailand and will be useful for planning and monitoring our cancer control strategies as well as for different areas of cancer research.*

A handwritten signature in blue ink, reading "Jinda Rojanamatin". The signature is fluid and cursive.

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## Cancer in Thailand Vol.X, 2016-2018



# Chapter 1

Registry Procedure and Statistical Methods

## Registry Procedure and Statistical Methods

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The methods specific to each registry are described in the appendix. Briefly, data on cancer cases are collected from hospitals, laboratories and death certificates. The data collected for each cancer patient consist of registry number, name, residential address, date of birth, age, sex, date and method of diagnosis, topographic site, histology and extent of cancer, and vital status of cancer patient. The data collection in details may differ from one to another registry.

Copies of death certificates are collected from the Chief Medical Officer's Offices. All certificates of death are reviewed and matched with the incident case records of the registries. The cases with no matching record are tracked back to the data sources for relevant information. Cases unable to be traced are registered as diagnosed by death certificate only.

The primary site and histology of cancer are coded according to the ICD-O 3rd edition (Fritz *et al.*, 2000) and current the ICD-O 3rd edition First Revision. Second and subsequent primary cancers are also registered. A new registration number is given for each new primary and subsequent cancer as indicated by the 3-digit code as specified in the ICD-O manual. Cases of carcinoma in situ are registered but not included in the calculation of incidence rates. Those carcinoma in situ cases later become invasive cancers are registered as malignant and included in the calculation of incidence rates. The most valid basis of diagnosis is recorded for all registered cases.

All registered cases are followed up by passive and active procedures. Registered cases are matched with death certificates. For the remaining cases, follow up information was obtained by scrutiny of hospital records, postal enquiries, and through the network of health care system.

### Population denominators

The population denominators used for the calculation of rates were taken from the Population Projections report for Thailand 2010-2040 by the Population Projection Working Group, Office of the National Economic and Social Development Board, published in 2013 which provided annual estimate by age group and sex for each province in Thailand.

The annual populations at risk were calculated for the period 2016-2018 in each registry area. They are shown in the section of each particular registry. The populations of the whole country and the five regions of Thailand for the period 2016-2018 were also estimated from the Office of the National Economic and Social Development Board.

### National estimate

The data from the three Northern cancer registries of Chiang Mai, Lampang, Lamphun first pooled by adding together the cases and the person-years at risk from the three registries. The expected incidence cases of the whole Northern region were calculated by adjusting the pooled incidence cases by sex and age groups of the three cancer registries of the whole Northern region during 2016-2018 using the data from Ministry of Public Health. The same procedure was done in the Northeastern region by adding together cases and person-years at risk from Khon Kaen, Ubon Ratchathani, Udon Thani and Chaiyaphum. Chon Buri and Rayong were representatives of the Eastern region, while Lop Buri and Suphan Buri were representative of central region. The data of the Southern region was conducted from Songkhla and Surat Thani.

Then the age (five-year age groups) and sex specific rates for the five regions excluding Bangkok were calculated. When expected cases for the five regions and the actual cases of Bangkok were combined together, the expected number of cases and estimated ASRs for the period 2016-2018 by sex and site for the whole Kingdom of Thailand were finally obtained.

### **Crude incidence rate (CR)**

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

### **Age-specific incidence rate**

Age-specific incidence rate is the incidence rate in a specific age group. The age-specific rates are calculated by dividing the number of cancer cases in each five years age and sex structure of population in the age group multiplied by 100,000. The rates are expressed per 100,000 populations.

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

$N_i$  = Number of new cancers occurring in the age group

$P_i$  = Population of the age group

### **Age-standardized incidence rate (ASR)**

The age-standardized incidence rate is a summary measure of a rate that a population will have if it has a standard age structure. It is calculated first by estimating the age-specific incidence rates and applying these rates to the standard population. The world standard population is used in this book (O.M. JENSEN et al., 1991). It is also expressed per 100,000 populations. Standardization is necessary when comparing several populations that differ with respect to age because it has powerful influence on the risk of cancer

### **Cumulative rate**

The cumulative rate is the summation of the age-specific rates over each year of age from birth to a defined upper age limit. As age-specific incidence rates are usually computed for five-year age intervals, the cumulative rate is five times the sum of the age-specific rates calculated over the five-year age groups, assuming the age-specific rates are the same for all ages within the five-year age stratum (Bray, 2002).

### ***Quality control was carried out through the following indices:***

1. Percentage of morphologically verified cases (%MV): The percentage of cases where diagnosis was based on cytology or histology examination of tissue from primary site or from metastatic site, bone marrow, cytology and peripheral blood for leukemia.

2. Percentage of death certificate only cases (%DCO): The percentage of cases where diagnosis was based on information obtained from a death certificate.

# Chapter 2

## Cancer Incidence in Thailand

## Cancer Incidence in Thailand

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The first population-based cancer registry started in 1986 in Chiang Mai, followed by Khon Kaen in 1988, Bangkok in 1990 and Lampang in 1993. The first volume of Cancer in Thailand was published in 1993 with co-operation of the registries of Chiang Mai, Khon Kaen, the National Cancer Institute (Bangkok), and the International Agency for Research on Cancer (Vatanasapt et al., 1993). The second (Deerasamee et al., 1999) and third (Sriprachea, bronchus and lung et al., 2003) volumes were published in series

### Registration area

Thailand is located in Southeast Asia between latitudes 5:37 N and 20:27 N and between longitudes 97:22 E and 105:37 E, it is bordered to the north by Laos and Myanmar, to the east by Laos and Cambodia, to the south by the Gulf of Thailand and Malaysia, and to the west by the Andaman Sea and Myanmar. Its maritime boundaries include Vietnam in the Gulf of Thailand to the southeast and Indonesia and India in the Andaman Sea to the southwest. The total area is 513,120 square kilometers. The climate of the country as a whole is tropical and characterized by monsoons. Thailand is divided into 77 provinces, within five geographical regions: the Northern, Northeastern, Central, Eastern and Southern. Currently, we have 19 population-based cancer registries but in this volume we used the data from 14 cancer registries to calculate cancer incidence in Thailand. The geographic area cover 14 population-based cancer registries are shown in Figure A, the estimated population in each province by sex is shown in Table A and Mean annual age-standardized incidence rate (ASR) is shown in Table B

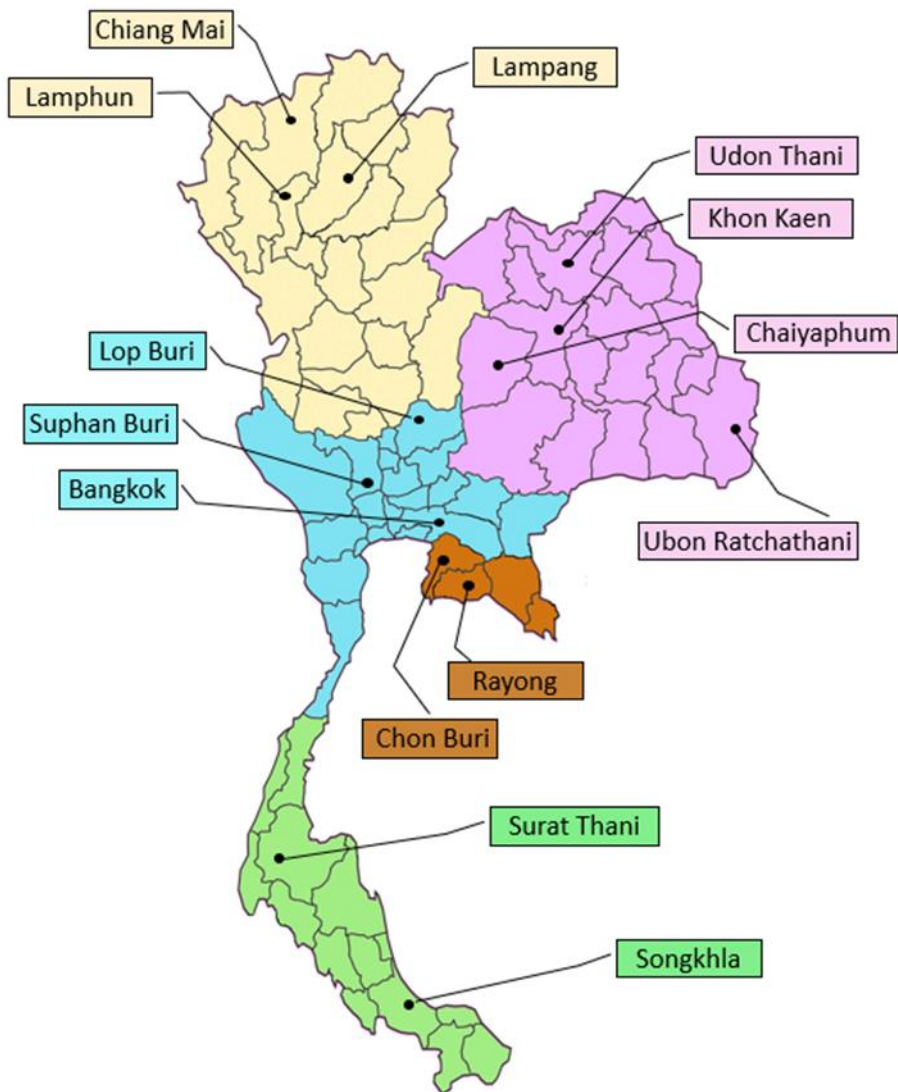
**Table A** Land area and estimated population in 2017 (2016-2018)

Provinces	Population Density (person / km <sup>2</sup> )	Land area (km <sup>2</sup> )	Estimated population Male	Estimated population Female
Chiang Mai	82.30	20,107	805,233	849,567
Lampang	58.34	12,534	359,133	372,133
Lamphun	89.26	4,505	194,400	207,733
Khon Kaen	158.08	10,886	829,133	891,733
Ubon Ratchathani	107.81	15,745	832,867	864,667
Udon Thani	106.36	11,730	607,367	640,200
Chaiyaphum	74.51	12,778	462,567	489,467
Lop Buri	123.70	6,200	383,500	383,433
Suphan Buri	159.86	5,358	412,000	444,533
Bangkok	5,192.45	1,569	3,914,558	4,232,403
Chon Buri	355.38	4,363	743,833	806,700
Rayong	240.13	3,552	428,900	424,033
Surat Thani	77.51	12,891	485,733	513,400
Songkhla	206.76	7,394	740,633	788,133
<b>Thailand</b>	<b>127.63</b>	<b>513,120</b>	<b>31,805,158</b>	<b>33,685,403</b>

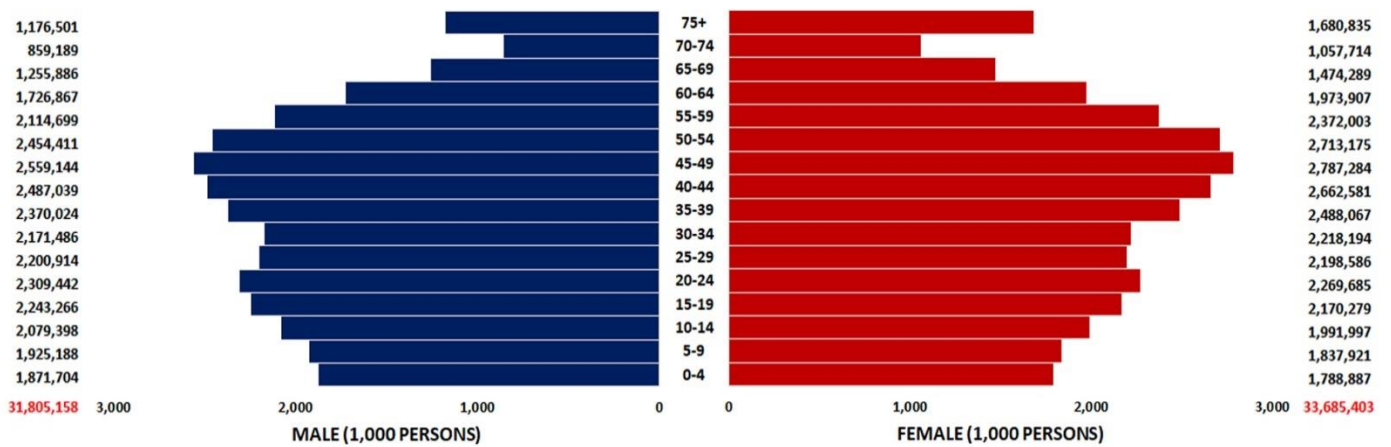
**Table B** Mean annual age-standardized incidence rate (ASR per 100,000), all sites, 2016-2018

Area	Male		Female	
	Cases	ASR (per 100,000)	Cases	ASR (per 100,000)
<b>Thailand</b>	<b>67,061</b>	<b>147.5</b>	<b>72,145</b>	<b>141.8</b>
Chiang Mai	2,145	173.2	2,121	161.8
Lampang	1,035	151.4	1,001	147.3
Lamphun	572	171.9	539	152.3
Khon Kaen	1,686	135.2	1,609	117.5
Ubon Ratchathani	1,506	125.2	1,578	127.5
Udon Thani	1,167	137.0	1,109	117.8
Chaiyaphum	1,397	183.1	1,242	149.9
Lop Buri	1,034	180.7	1,030	168.3
Suphan Buri	1,087	160.0	1,268	167.3
Bangkok	5,785	124.7	7,042	117.8
Chon Buri	1,112	146.0	1,300	136.9
Rayong	572	125.7	621	113.5
Surat Thani	703	111.6	728	100.6
Songkhla	1,308	140.2	1,286	119.3

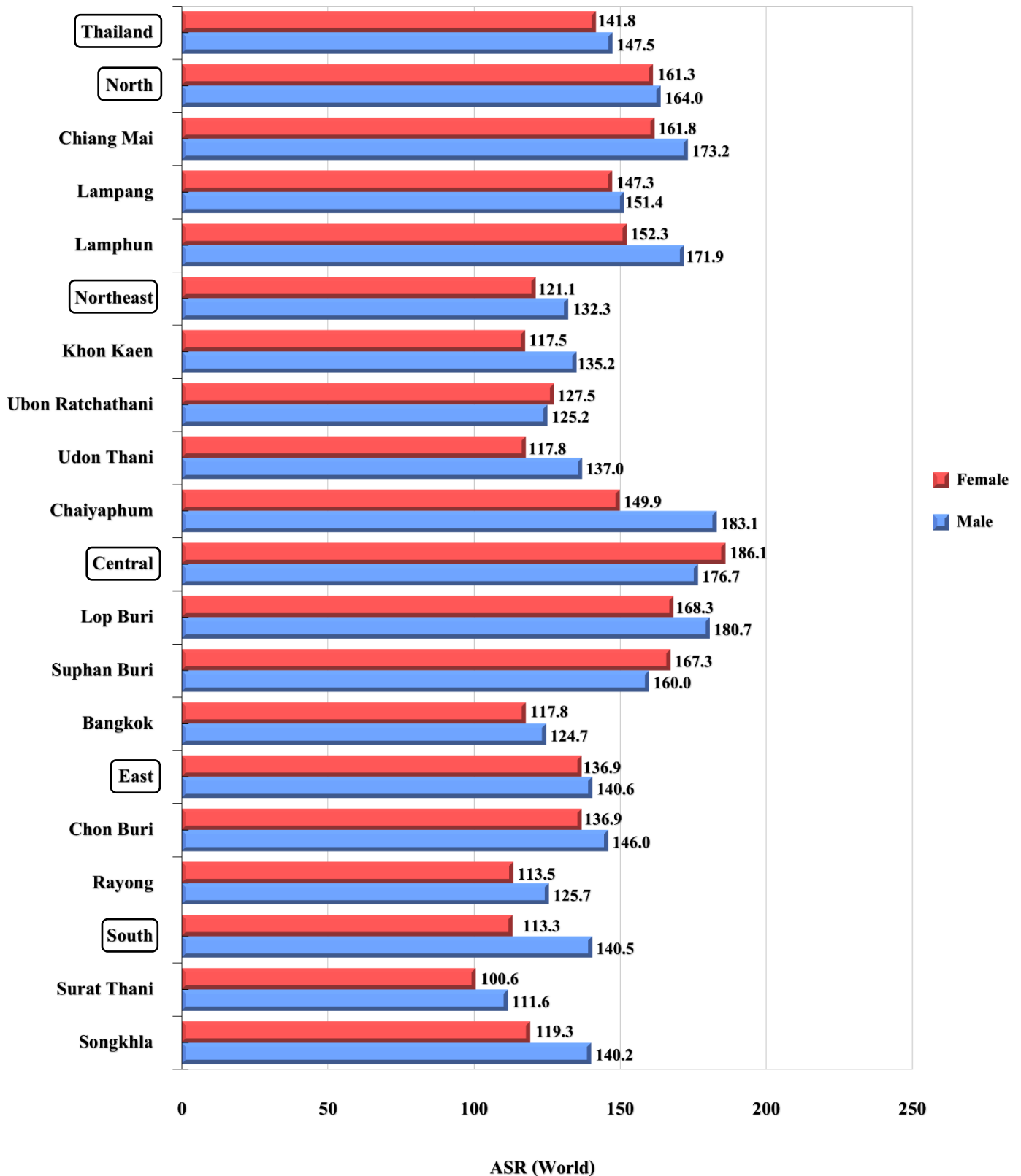
**Figure A** Thailand regions and area covered by the cancer registries.

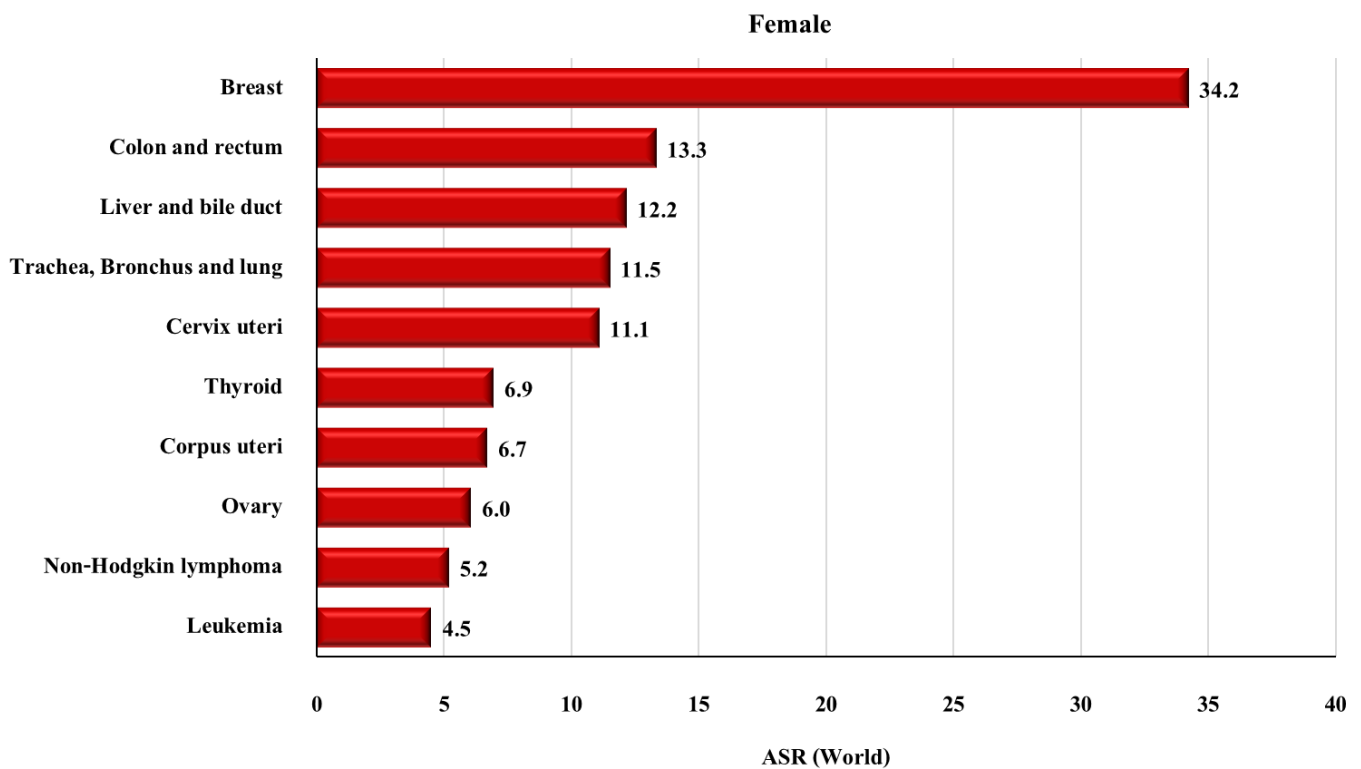
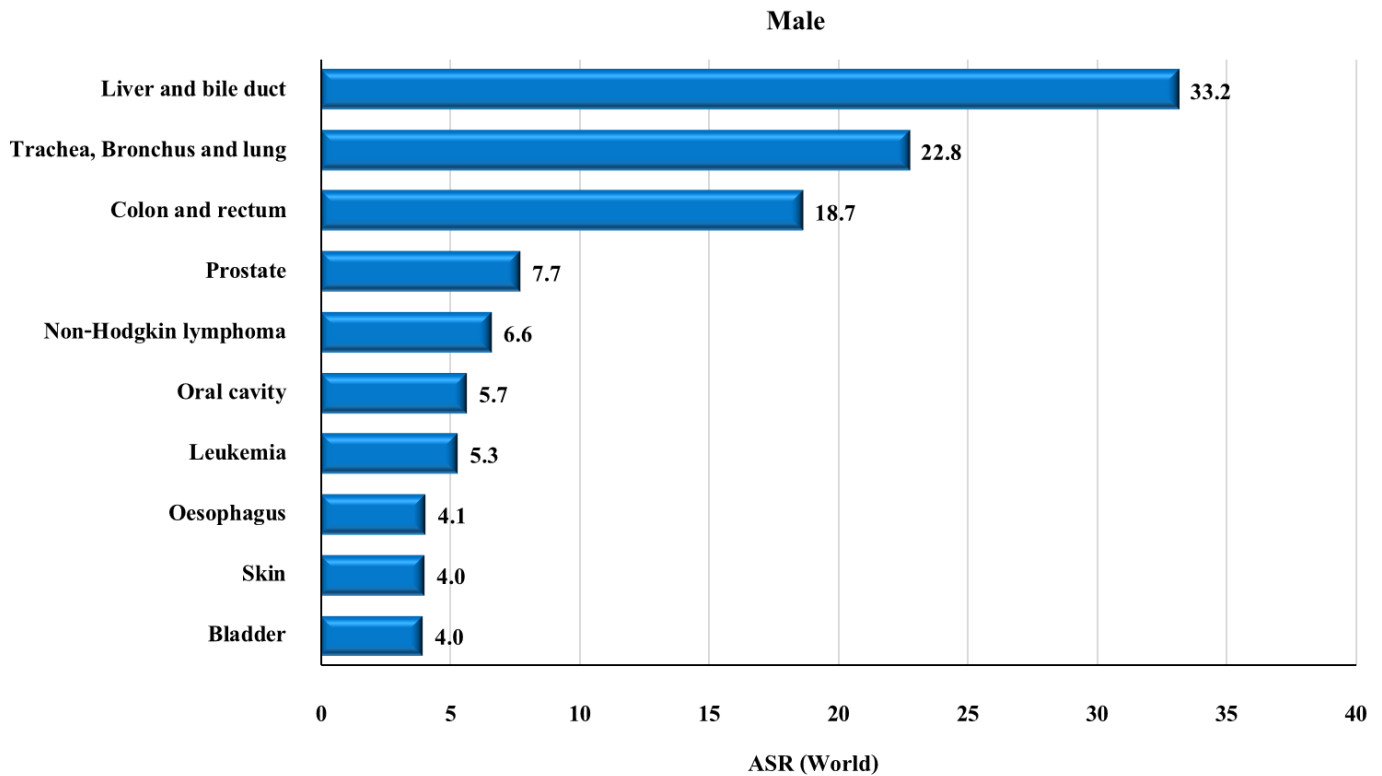


Population pyramid, Thailand  
estimated population in 2017 (2016-2018)



**Figure B** Mean annual age-standardized incidence rate in Thailand (ASR per 100,000), all sites, 2016-2018



**Figure C** Leading cancer in Thailand (mean annual ASR 2016-2018)

**Table C** Thailand (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group – Male

site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10
Lip	85	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.3	0.4	0.9	1.3	1.7	0.3	0.2	C00	
Tongue	1,145	0.1	0.0	0.1	0.0	0.2	0.5	0.6	1.5	2.5	5.4	8.1	8.0	9.7	9.4	9.8	11.8	3.6	2.5	C01-02
Mouth	1,059	0.0	0.0	0.0	0.0	0.2	0.1	0.5	1.3	1.7	5.3	6.1	8.0	7.9	9.4	9.7	14.8	3.3	2.3	C03-06
Salivary glands	316	0.0	0.0	0.1	0.1	0.1	0.3	0.9	0.4	0.7	1.2	1.2	2.2	1.8	3.7	2.9	4.1	1.0	0.7	C07-08
Tonsil	470	0.0	0.0	0.1	0.0	0.0	0.1	0.2	1.0	1.7	2.4	3.4	3.6	4.3	3.0	3.1	3.0	1.5	1.0	C09
Other oropharynx	231	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	1.1	1.6	2.7	1.5	2.2	1.6	2.0	0.7	0.5	C10
Nasopharynx	1,090	0.1	0.0	0.1	0.4	0.4	1.2	1.5	2.2	4.7	5.0	6.1	8.4	8.9	7.2	7.3	6.3	3.4	2.5	C11
Hypopharynx	656	0.0	0.0	0.0	0.0	0.0	0.2	0.3	1.3	1.6	2.2	4.4	4.5	4.7	7.5	5.9	7.6	2.1	1.4	C12-13
Pharynx unspecified	77	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.2	0.9	0.7	0.6	0.3	1.2	0.2	0.2	0.2	C14
Oesophagus	1,892	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2	2.8	7.4	13.2	16.0	17.4	22.8	18.3	16.5	5.9	4.1	C15
Stomach	1,713	0.0	0.0	0.0	0.2	0.1	0.5	0.9	1.7	3.5	4.2	7.5	10.5	15.2	20.2	23.8	26.8	5.4	3.7	C16
Small intestine	199	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.4	0.5	0.7	1.3	2.2	1.6	1.7	3.9	0.6	0.4	C17
Colon	4,946	0.1	0.0	0.1	0.3	0.5	2.0	3.5	4.0	7.0	9.2	18.0	30.7	46.1	62.9	71.5	86.1	15.6	10.7	C18
Rectum	3,581	0.0	0.0	0.0	0.2	0.3	0.5	1.1	3.0	4.8	8.0	14.4	24.0	34.8	49.7	49.4	53.3	11.3	7.7	C19-20
Anus	131	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.8	0.6	0.8	1.1	0.9	1.3	1.9	0.4	0.3	C21
Liver and bile duct	15,358	0.6	0.0	0.0	0.2	0.3	2.1	6.1	16.4	30.4	42.5	72.1	118.9	153.7	175.8	181.2	188.5	48.3	33.2	C22,C24
Gallbladder	376	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.7	0.6	1.7	3.6	4.2	7.0	9.5	1.2	0.8	C23
Pancreas	981	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.6	1.4	2.2	4.0	7.4	8.7	12.4	10.9	18.3	3.1	2.1	C25
Nose, sinuses etc.	242	0.0	0.0	0.0	0.0	0.2	0.1	0.3	1.4	0.4	0.9	1.4	1.5	1.4	2.1	1.7	2.6	0.8	0.5	C30-31
Larynx	1,046	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	1.6	3.1	5.0	8.5	9.5	12.0	15.1	14.1	3.3	2.2	C32
Trachea, Bronchus and lung	10,766	0.1	0.0	0.0	0.1	0.5	1.7	2.4	6.0	9.7	19.7	32.3	62.7	92.5	147.8	169.1	233.7	33.8	22.8	C33-34
Other thoracic organs	202	0.1	0.0	0.2	0.6	0.5	1.0	0.3	0.7	0.3	0.5	0.7	0.8	0.8	0.9	1.9	2.4	0.6	0.5	C37-38
Bone	451	0.3	0.7	1.0	1.5	0.6	1.5	1.0	0.3	1.7	0.9	0.7	2.2	2.5	3.4	3.3	4.7	1.4	1.2	C40-C41
Melanoma of skin	229	0.0	0.1	0.0	0.1	0.0	0.1	0.7	0.1	0.3	0.4	0.9	1.1	2.0	3.1	1.7	4.5	0.7	0.5	C43
Other skin	1,697	0.1	0.0	0.3	0.3	0.1	0.4	1.5	1.0	1.5	2.7	4.4	8.1	10.0	16.5	24.0	54.5	5.3	3.5	C44
Mesothelioma	9	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	C45
Kaposi's sarcoma	34	0.0	0.0	0.0	0.0	0.1	0.5	0.4	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	C46
Connective tissue	459	0.3	0.2	0.6	0.4	0.5	0.6	1.5	1.0	0.6	1.8	2.5	2.3	2.5	3.4	3.2	5.4	1.4	1.1	C47,C49
Breast	197	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.5	0.3	1.0	1.3	1.8	1.8	1.5	2.9	0.6	0.4	C50
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58
Penis	491	0.0	0.0	0.0	0.0	0.3	0.6	0.4	0.5	1.3	2.3	1.6	1.9	3.2	5.2	6.3	9.0	1.5	1.1	C60
Prostate	3,755	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.5	0.7	4.0	10.9	27.3	56.7	83.0	126.8	11.8	7.7	C61
Testis	234	0.2	0.0	0.0	0.5	0.9	1.2	2.8	1.1	1.0	0.7	0.7	0.2	0.3	0.6	0.2	0.6	0.7	0.7	C62
Other male genital organs	36	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.4	0.5	0.1	0.1	C63
Kidney	736	0.3	0.1	0.1	0.0	0.1	0.0	0.2	1.3	1.4	1.6	2.9	5.8	6.9	10.4	7.3	9.0	2.3	1.6	C64
Renal pelvis	55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.4	0.2	0.3	1.0	1.3	0.2	0.1	C65
Ureter	44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.6	0.7	0.9	0.1	0.1	C66
Bladder	1,906	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.7	1.1	2.7	4.0	8.3	16.3	22.7	32.3	56.1	6.0	4.0	C67
Other urinary organs	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.4	0.3	0.5	0.1	0.0	C68
Eye	80	0.9	0.1	0.1	0.0	0.1	0.0	0.3	0.2	0.1	0.1	0.0	0.2	0.6	0.6	0.4	1.2	0.3	0.3	C69
Brain, nervous system	946	0.9	1.1	2.1	1.1	0.6	0.7	2.6	2.7	2.3	3.5	3.5	5.5	6.6	6.4	7.7	6.7	3.0	2.4	C70-72
Thyroid	665	0.1	0.0	0.1	0.2	0.8	1.0	2.3	1.8	2.0	2.7	3.6	3.7	3.6	5.4	5.6	5.1	2.1	1.6	C73
Adrenal gland	54	0.8	0.0	0.0	0.2	0.1	0.0	0.0	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.4	0.6	0.2	0.2	C74
Other endocrine	46	0.0	0.0	0.3	0.1	0.1	0.5	0.0	0.0	0.0	0.1	0.0	0.2	0.3	0.1	0.5	0.3	0.1	0.1	C75
Hodgkin disease	192	0.2	0.2	0.3	0.7	0.6	1.0	0.2	0.6	0.8	0.2	0.6	0.8	1.2	1.1	0.7	0.5	0.6	0.6	C81
Non-Hodgkin lymphoma	2,855	0.6	1.3	1.7	1.5	1.3	3.9	2.4	6.8	6.2	7.1	12.4	15.8	21.6	28.4	31.0	38.3	9.0	6.6	C82-85,C96
Multiple myeloma	461	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	1.0	2.5	3.1	4.2	6.4	5.4	7.4	1.4	1.0	C90
Lymphoid leukemia	434	4.0	1.8	2.2	1.5	0.6	0.8	0.4	0.4	0.5	0.4	0.9	1.1	2.6	1.5	2.0	4.0	1.4	1.6	C91
Myeloid leukemia	818	1.7	0.4	1.4	0.9	0.8	0.9	2.1	1.4	1.9	2.0	2.9	3.3	5.2	7.7	7.9	9.9	2.6	2.1	C92-94
Leukemia unspecified	532	3.4	1.7	1.0	0.6	0.6	0.9	0.8	1.3	0.8	0.8	1.1	1.9	2.5	4.1	4.9	6.5	1.7	1.6	C95
Myelodysplastic disease	564	0.7	0.4	0.2	0.5	0.3	0.1	0.9	1.1	0.9	1.1	1.4	3.0	4.2	6.1	7.9	9.2	1.8	1.3	D45-D47
Other and unspecified	2,497	0.5	0.3	0.3	0.5	0.6	1.7	2.9	3.4	4.1	7.4	8.9	14.9	17.5	27.4	35.4	42.2	7.9	5.5	O&U
<b>All sites</b>	<b>67,061</b>	<b>16.2</b>	<b>8.5</b>	<b>12.7</b>	<b>12.8</b>	<b>12.7</b>	<b>27.6</b>	<b>44.2</b>	<b>71.6</b>	<b>107.2</b>	<b>163.6</b>	<b>263.3</b>	<b>420.8</b>	<b>571.2</b>	<b>777.8</b>	<b>869.7</b>	<b>1119.0</b>	<b>210.9</b>	<b>147.5</b>	<b>ALL</b>

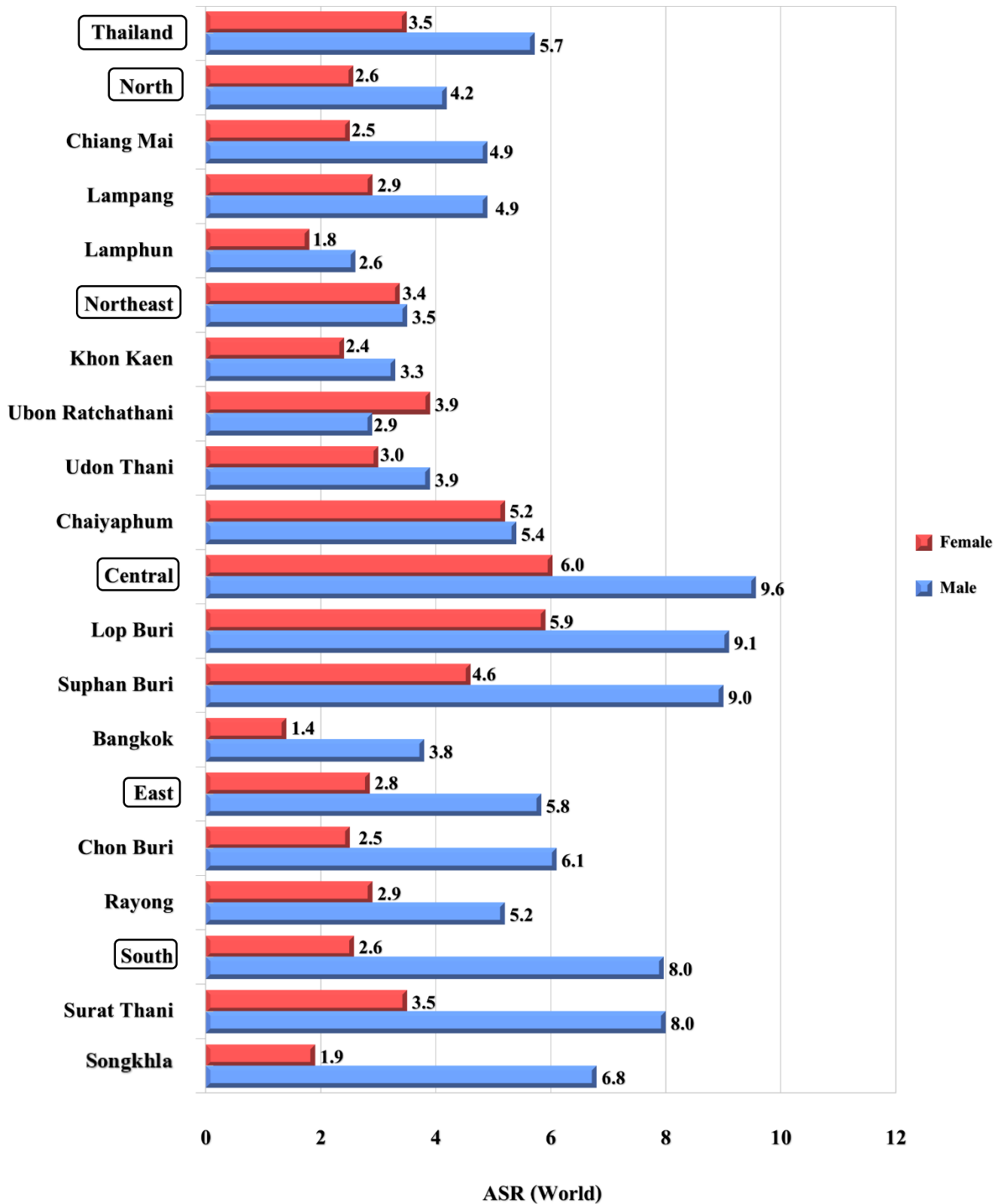
**Table D** Thailand (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group – Female

site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10
Lip	302	0.0	0.0	0.0	0.0	0.2	0.5	0.3	0.2	0.2	0.1	0.1	0.3	1.6	3.1	4.1	8.1	0.9	0.5	C00
Tongue	492	0.0	0.0	0.0	0.0	0.1	1.8	0.5	0.6	1.3	1.6	1.9	2.5	2.9	4.0	2.8	5.5	1.5	1.0	C01-02
Mouth	757	0.1	0.1	0.1	0.0	0.6	0.4	1.6	0.9	1.0	0.9	1.8	2.8	4.2	5.5	7.9	15.0	2.2	1.4	C03-06
Salivary glands	284	0.0	0.0	0.0	0.0	0.2	0.5	0.7	0.2	1.1	0.6	1.5	1.1	1.7	1.4	1.6	1.5	0.8	0.6	C07-08
Tonsil	92	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.5	0.1	0.2	0.2	0.6	0.3	0.4	0.9	1.1	0.3	C09
Other oropharynx	35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.5	0.0	0.3	0.4	0.1	0.1	C10
Nasopharynx	414	0.0	0.0	0.1	0.1	0.2	0.7	0.7	0.7	1.5	1.5	2.5	2.5	2.1	3.5	2.3	2.2	1.2	0.8	C11
Hypopharynx	64	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.2	0.5	0.2	0.8	0.7	0.2	0.1	C12-13
Pharynx unspecified	17	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.3	0.0	0.0	C14
Oesophagus	307	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.5	0.4	1.1	1.7	2.7	3.8	2.6	4.2	0.9	0.6	C15
Stomach	1,472	0.0	0.0	0.0	0.0	0.2	0.9	1.1	2.9	2.8	3.5	5.2	8.4	10.0	12.7	12.6	19.2	4.4	2.7	C16
Small intestine	145	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.1	0.6	0.5	0.7	1.5	1.3	1.4	1.6	0.4	0.3	C17
Colon	4,515	0.0	0.0	0.1	0.1	0.9	0.8	4.2	4.4	5.6	10.1	15.1	27.8	33.0	39.7	48.7	60.7	13.4	8.2	C18
Rectum	2,630	0.1	0.0	0.0	0.0	0.2	1.2	2.7	2.6	5.3	5.3	8.9	17.0	20.4	28.3	26.1	26.5	7.8	4.9	C19-20
Anus	136	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.4	0.5	0.9	1.6	1.2	2.0	0.4	0.2	C21
Liver and bile duct	6,855	0.7	0.1	0.1	0.0	0.6	1.7	3.0	3.0	5.1	11.0	18.9	35.3	50.1	76.5	87.3	108.0	20.4	12.2	C22,C24
Gallbladder	543	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.2	0.6	1.4	3.1	3.7	5.9	6.6	10.0	1.6	0.9	C23
Pancreas	933	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.7	1.8	2.8	4.5	7.5	8.6	10.4	16.5	2.8	1.6	C25
Nose, sinuses etc.	158	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.4	0.3	0.8	0.6	0.9	1.4	1.8	1.9	0.5	0.3	C30-31
Larynx	101	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.3	0.1	1.0	0.3	1.1	1.1	1.2	0.3	0.2	C32
Trachea, Bronchus and lung	6,456	0.3	0.0	0.0	0.1	0.3	2.6	2.7	3.7	6.7	11.9	17.9	31.8	50.2	70.0	73.3	100.2	19.2	11.5	C33-34
Other thoracic organs	127	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.5	0.7	0.4	0.8	0.5	0.4	0.7	1.3	0.4	0.2	C37-38
Bone	385	0.2	0.9	1.0	0.6	0.8	1.3	0.5	0.3	0.6	1.2	1.5	1.9	1.7	2.3	3.2	1.8	1.1	1.0	C40-C41
Melanoma of skin	235	0.0	0.0	0.0	0.3	0.1	0.0	0.5	0.5	0.3	0.5	0.6	1.2	1.5	1.8	2.4	3.1	0.7	0.4	C43
Other skin	2,213	0.1	0.0	0.2	0.4	0.3	2.0	1.3	1.7	1.5	2.8	3.9	8.7	11.5	19.9	24.4	51.7	6.6	3.8	C44
Mesothelioma	11	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.3	0.0	0.0	C45
Kaposi's sarcoma	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0	C46
Connective tissue	484	0.2	0.2	0.2	0.3	0.7	1.1	0.7	1.5	1.9	1.7	2.0	2.1	2.3	3.5	2.4	3.1	1.4	1.1	C47,C49
Breast	17,043	0.3	0.0	0.0	0.1	2.4	10.7	25.2	46.4	62.0	93.4	96.0	111.7	108.8	106.1	75.7	60.0	50.6	34.2	C50
Vulva	213	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.6	0.4	0.5	0.4	1.1	1.0	2.2	1.8	3.7	0.6	0.4	C51
Vagina	88	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.2	0.1	0.5	0.5	0.8	1.2	0.7	0.3	0.2	0.2	C52
Cervix uteri	5,422	0.0	0.0	0.0	0.1	0.9	6.9	12.6	18.4	21.9	26.6	28.1	29.8	27.8	30.3	29.1	24.6	16.1	11.1	C53
Corpus uteri	3,368	0.2	0.0	0.0	0.1	0.9	3.2	4.4	6.6	6.3	11.0	18.0	29.0	26.8	29.1	20.4	10.9	10.0	6.7	C54
Uterus unspecified	280	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.4	1.6	1.9	1.4	1.5	1.5	1.7	0.9	1.3	0.8	0.6	C55
Ovary	2,902	0.1	0.1	0.6	1.4	3.2	3.6	5.0	7.3	7.9	13.5	15.5	18.3	17.3	17.5	14.9	12.5	8.6	6.0	C56
Other female genital organs	81	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.1	0.2	0.3	0.3	0.5	0.7	0.7	0.8	0.4	0.2	0.2	C57
Placenta	36	0.0	0.0	0.1	0.0	0.2	0.2	0.2	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C58
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63
Kidney	388	0.9	0.2	0.0	0.0	0.4	0.1	0.2	0.5	0.7	0.8	1.2	1.9	2.8	3.2	4.5	4.4	1.2	0.8	C64
Renal pelvis	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.1	0.7	0.1	0.1	C65
Ureter	49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.4	0.4	0.5	1.4	0.1	0.1	C66
Bladder	591	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.8	1.0	1.4	2.2	4.7	6.7	6.6	10.7	1.8	1.0	C67
Other urinary organs	28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.4	0.2	0.4	0.3	0.1	0.1	C68
Eye	62	0.9	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.4	0.4	0.2	0.2	C69
Brain, nervous system	920	1.0	1.1	1.0	0.5	1.0	0.6	2.5	2.3	2.9	3.8	3.8	4.5	4.1	4.6	5.4	6.2	2.7	2.1	C70-72
Thyroid	3,021	0.0	0.1	0.6	1.7	4.9	12.4	13.9	10.7	10.8	12.7	12.5	13.2	11.1	13.7	11.5	10.5	9.0	6.9	C73
Adrenal gland	55	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.1	0.3	0.2	0.0	0.2	0.2	0.2	0.2	C74
Other endocrine	39	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.3	0.4	0.3	0.1	0.1	C75
Hodgkin disease	136	0.1	0.2	0.2	1.0	0.4	1.0	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.5	0.3	0.3	0.4	0.4	C81
Non-Hodgkin lymphoma	2,487	0.5	0.7	1.0	1.8	3.0	4.5	4.3	5.1	4.1	6.2	7.2	12.0	14.8	21.9	22.2	24.1	7.4	5.2	C82-85,C96
Multiple myeloma	435	0.0	0.0	0.0	0.1	0.0	0.0	0.4	0.2	0.4	1.3	1.4	3.0	2.8	4.7	5.6	4.7	1.3	0.8	C90
Lymphoid leukemia	358	4.7	1.8	0.9	0.6	0.4	0.3	0.6	0.5	0.3	0.6	0.6	1.0	1.1	2.1	1.2	2.2	1.1	1.3	C91
Myeloid leukemia	699	1.2	0.4	0.8	0.4	0.6	0.7	1.1	1.3	1.6	1.7	2.2	3.8	4.1	4.1	6.9	6.2	2.1	1.6	C92-94
Leukemia unspecified	581	2.7	1.1	0.8	0.4	1.1	1.2	1.7	1.6	0.7	1.7	0.9	1.7	2.3	3.7	4.1	5.3	1.7	1.6	C95
Myelodysplastic disease	575	1.0	0.2	0.1	0.1	0.3	0.9	0.5	1.0	0.5	0.6	1.0	2.1	3.3	5.5	7.0	9.6	1.7	1.2	D45-D47
Other and unspecified	2,089	0.3	0.1	0.1	0.2	0.8	1.1	2.4	3.1	3.2	5.1	5.1	9.4	13.0	20.8	21.2	31.1	6.2	3.9	O&U
All sites	72,145	16.7	7.5	8.2	10.9	26.5	66.2	97.1	133.9	164.7	243.2	287.9	406.5	463.7	578.3	570.2	680.6	214.2	141.8	ALL

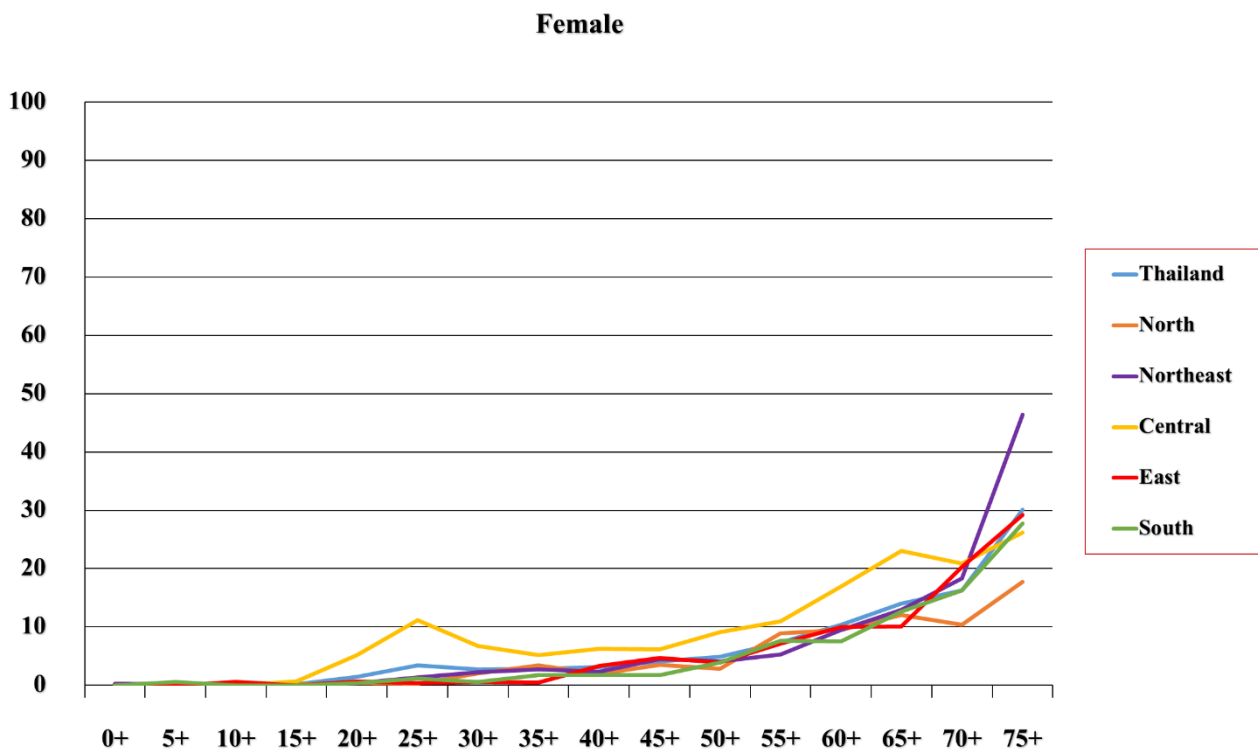
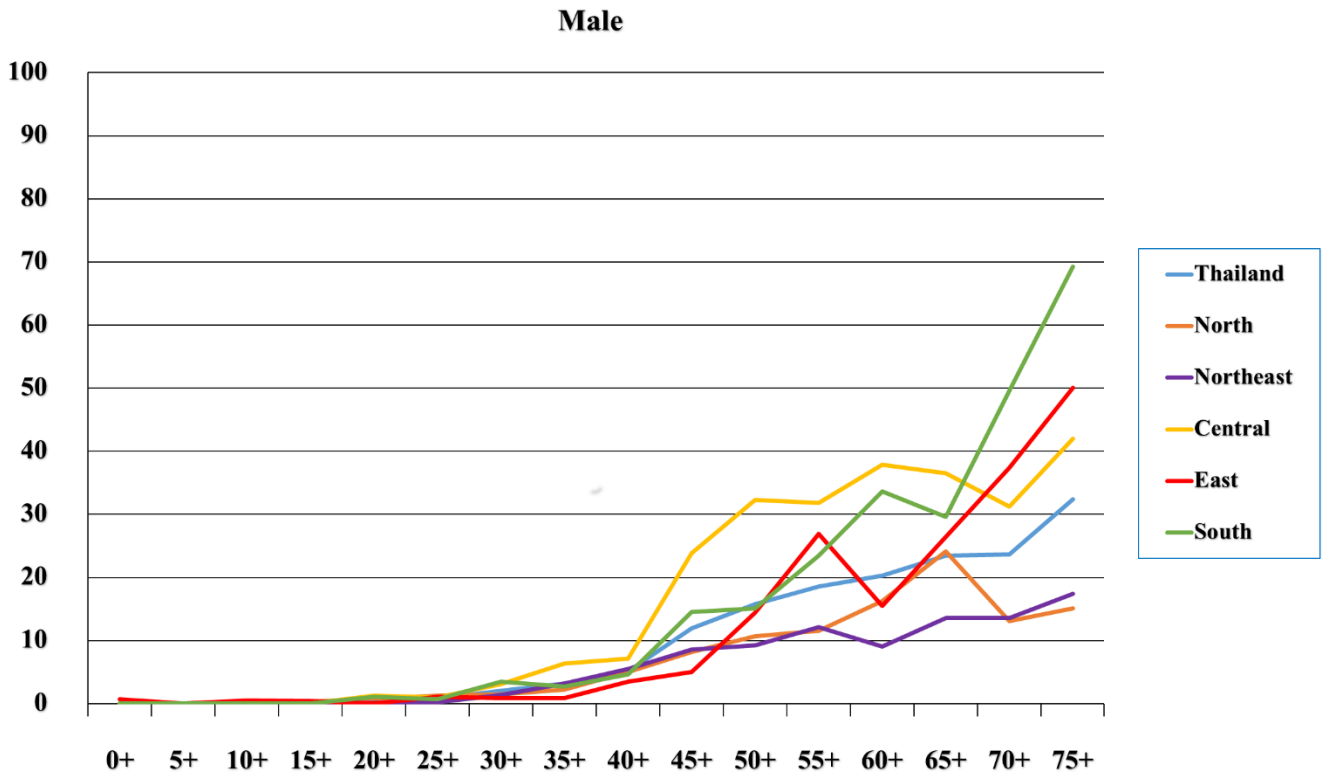
# Cancer Incidence in Leading Sites

## 2.1 Oral cavity

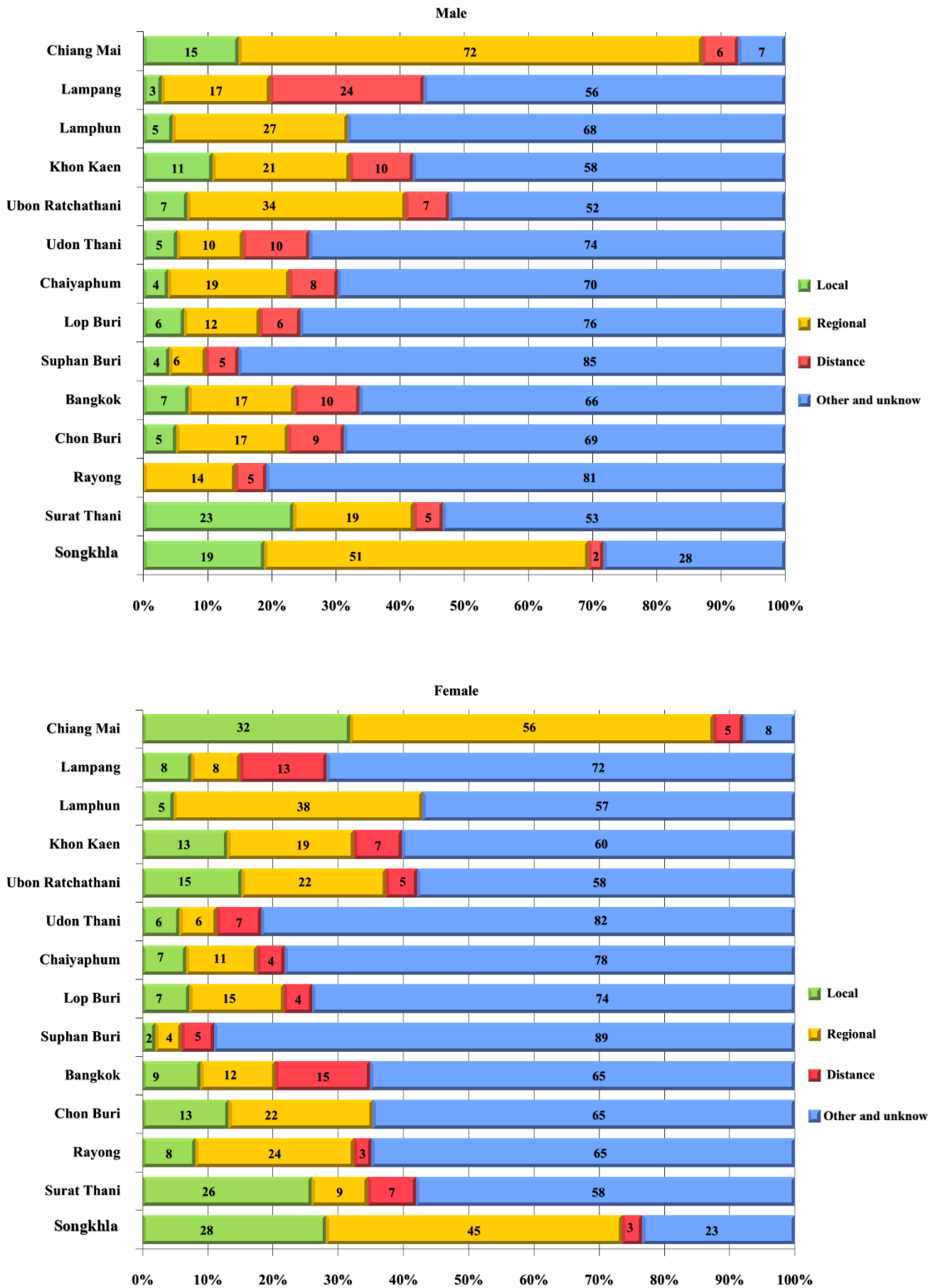
**Figure 2.1.1** Oral cavity cancer in different regions, mean annual ASR per 100,000 (2016-2018)



**Figure 2.1.2** Age - specific incidence rates of oral cavity cancer, mean annual rate per 100,000 (2016-2018)

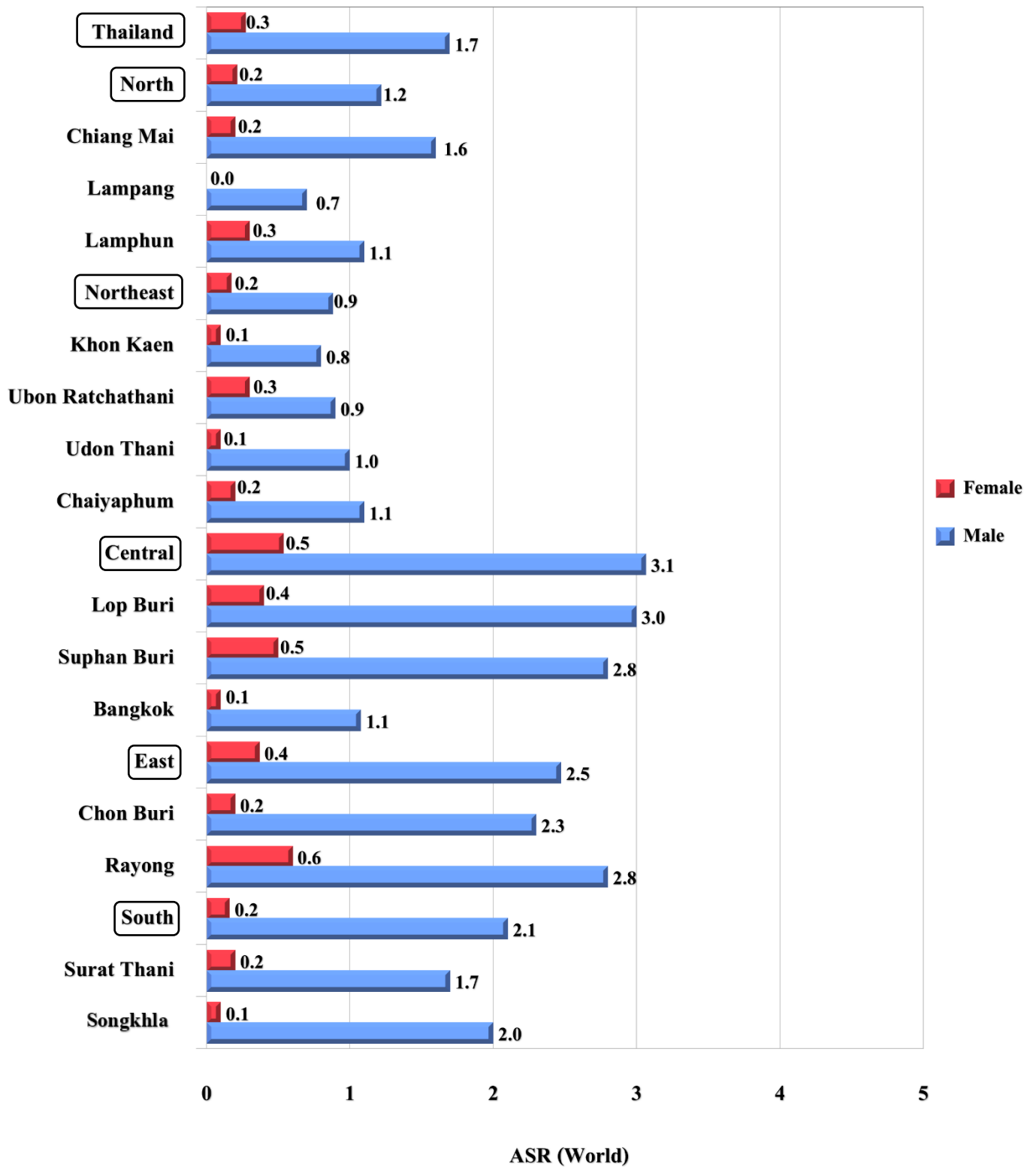


**Figure 2.1.3** Stage distribution of oral cavity cancer (2016-2018)

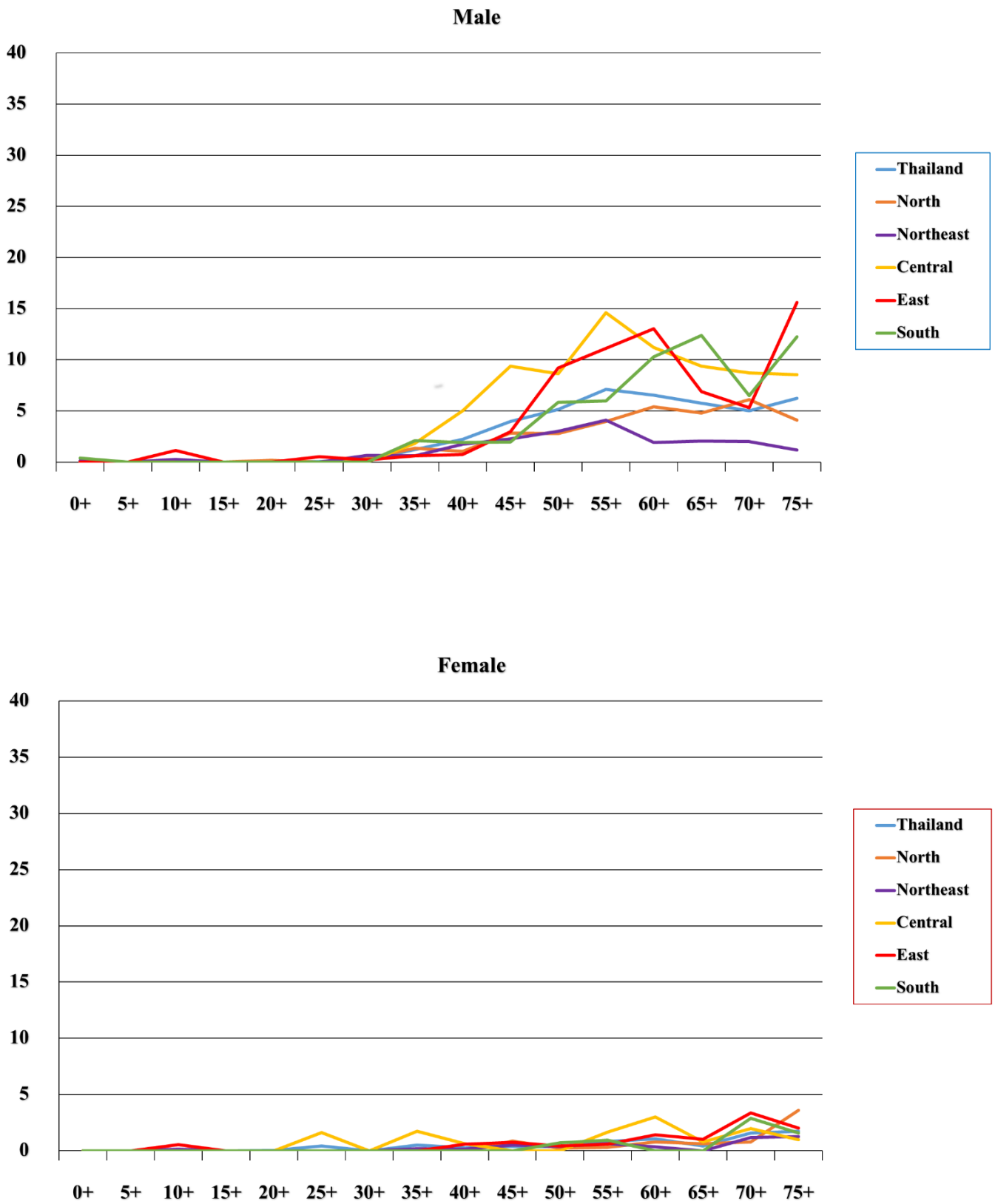


## 2.2 Oropharynx

**Figure 2.2.1** Oropharynx cancer in different regions, mean annual ASR per 100,000 (2016-2018)

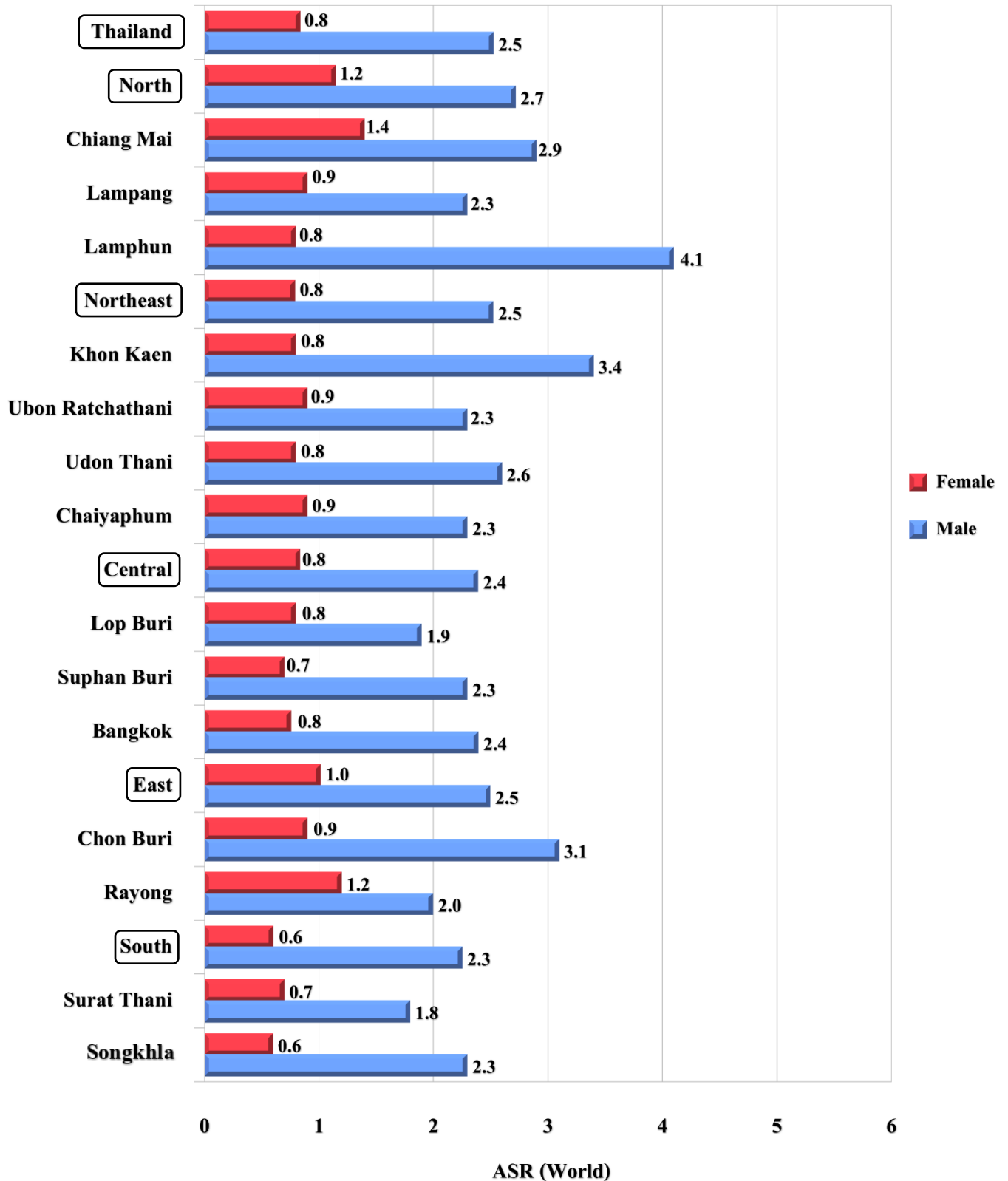


**Figure 2.2.2** Age - specific incidence rates of oropharynx cancer, mean annual rate per 100,000 (2016-2018)

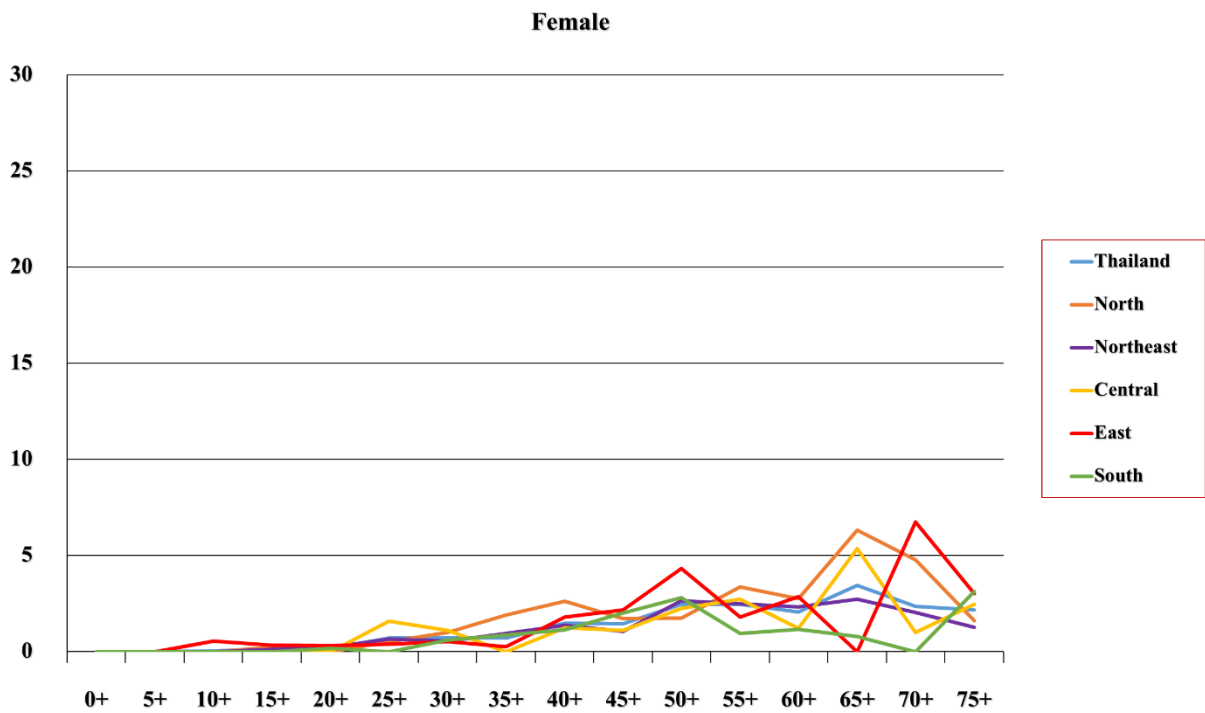
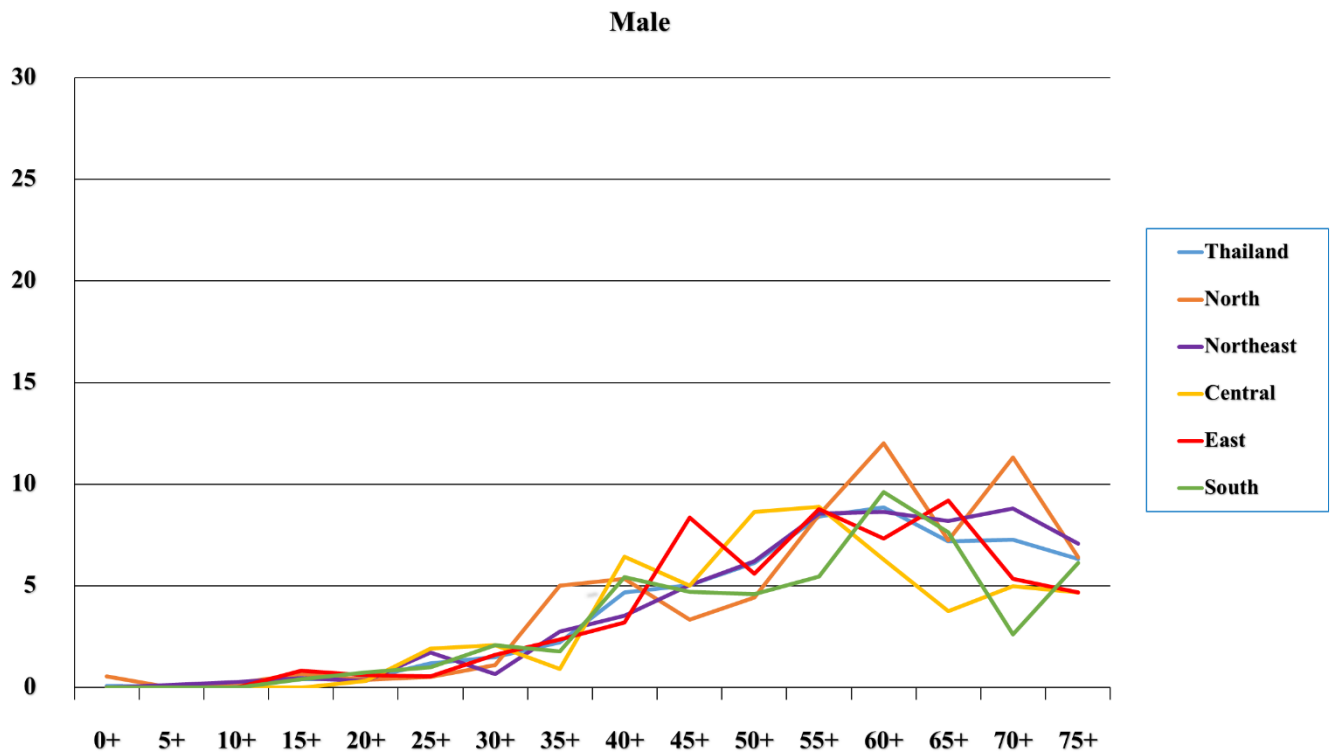


## 2.3 Nasopharynx

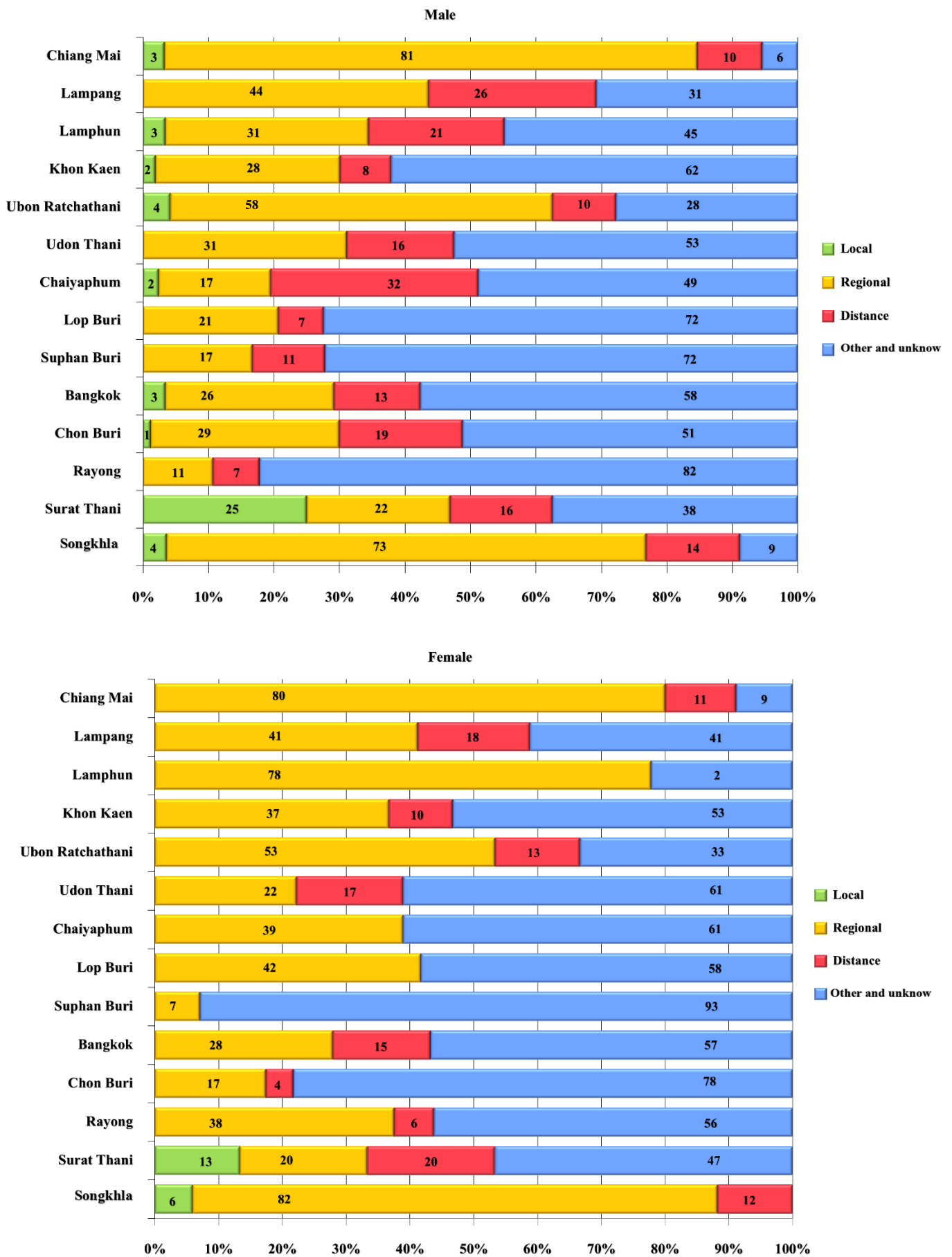
**Figure 2.3.1** Nasopharynx cancer in different regions, mean annual ASR per 100,000 (2016-2018)



**Figure 2.3.2** Age - specific incidence rates of nasopharynx cancer, mean annual rate per 100,000 (2016-2018)

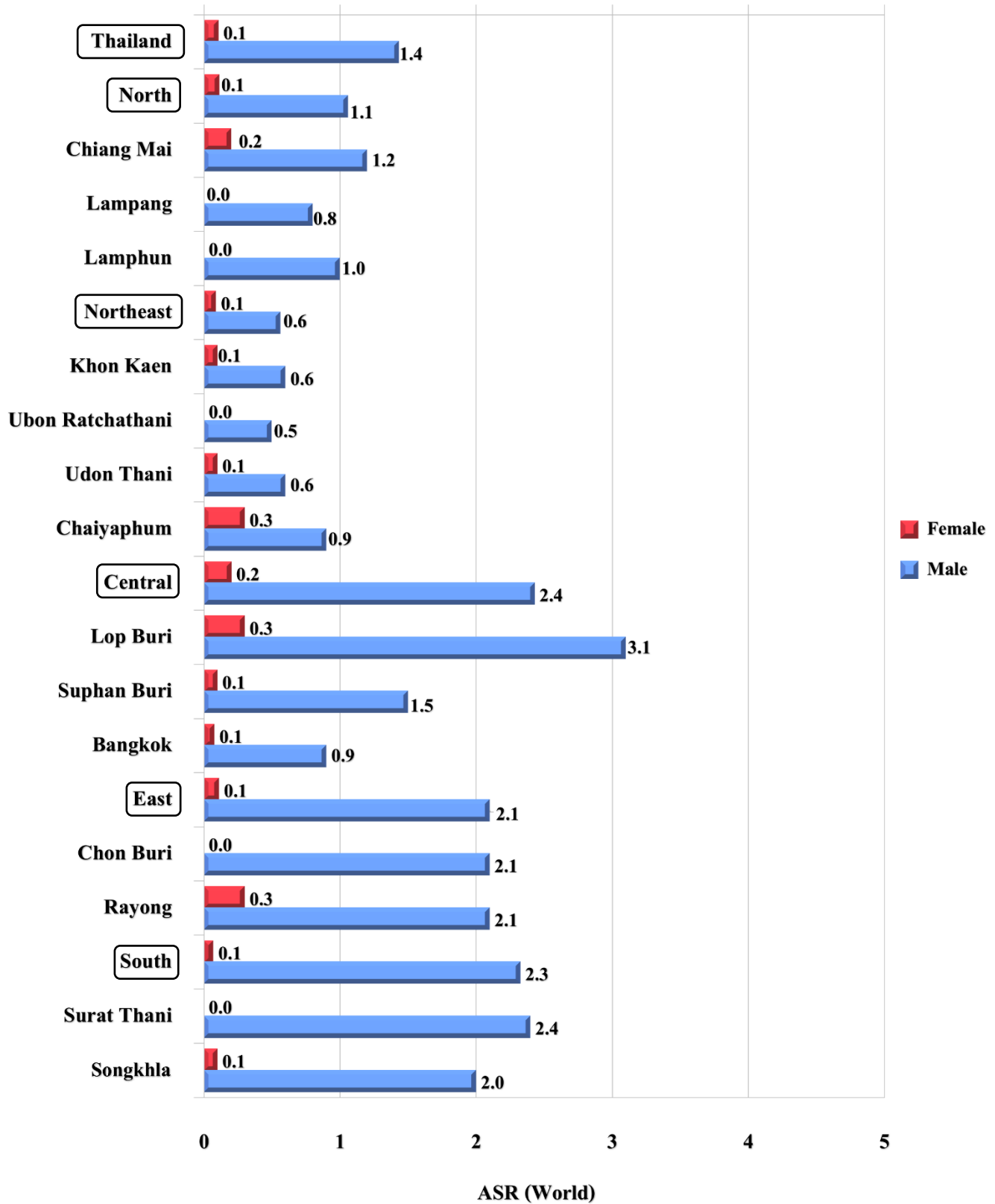


**Figure 2.3.3** Stage distribution of nasopharynx cancer (2016-2018)

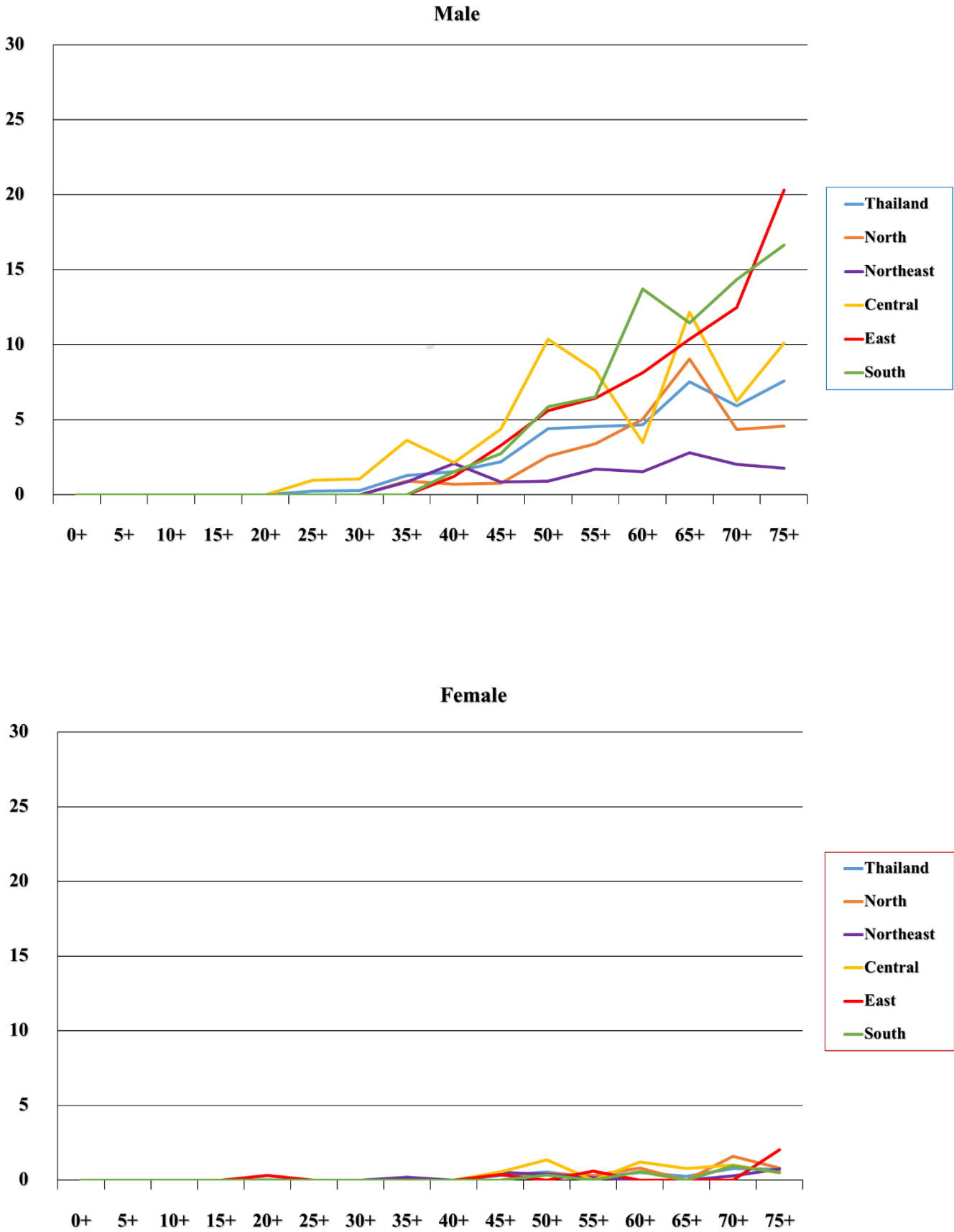


## 2.4 Hypopharynx

**Figure 2.4.1** Hypopharynx cancer in different regions, mean annual ASR per 100,000 (2016-2018)

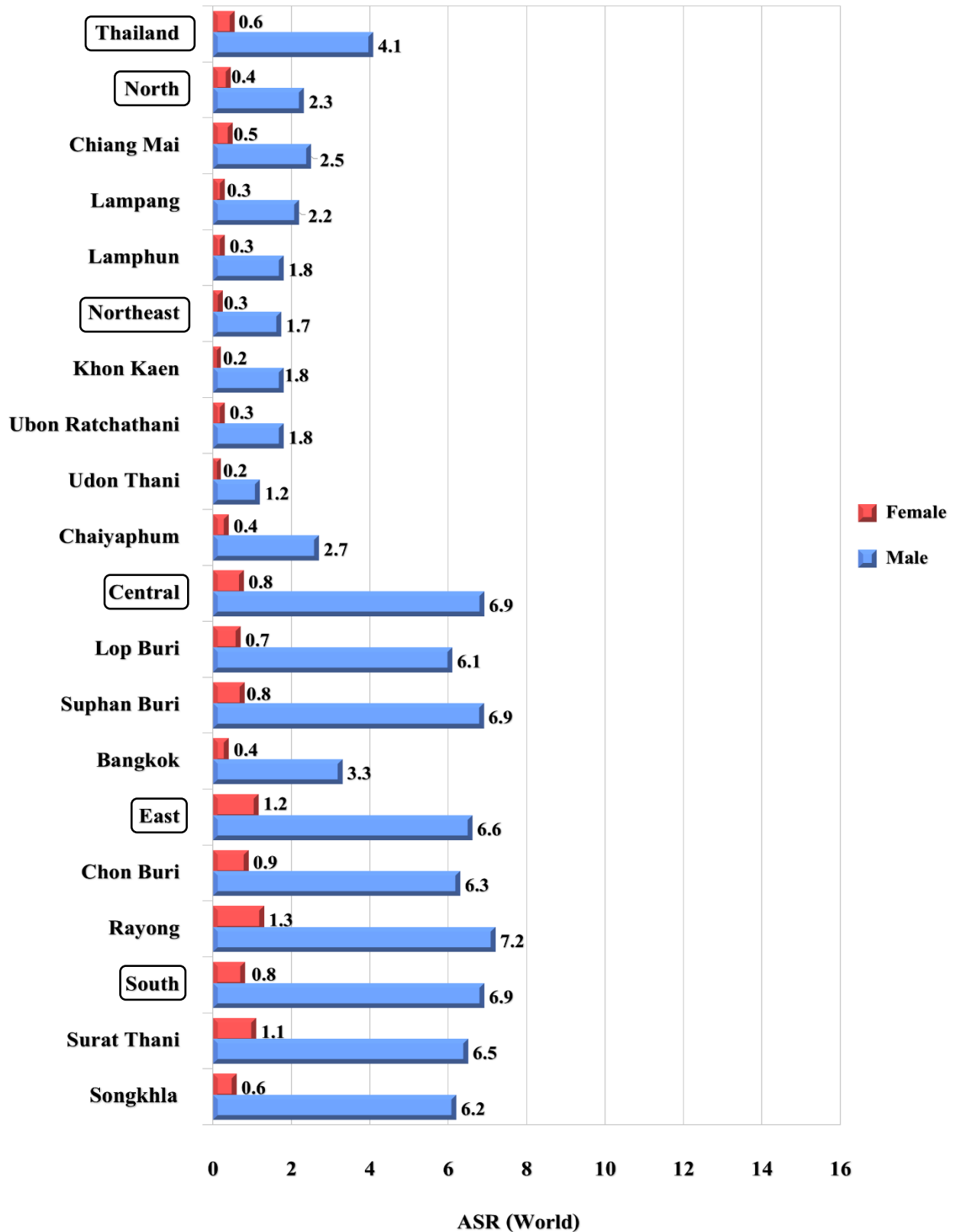


**Figure 2.4.2** Age - specific incidence rates of hypopharynx cancer, mean annual rate per 100,000 (2016-2018)

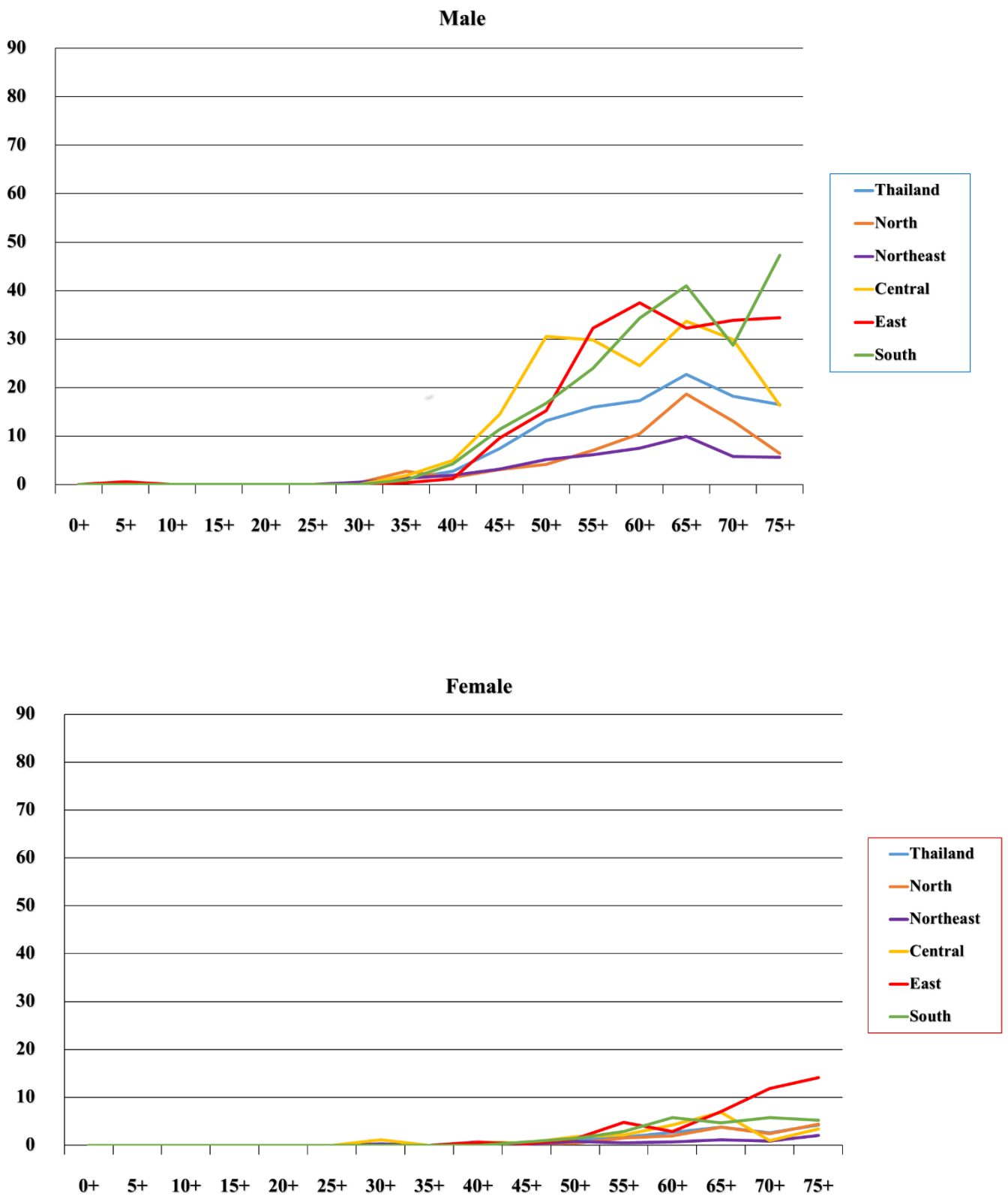


## 2.5 Esophagus

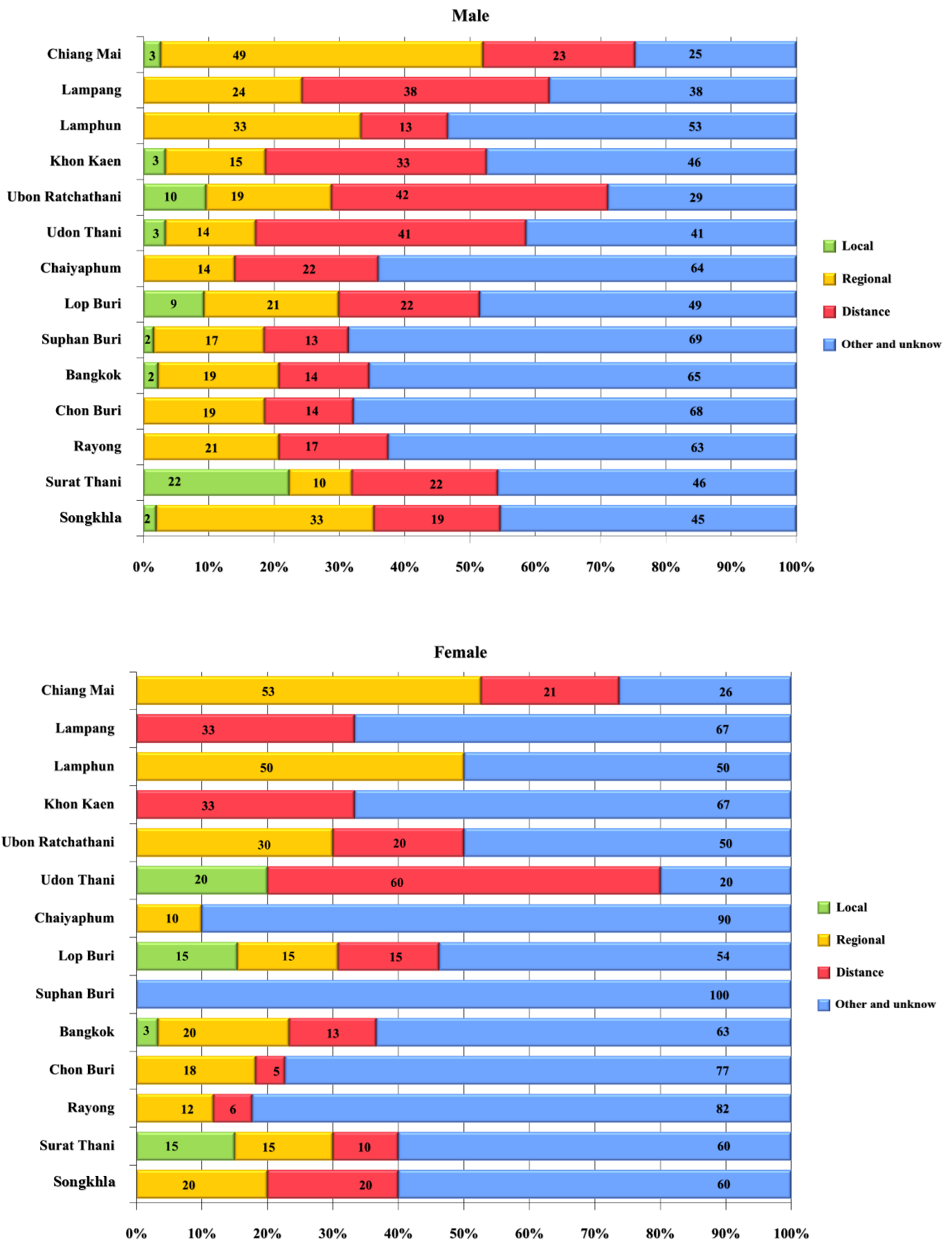
**Figure 2.5.1** Esophagus cancer in different regions, mean annual ASR per 100,000 (2016-2018)



**Figure 2.5.2** Age - specific incidence rates of esophagus cancer, mean annual rate per 100,000 (2016-2018)

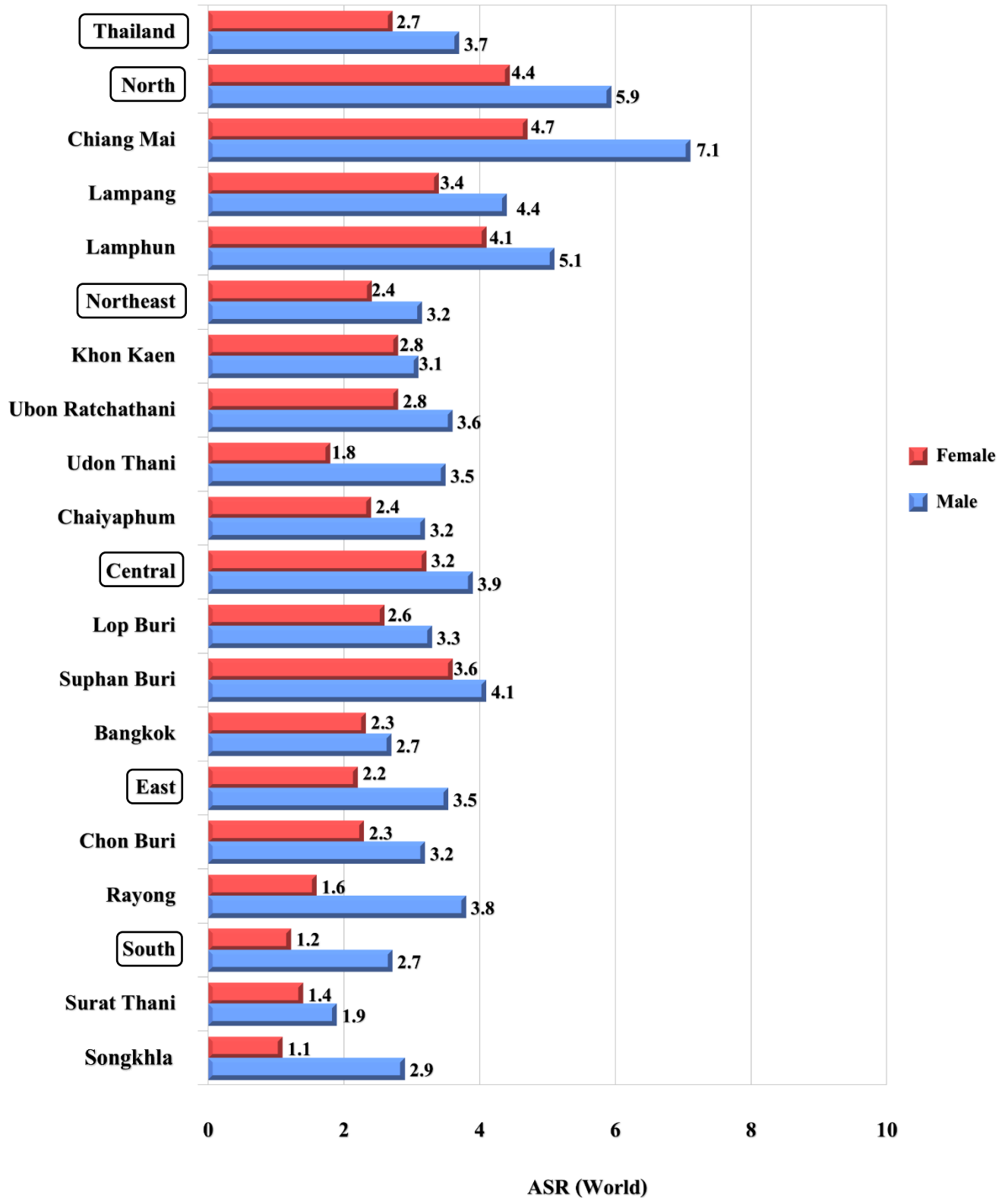


**Figure 2.5.3** Stage distribution of esophagus cancer (2016-2018)

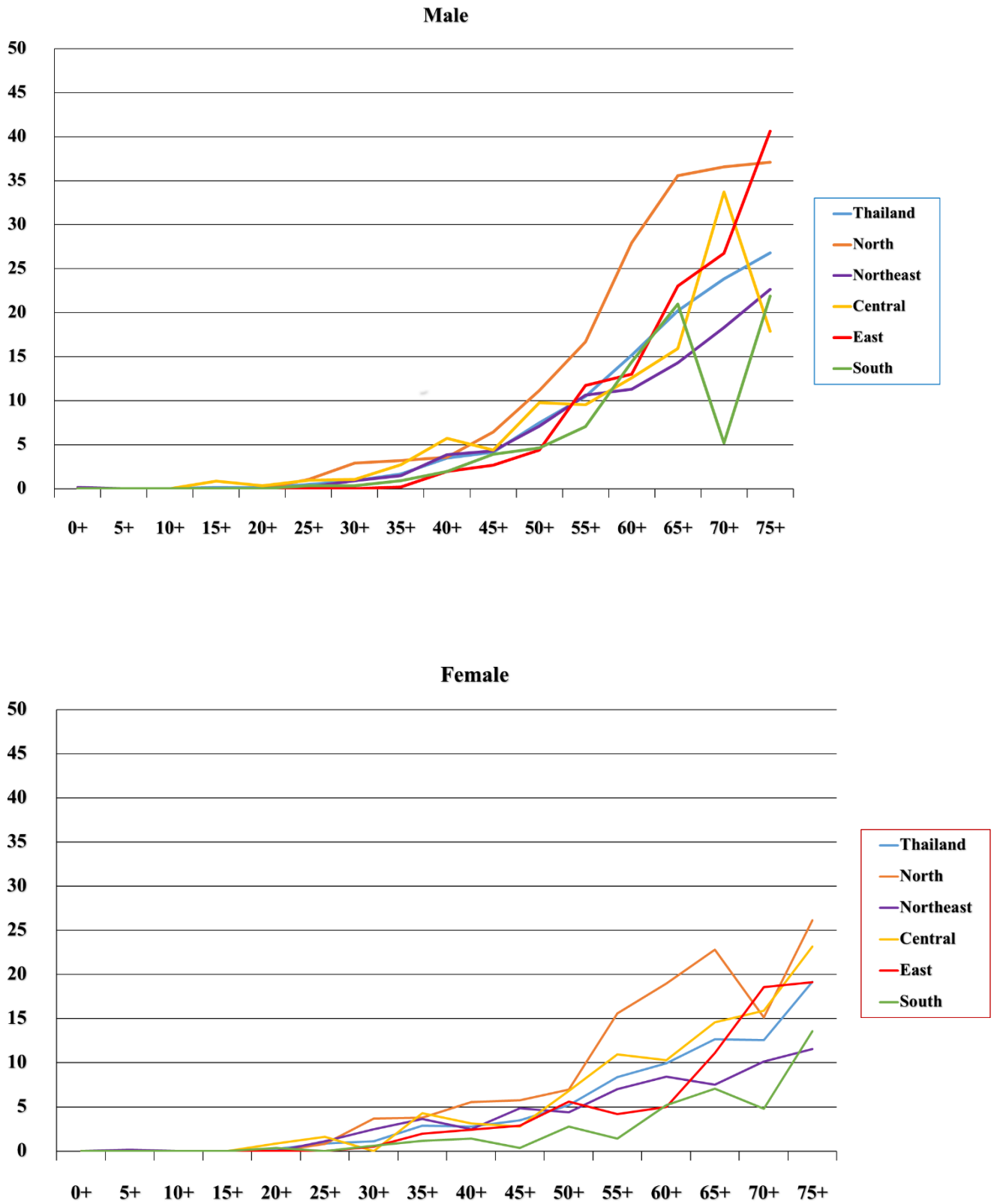


## 2.6 Stomach

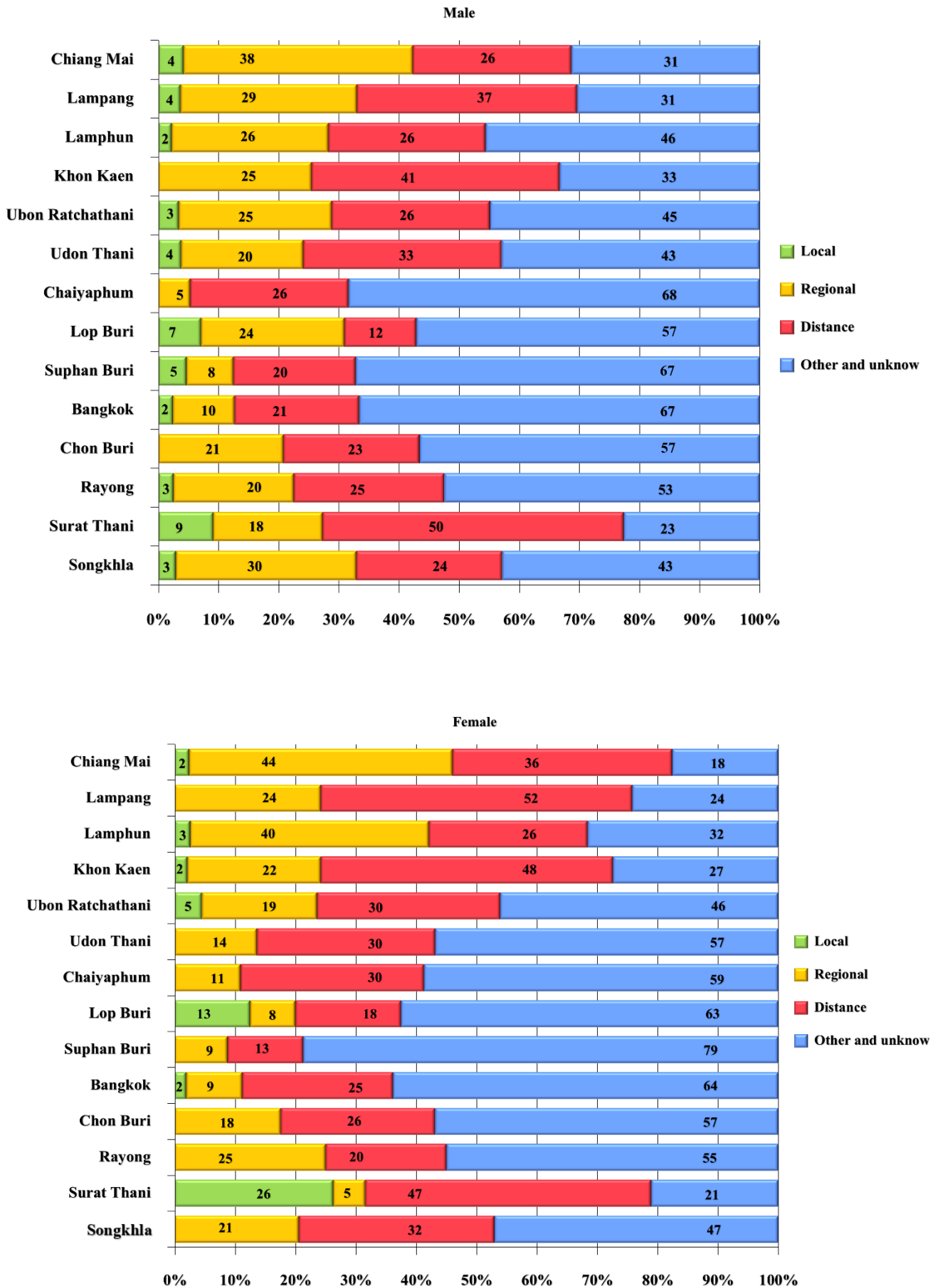
**Figure 2.6.1** Stomach cancer in different regions, mean annual ASR per 100,000 (2016-2018)



**Figure 2.6.2** Age - specific incidence rates of stomach cancer, mean annual rate per 100,000 (2016-2018)

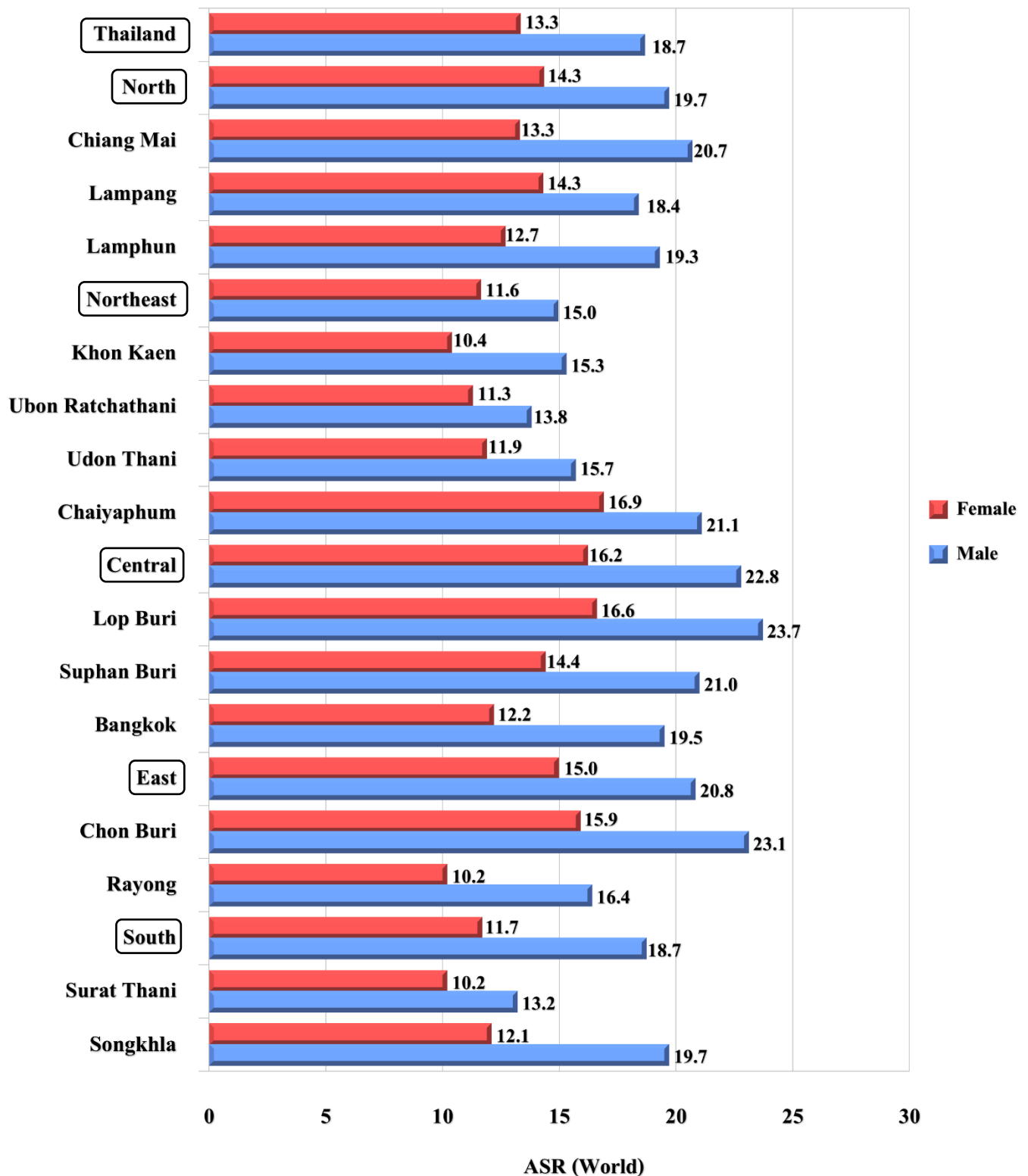


**Figure 2.6.3** Stage distribution of stomach cancer (2016-2018)

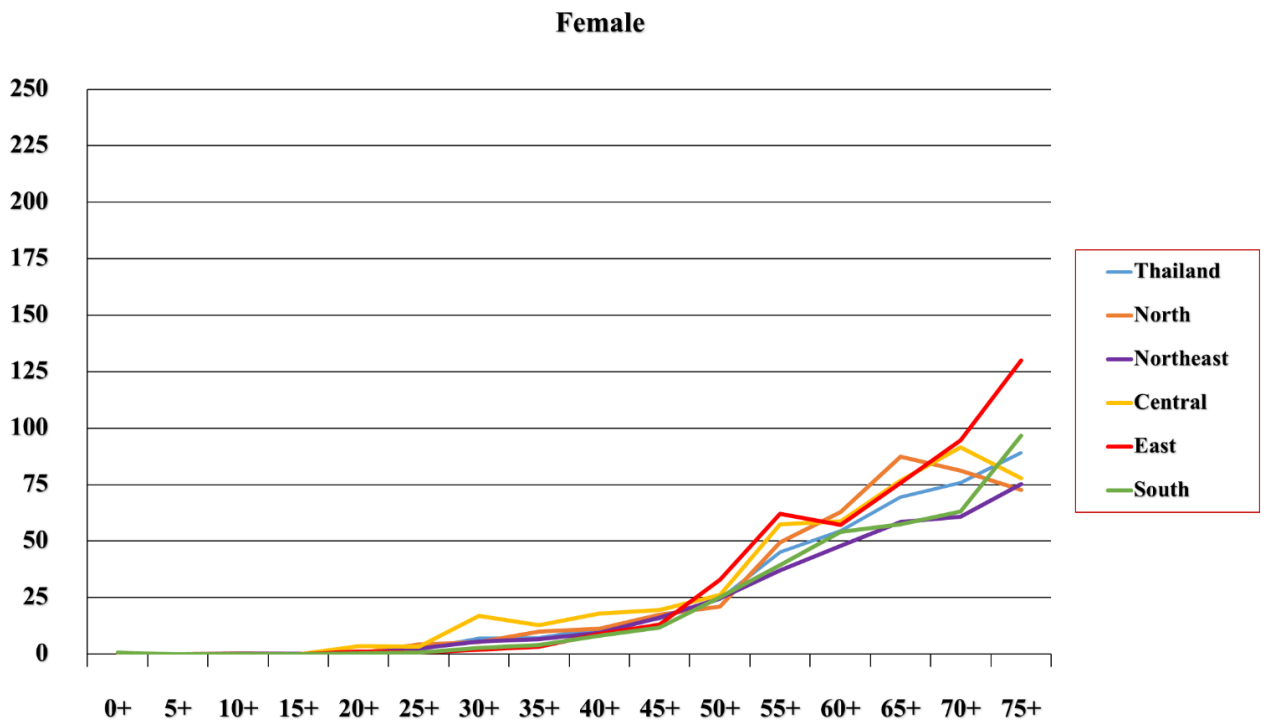
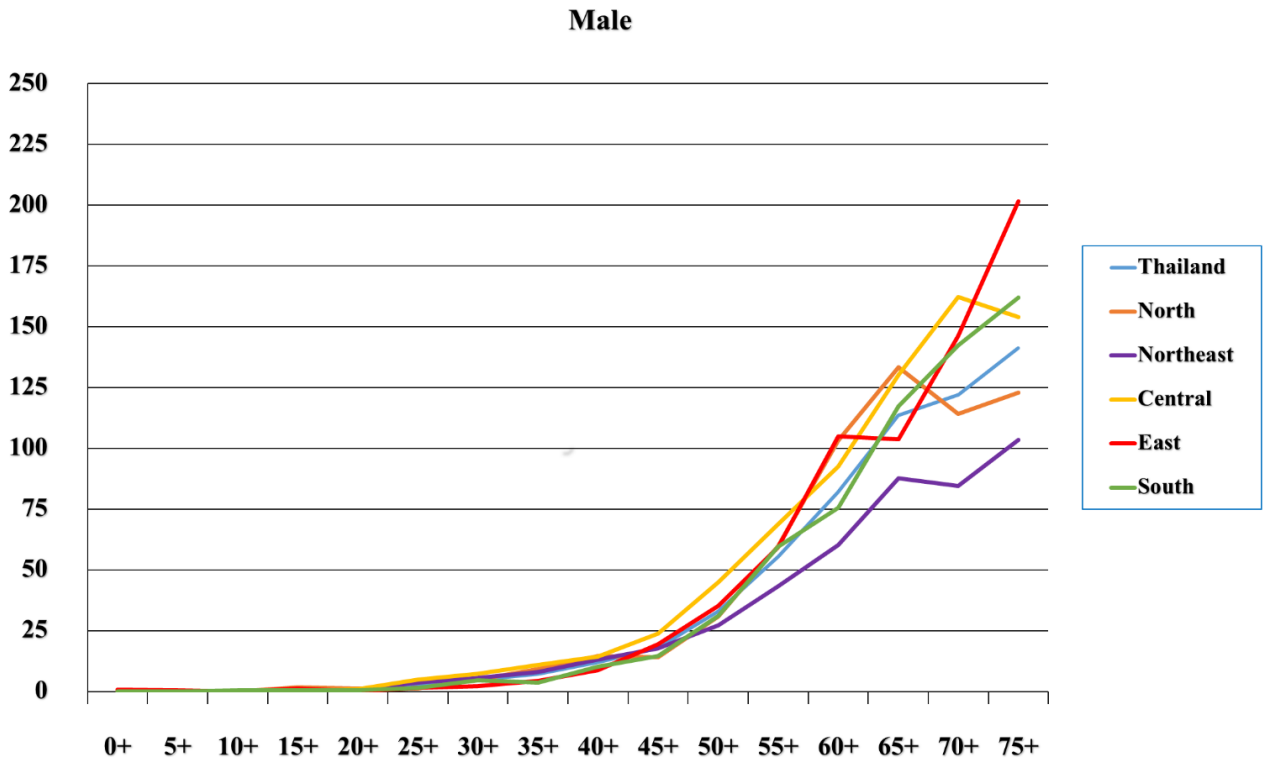


## 2.7 Colon and Rectum

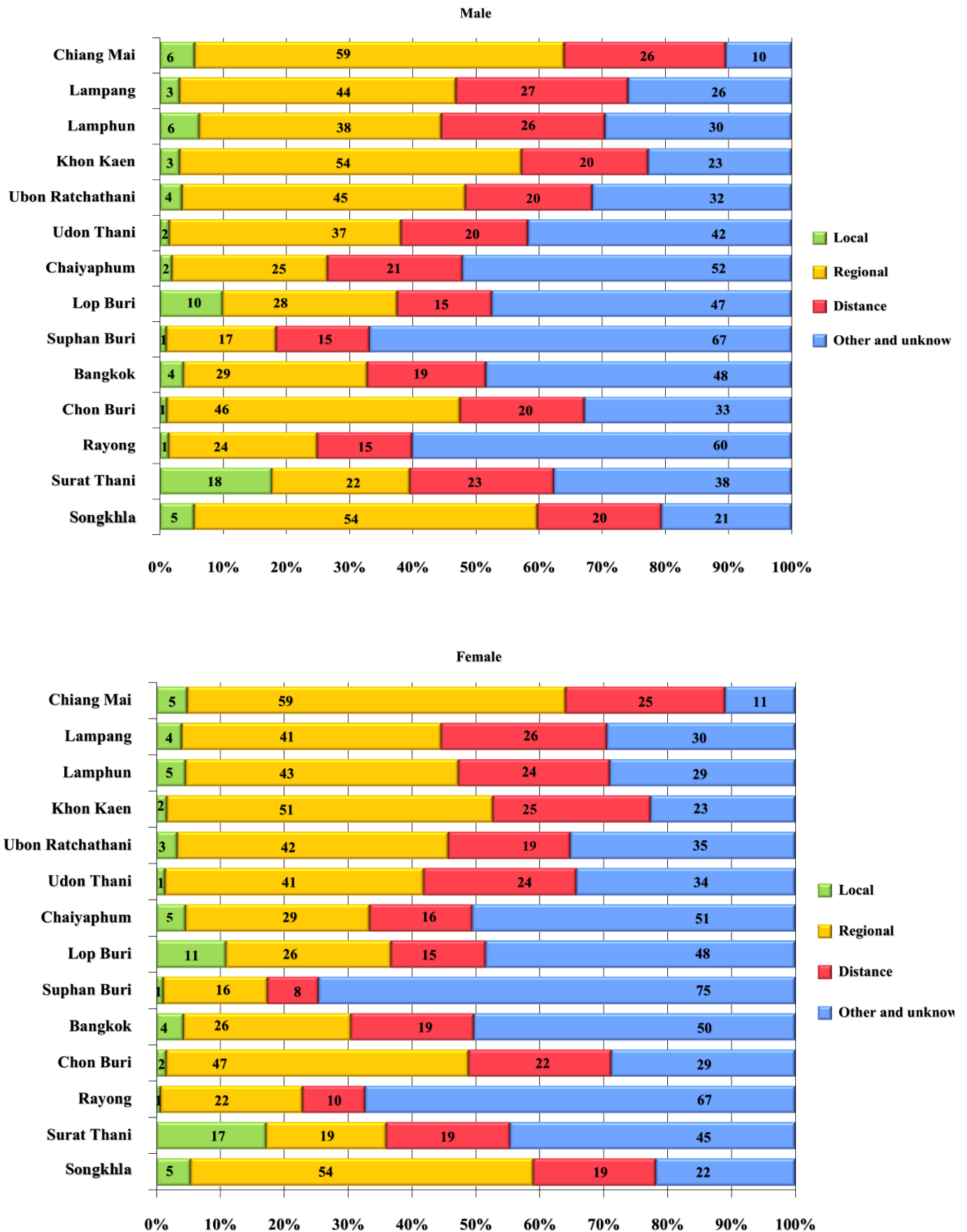
**Figure 2.7.1** Colon and rectum cancer in different regions, mean annual ASR per 100,000 (2016-2018)



**Figure 2.7.2** Age - specific incidence rates of colon and rectum cancer, mean annual rate per 100,000 (2016-2018)

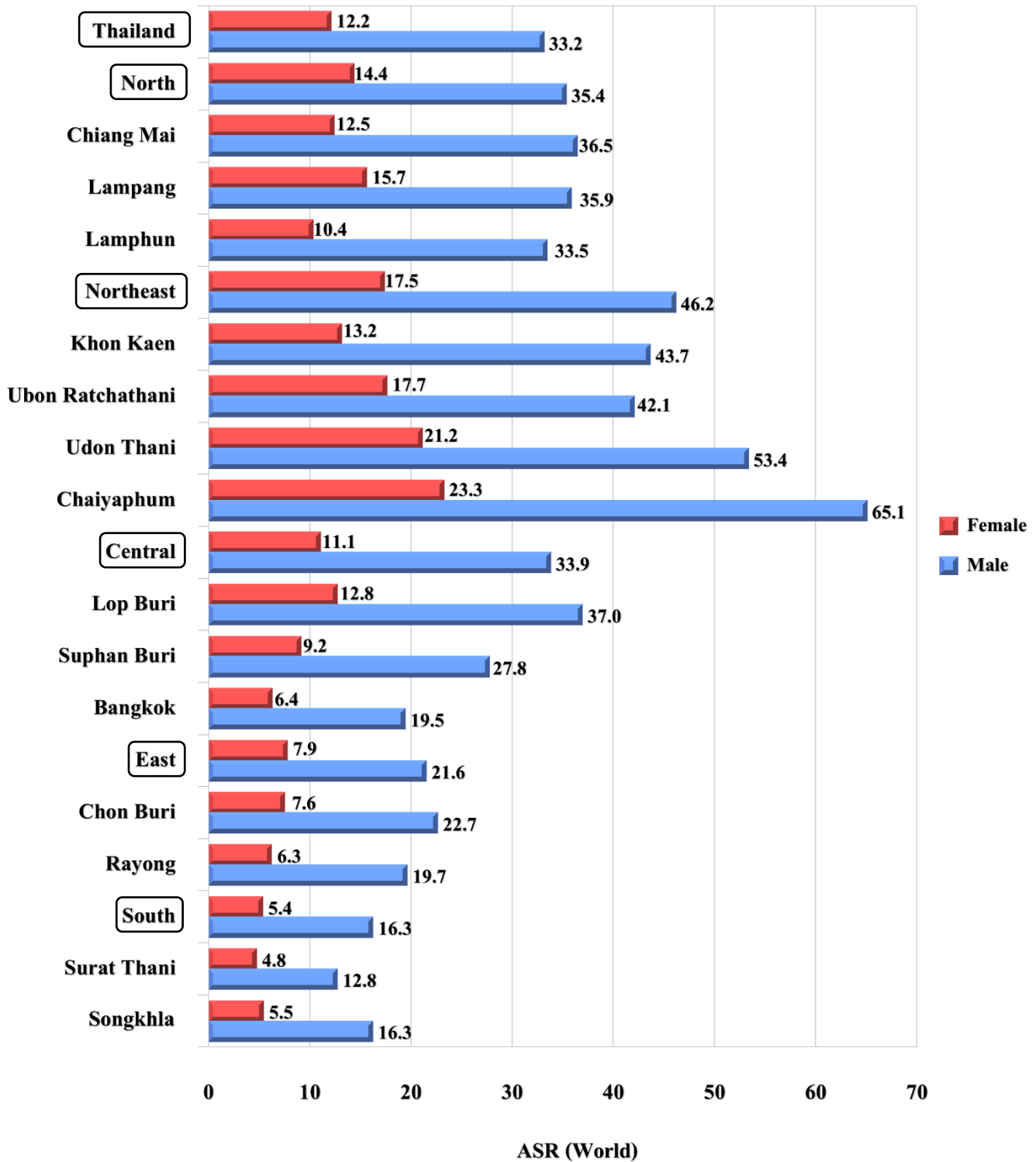


**Figure 2.7.3** Stage distribution of colon and rectum cancer (2016-2018)

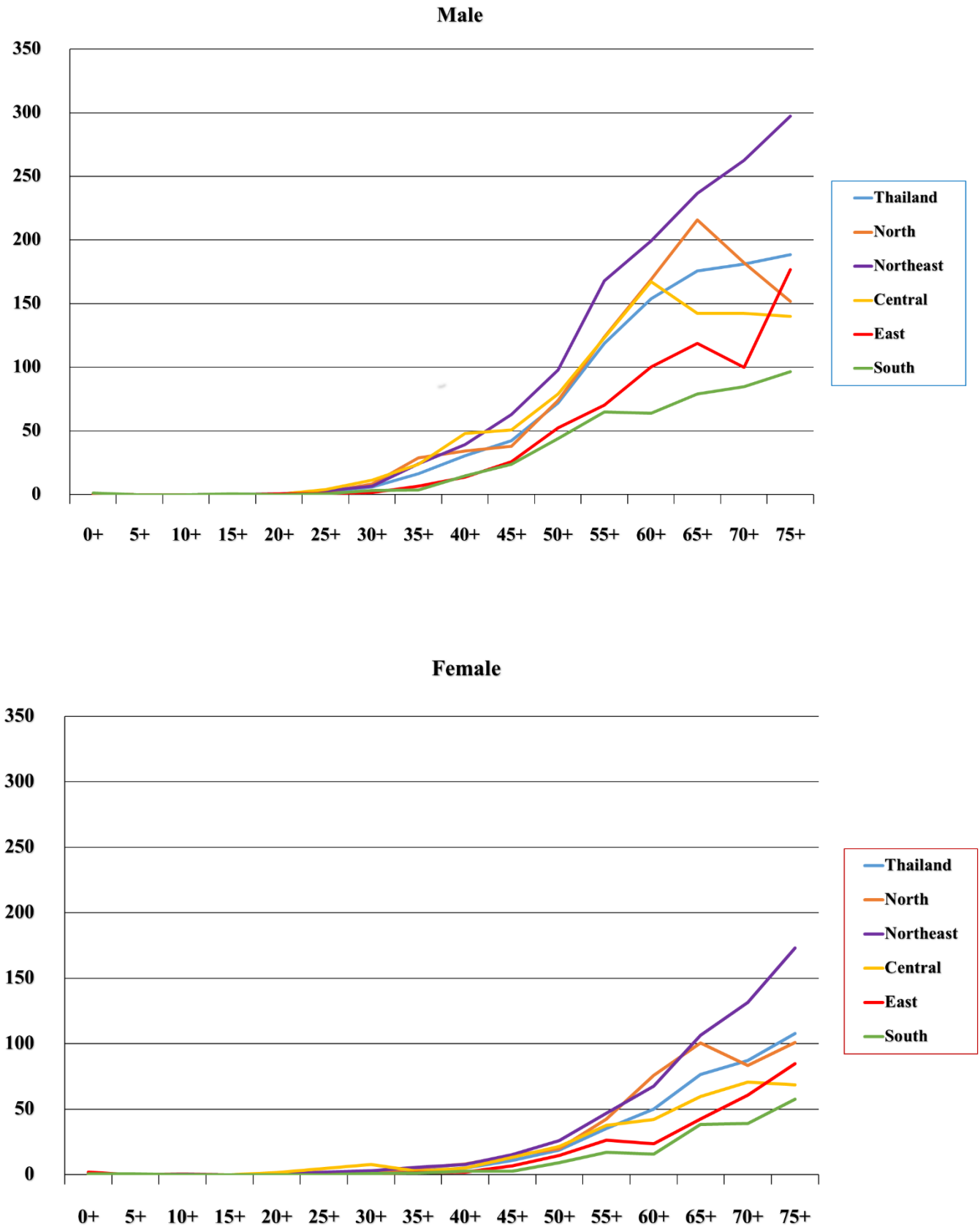


## 2.8 Liver and bile duct

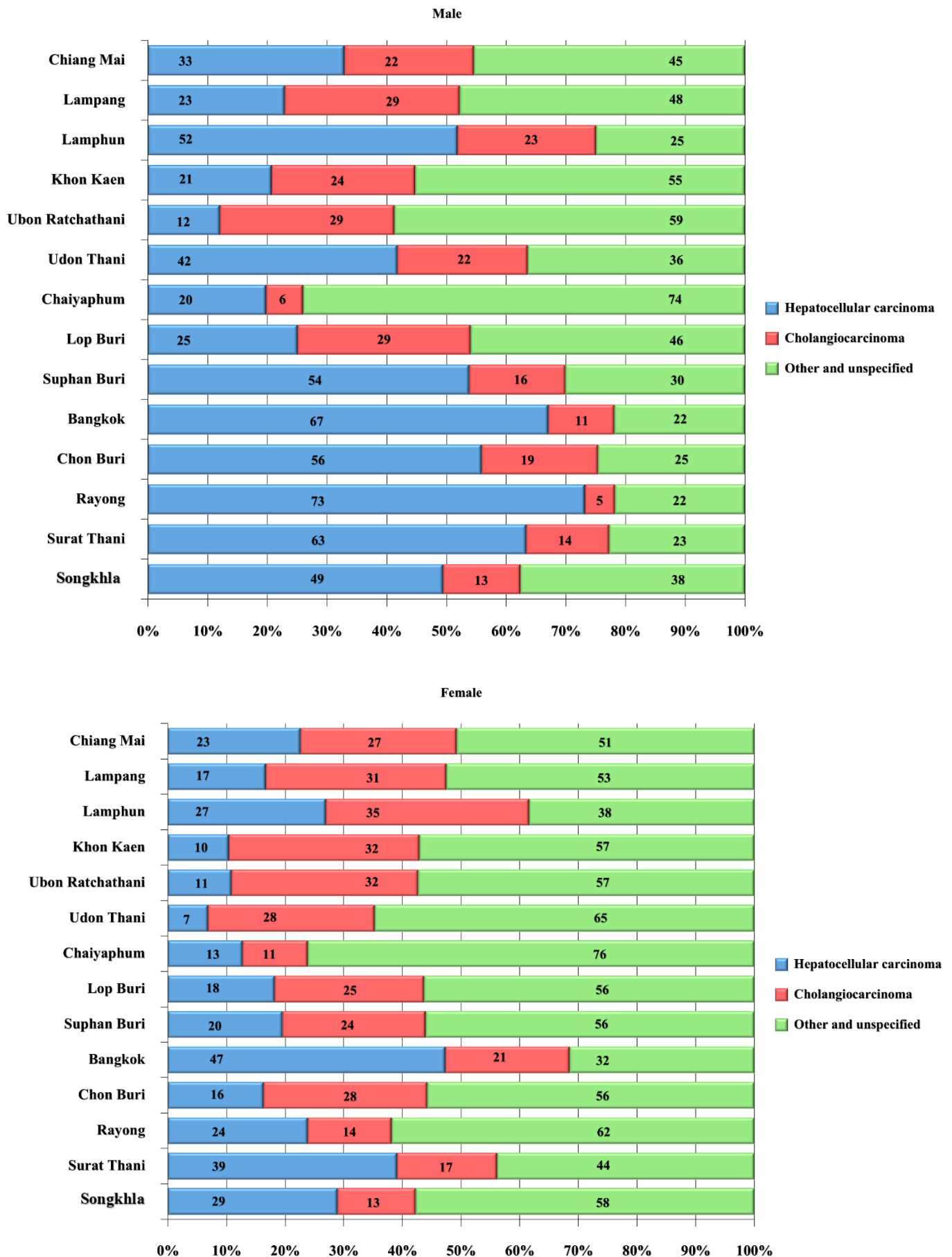
**Figure 2.8.1** Liver and bile duct cancer in different regions, mean annual ASR per 100,000 (2016-2018)



**Figure 2.8.2** Age - specific incidence rates of liver and bile duct cancer, mean annual rate per 100,000 (2016-2018)

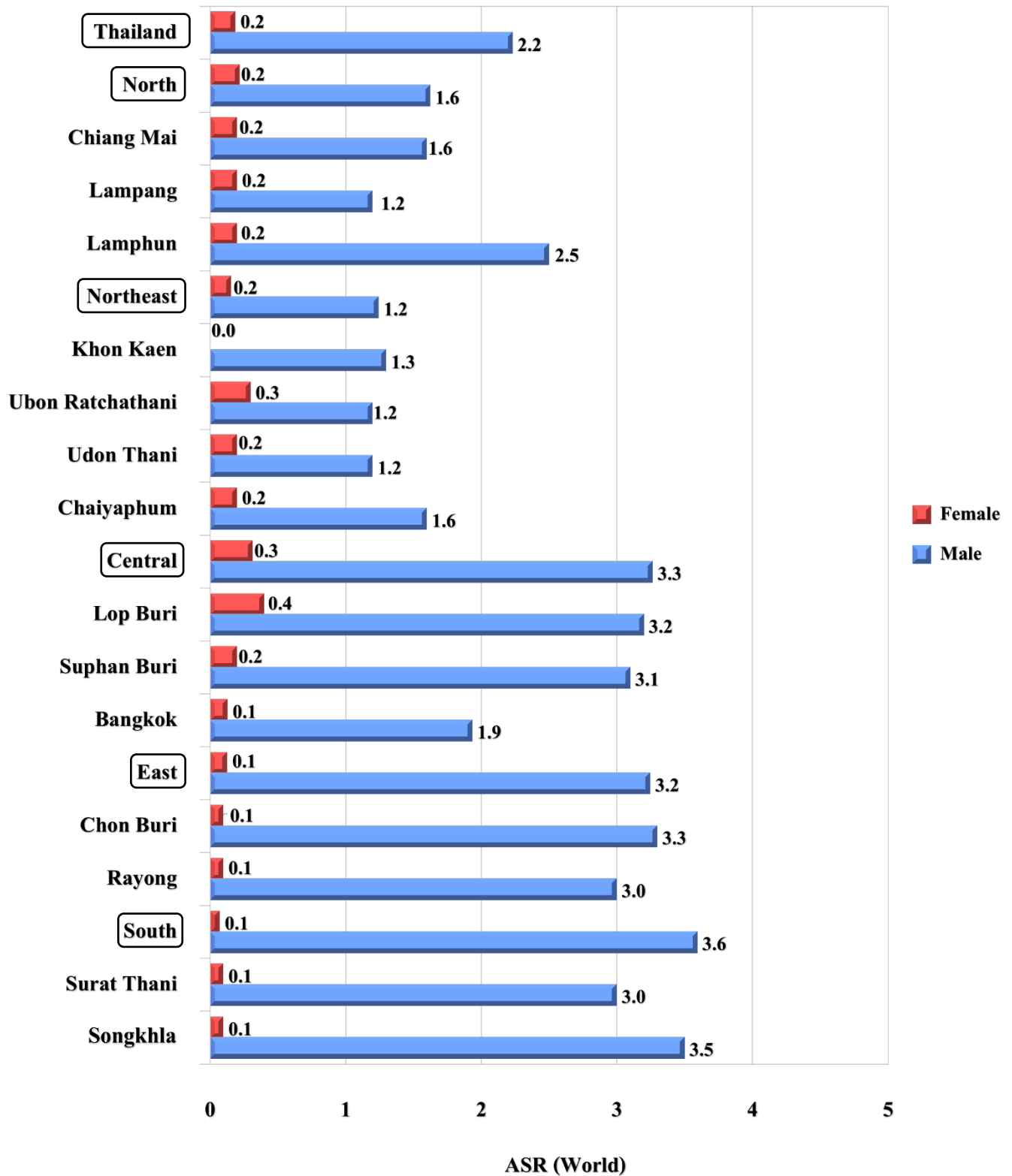


**Figure 2.8.3** Histological types of liver and bile duct cancer (2016-2018)

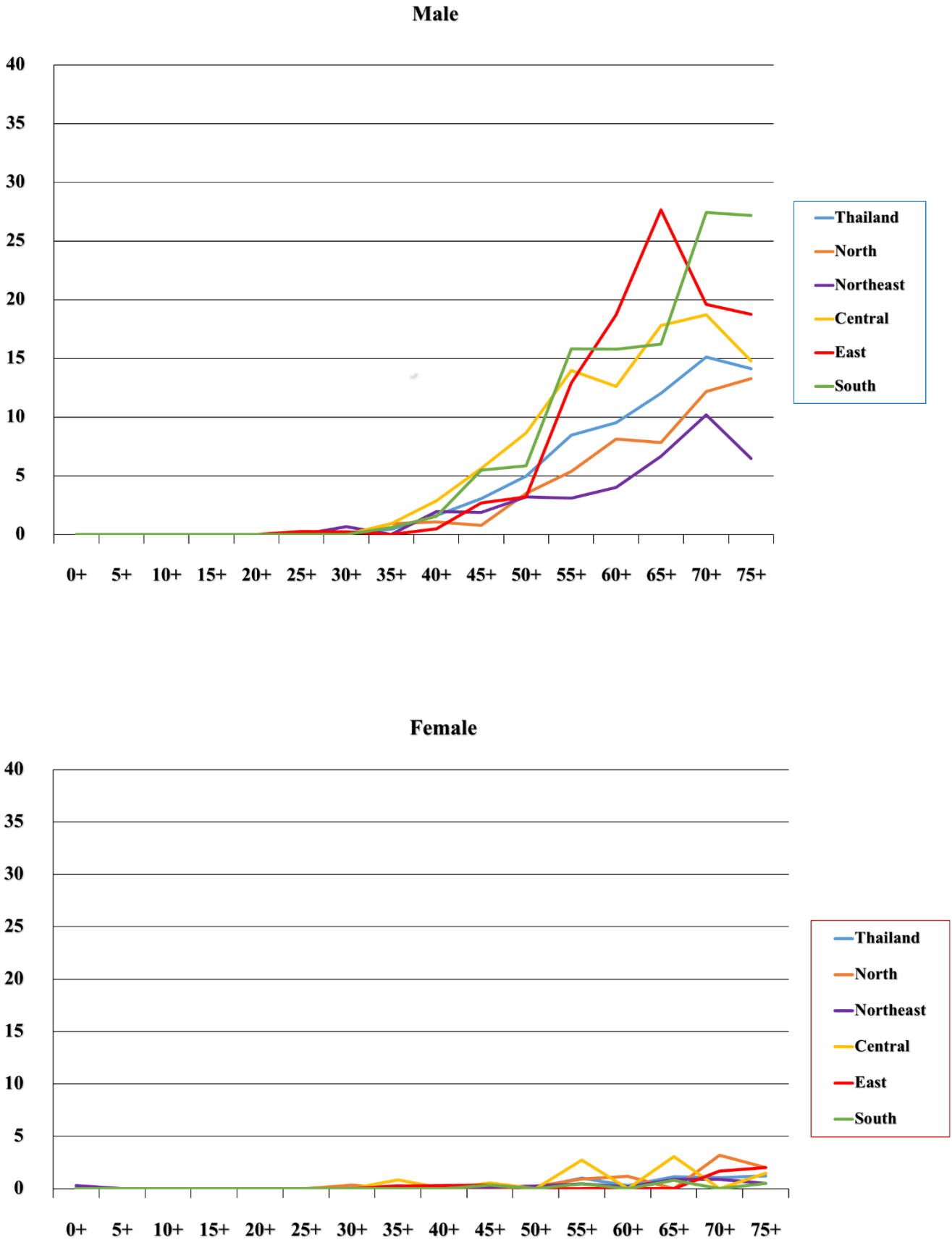


## 2.9 Larynx

**Figure 2.9.1** Larynx cancer in different regions, mean annual ASR per 100,000 (2016-2018)

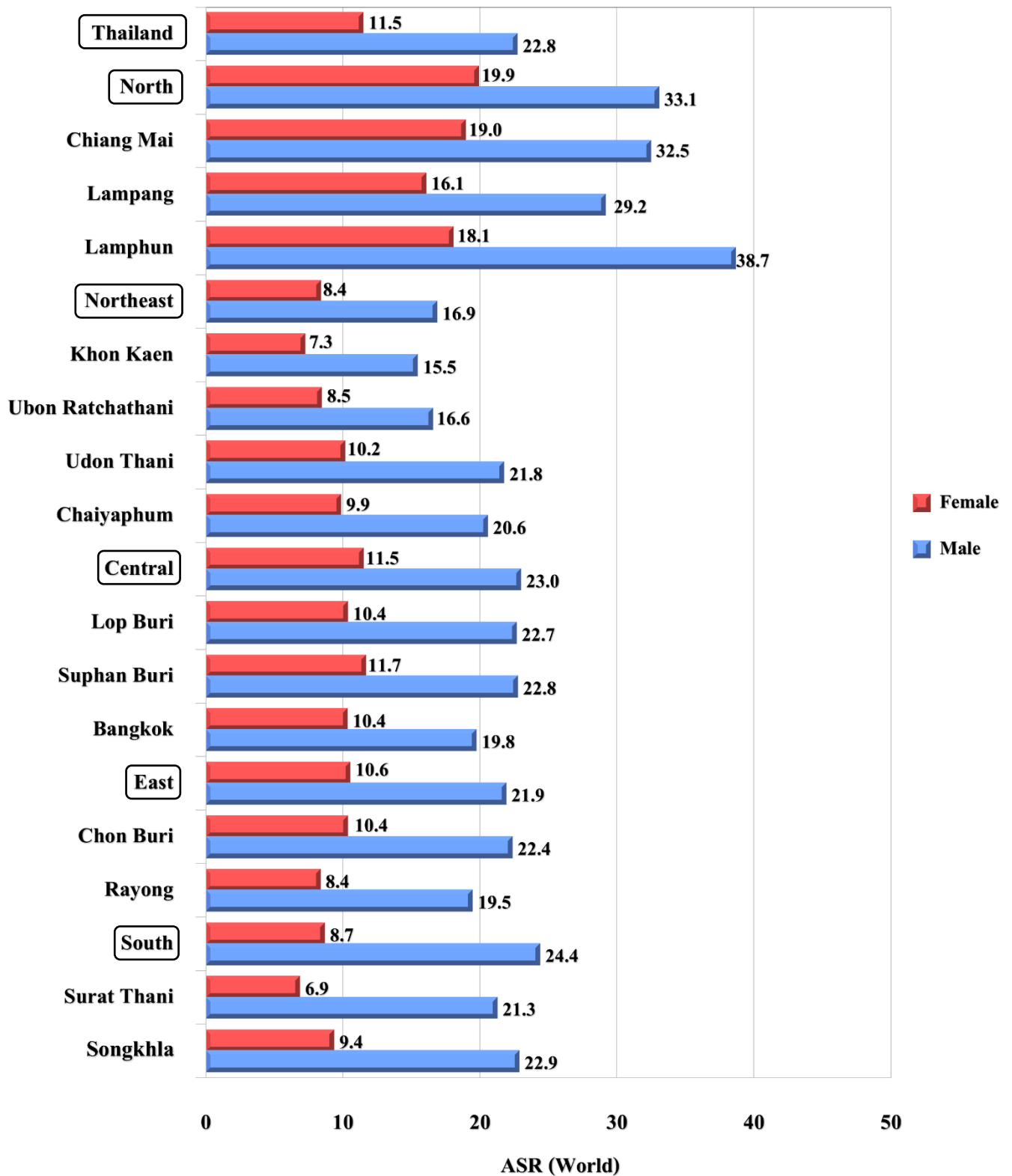


**Figure 2.9.2** Age - specific incidence rates of larynx cancer, mean annual rate per 100,000 (2016-2018)

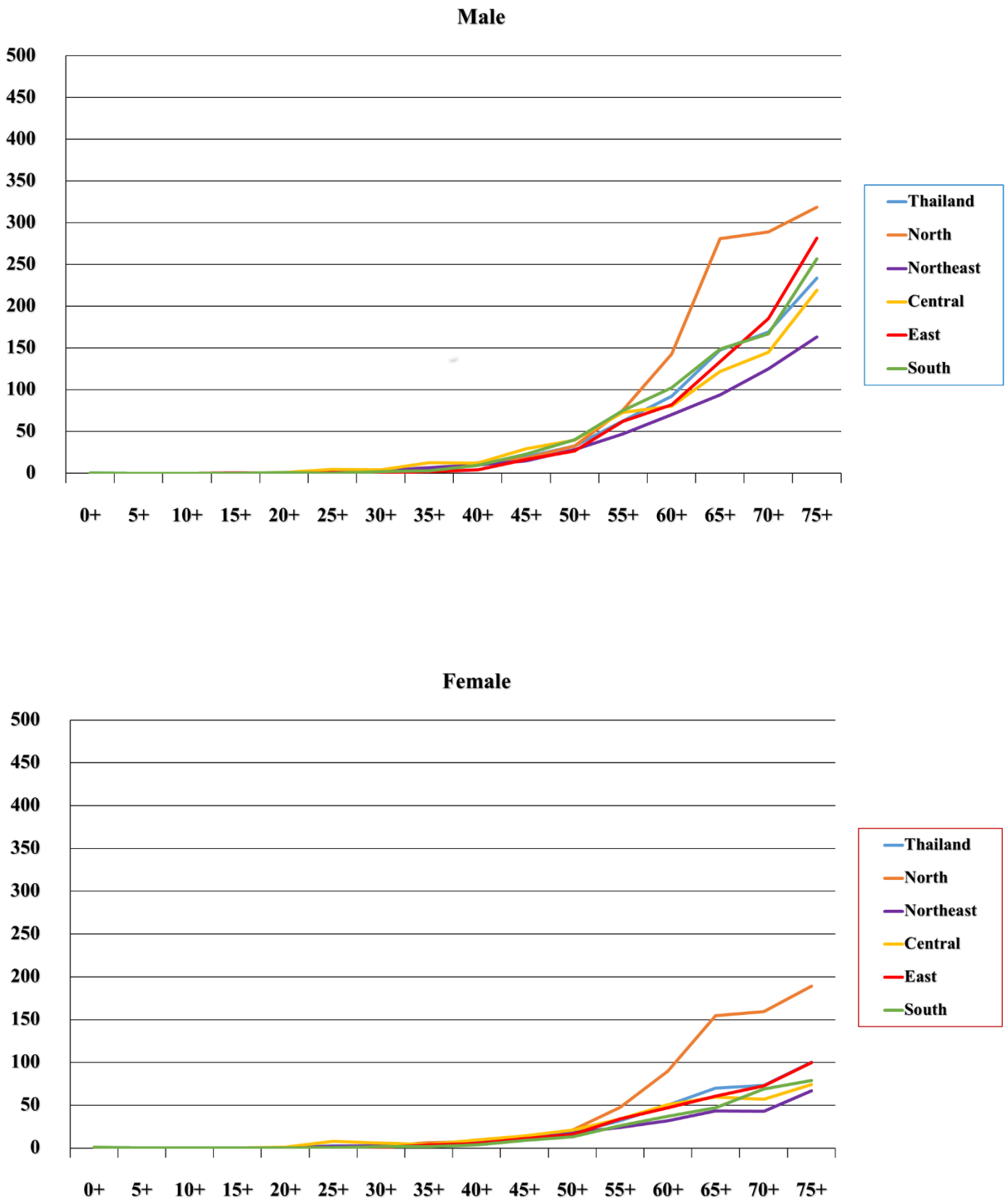


## 2.10 Trachea, bronchus and lung

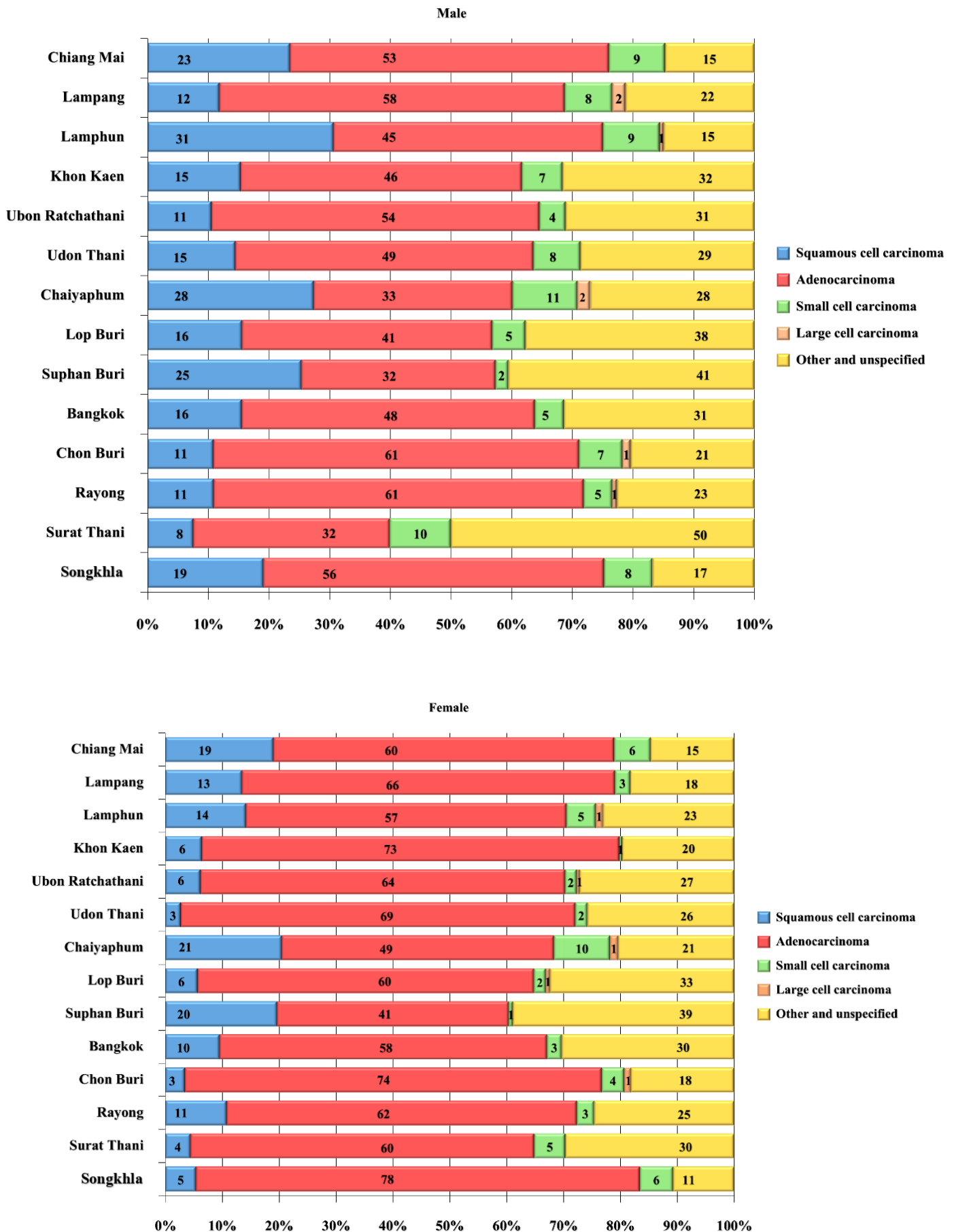
**Figure 2.10.1** Trachea, bronchus and lung cancer in different regions, mean annual ASR per 100,000 (2016-2018)



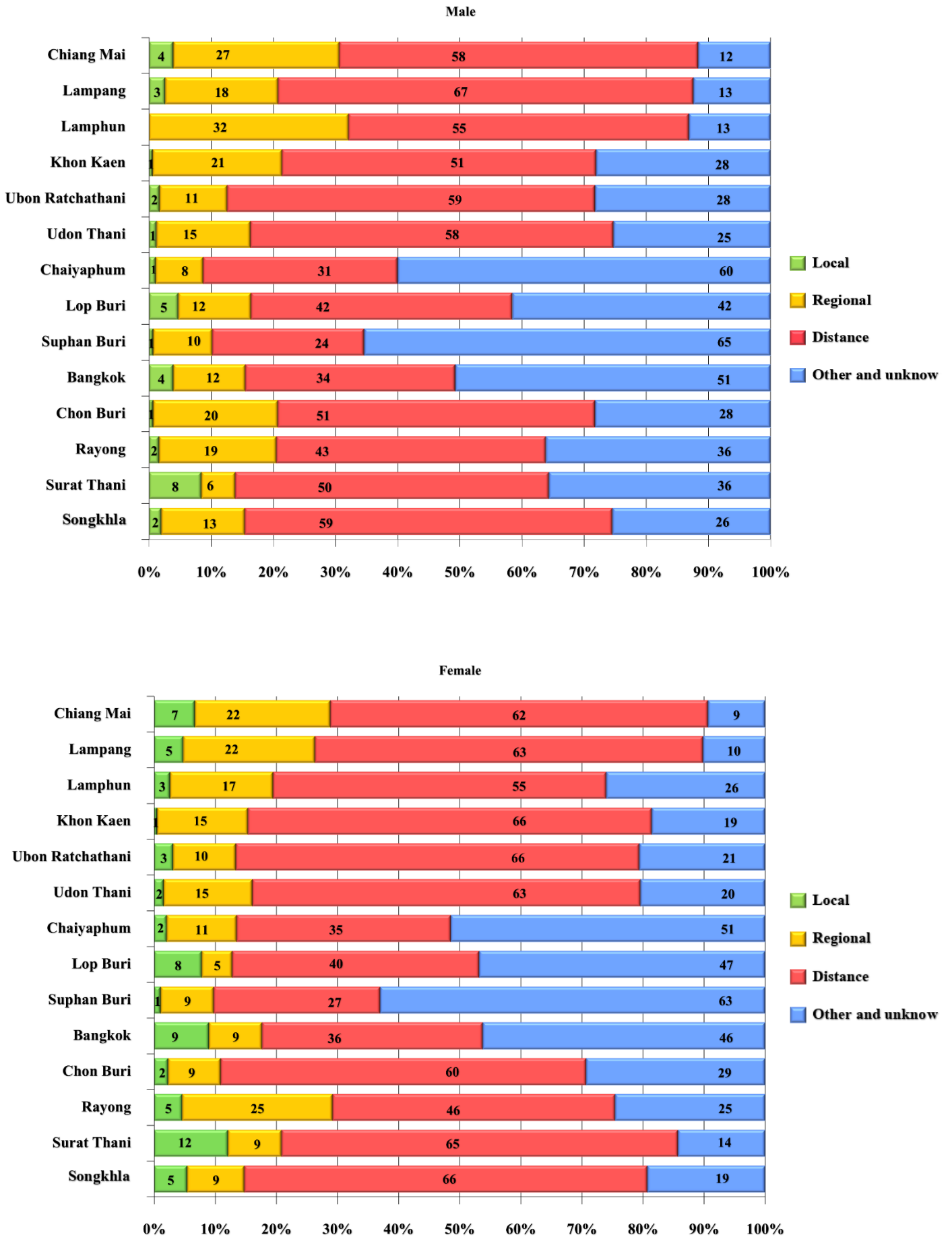
**Figure 2.10.2** Age - specific incidence rates of trachea, bronchus and lung cancer, mean annual rate per 100,000 (2016-2018)



**Figure 2.10.3** Histological types of trachea, bronchus and lung cancer (2016-2018)

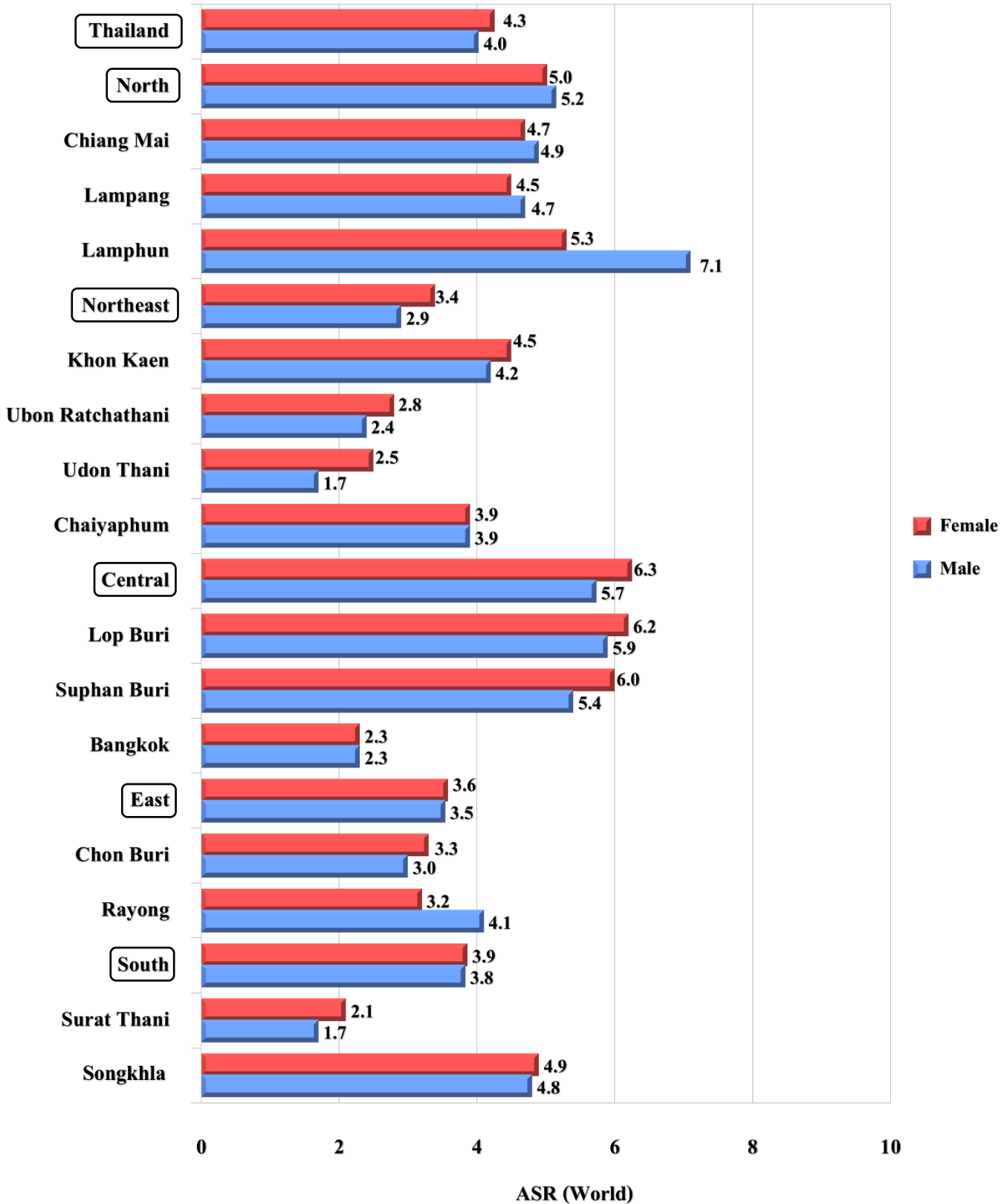


**Figure 2.10.4** Stage distribution of trachea, bronchus and lung cancer (2016-2018)



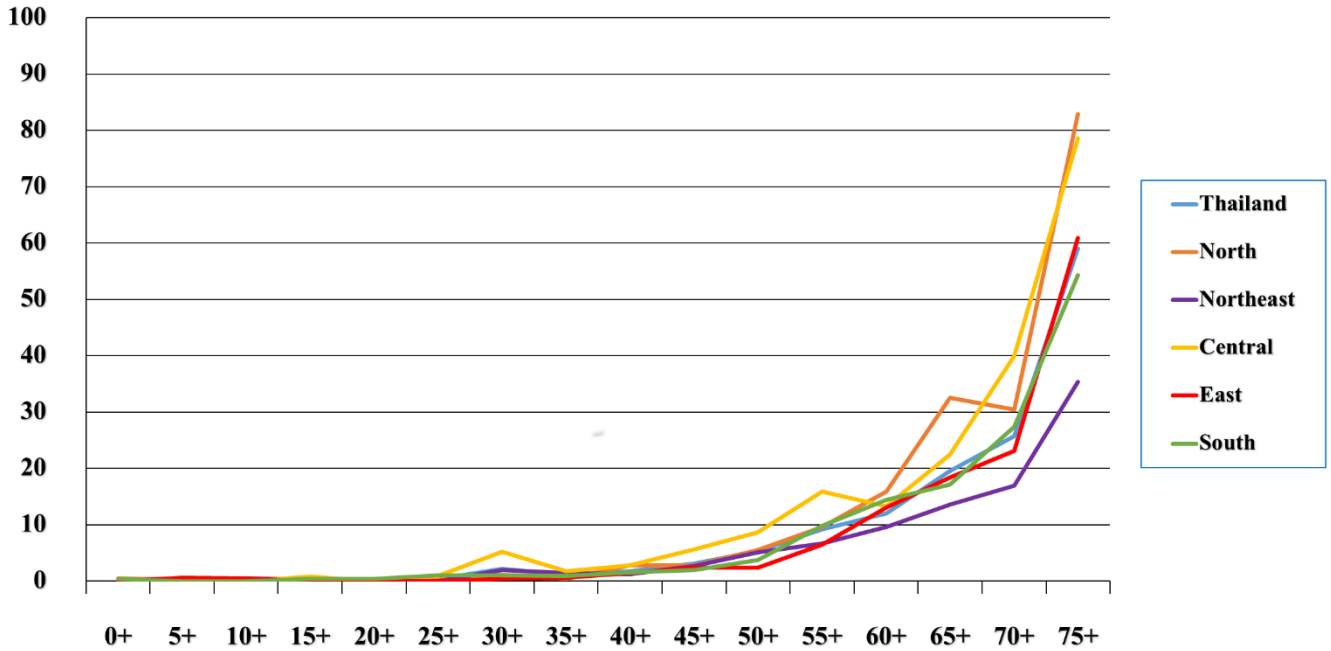
## 2.11 Skin

**Figure 2.11.1** Skin cancer in different regions, mean annual ASR per 100,000 (2016-2018)

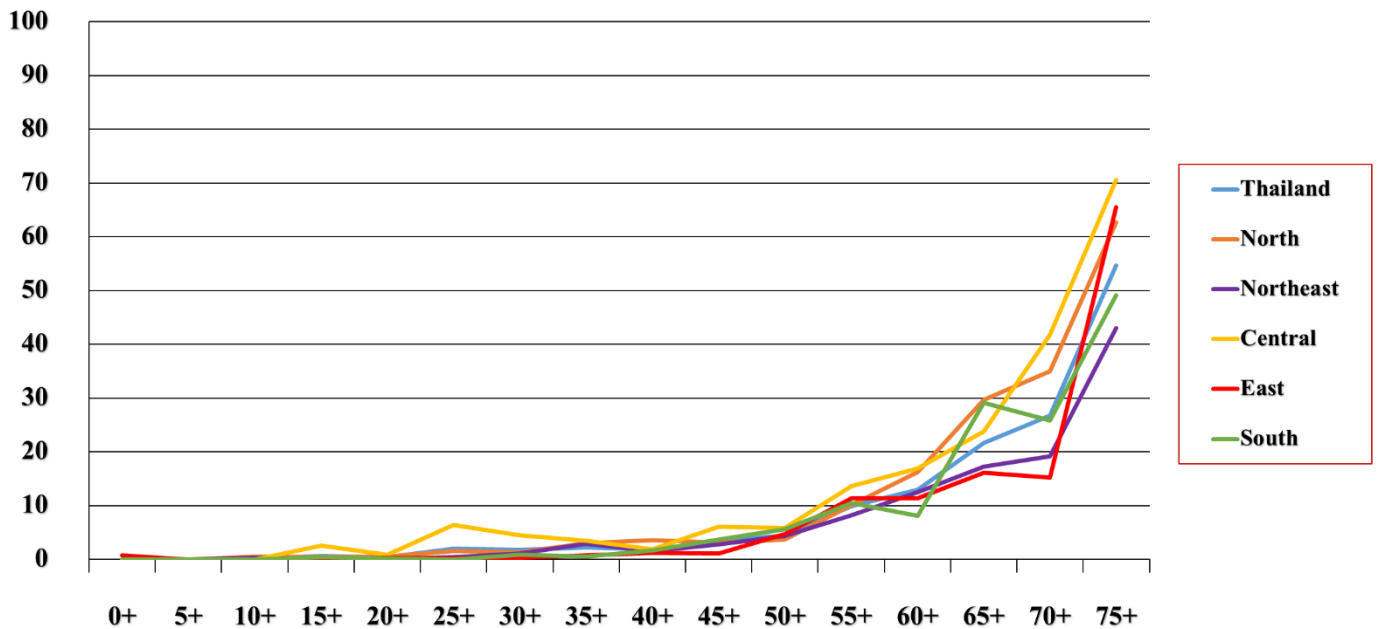


**Figure 2.11.2** Age - specific incidence rates of skin cancer, mean annual rate per 100,000 (2016-2018)

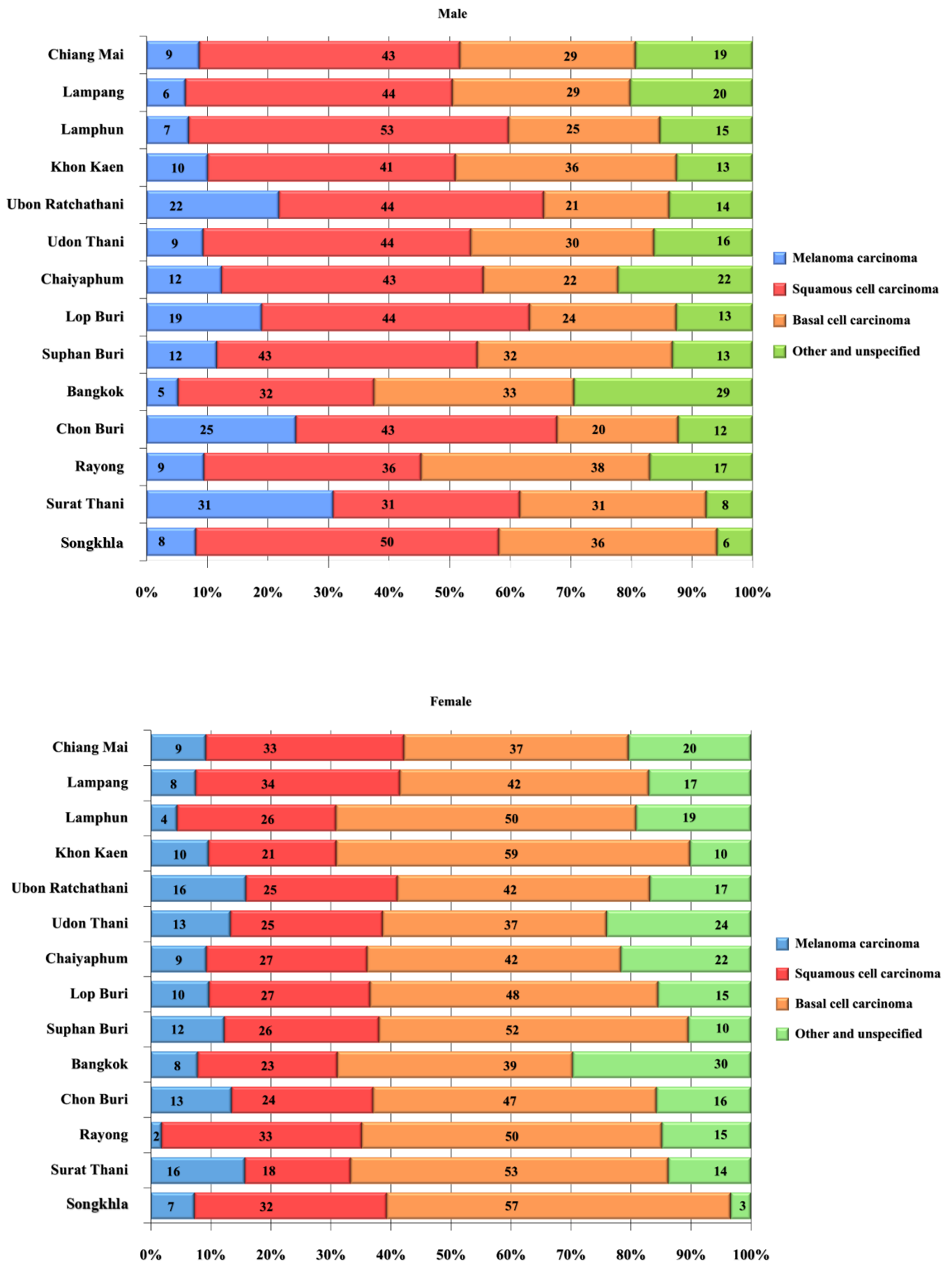
### Male



### Female

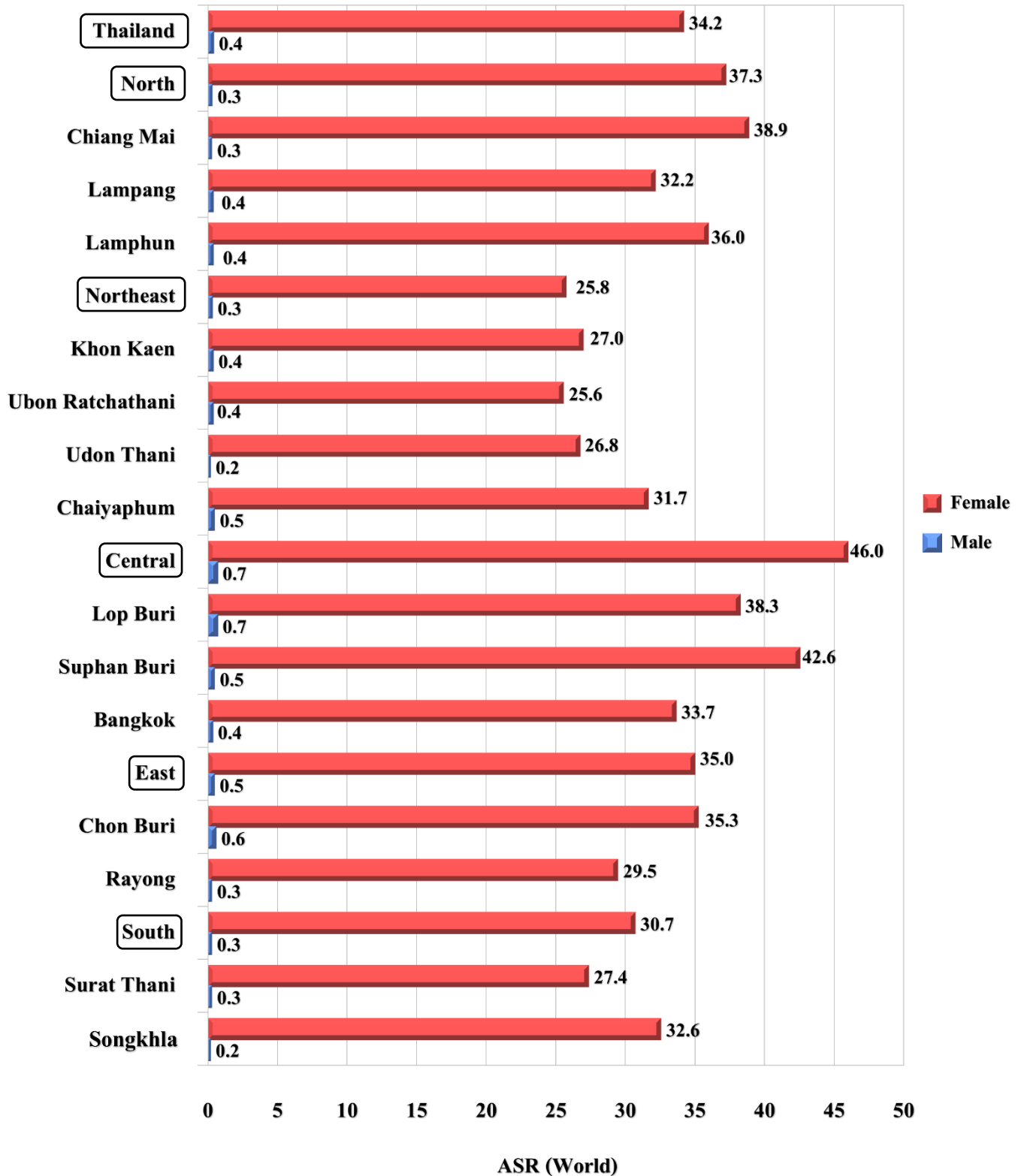


**Figure 2.11.3** Histological types of skin cancer (2016-2018)

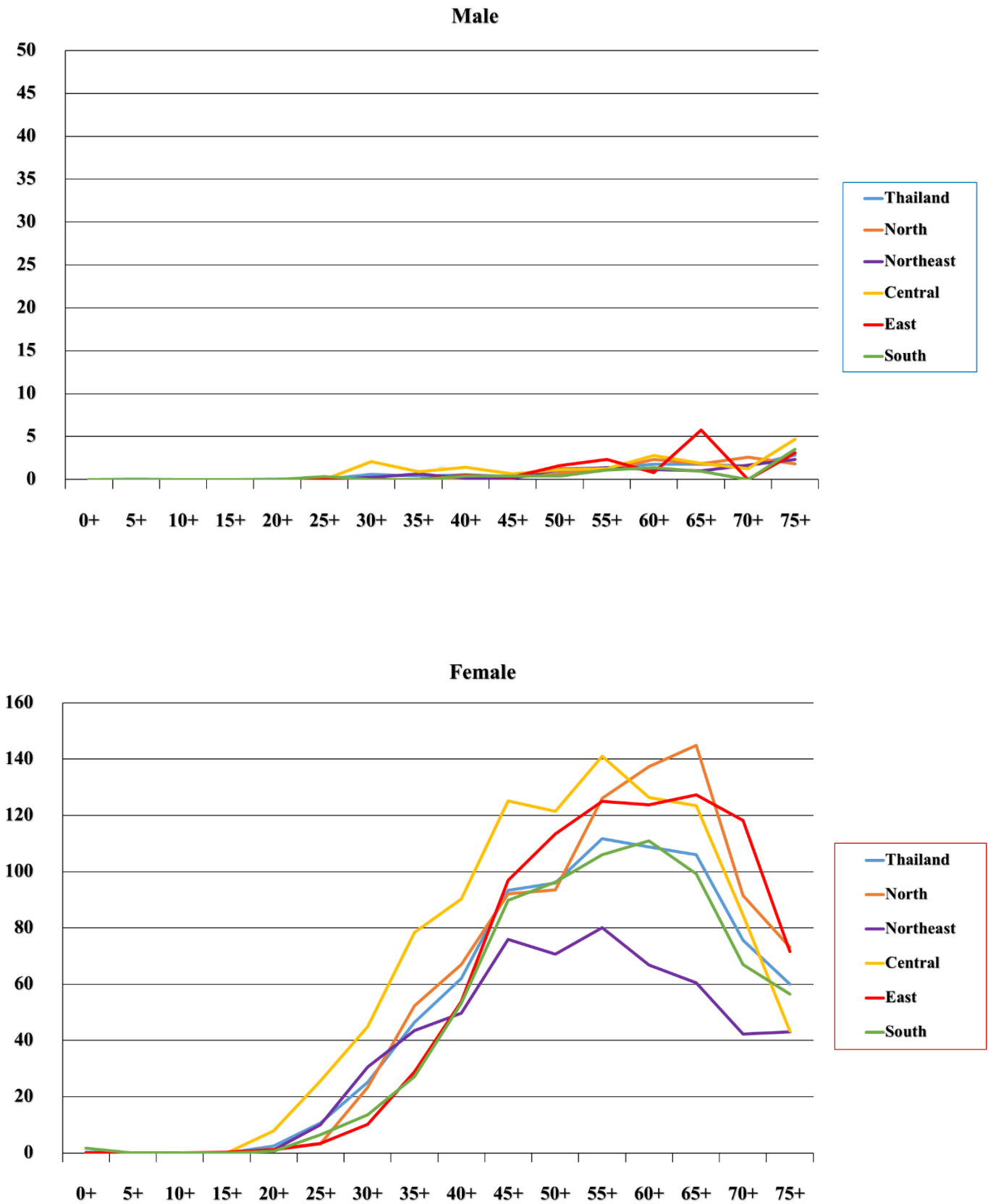


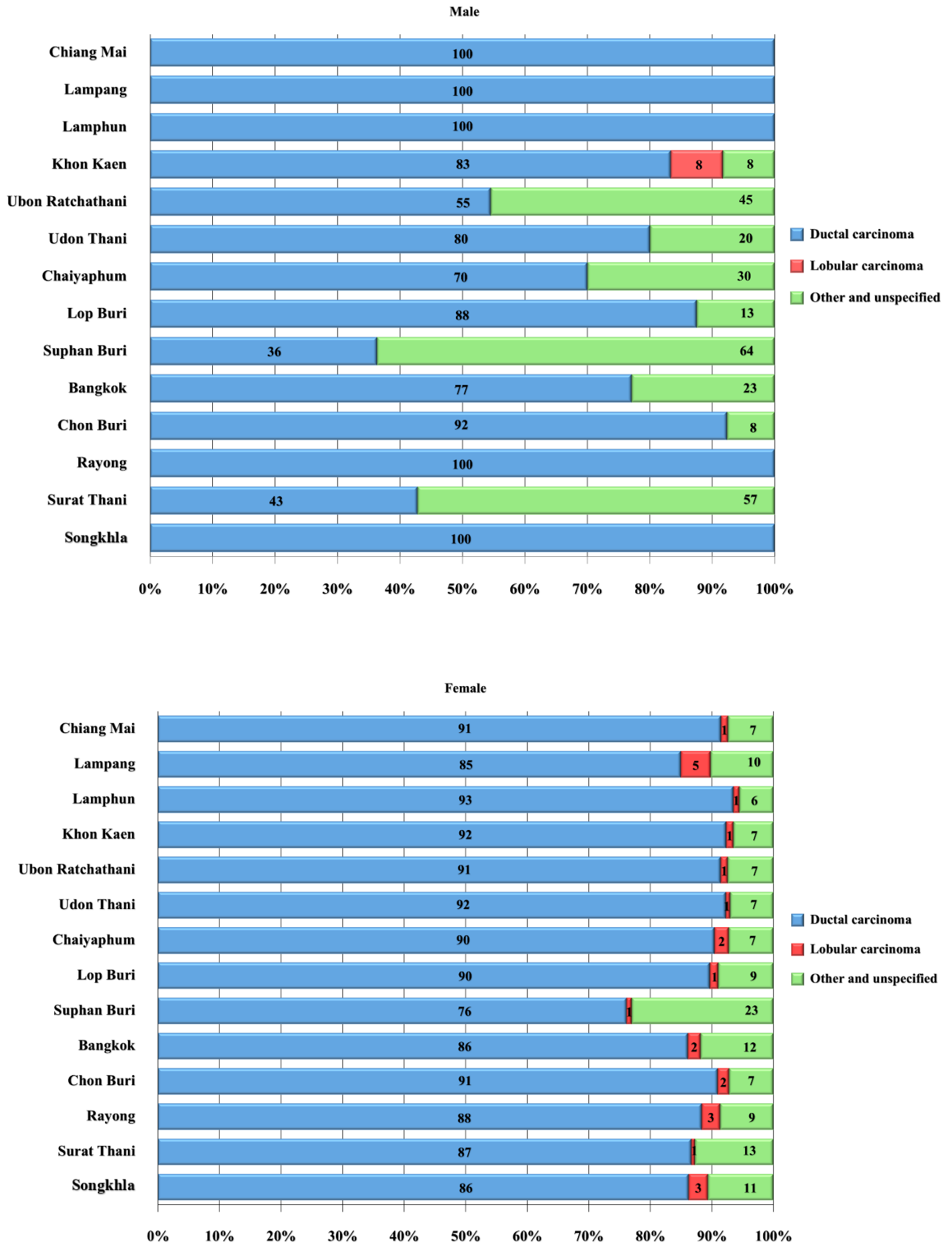
## 2.12 Breast

**Figure 2.12.1** Breast cancer in different regions, mean annual ASR per 100,000 (2016-2018)

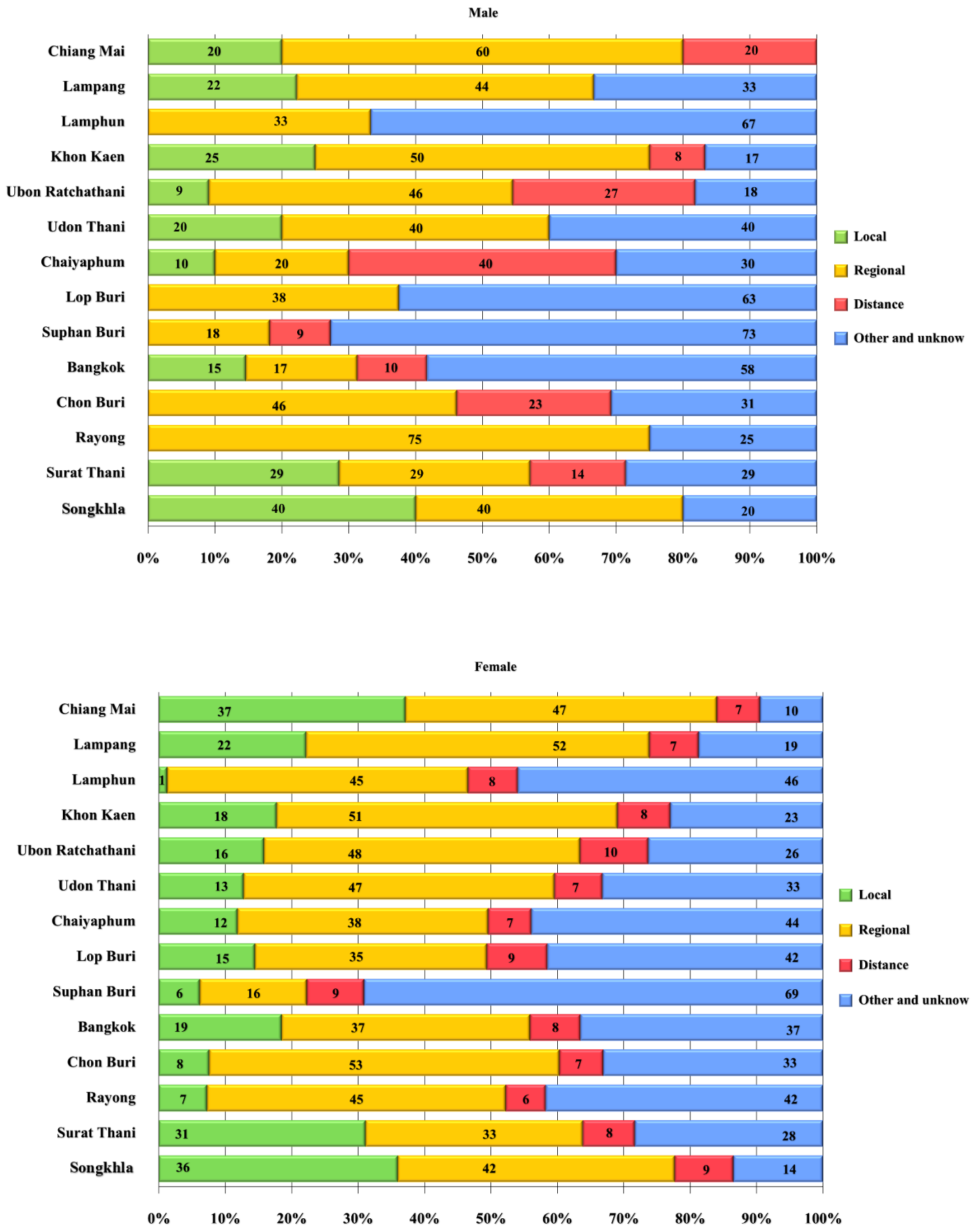


**Figure 2.12.2** Age - specific incidence rates of breast cancer, mean annual rate per 100,000 (2016-2018)



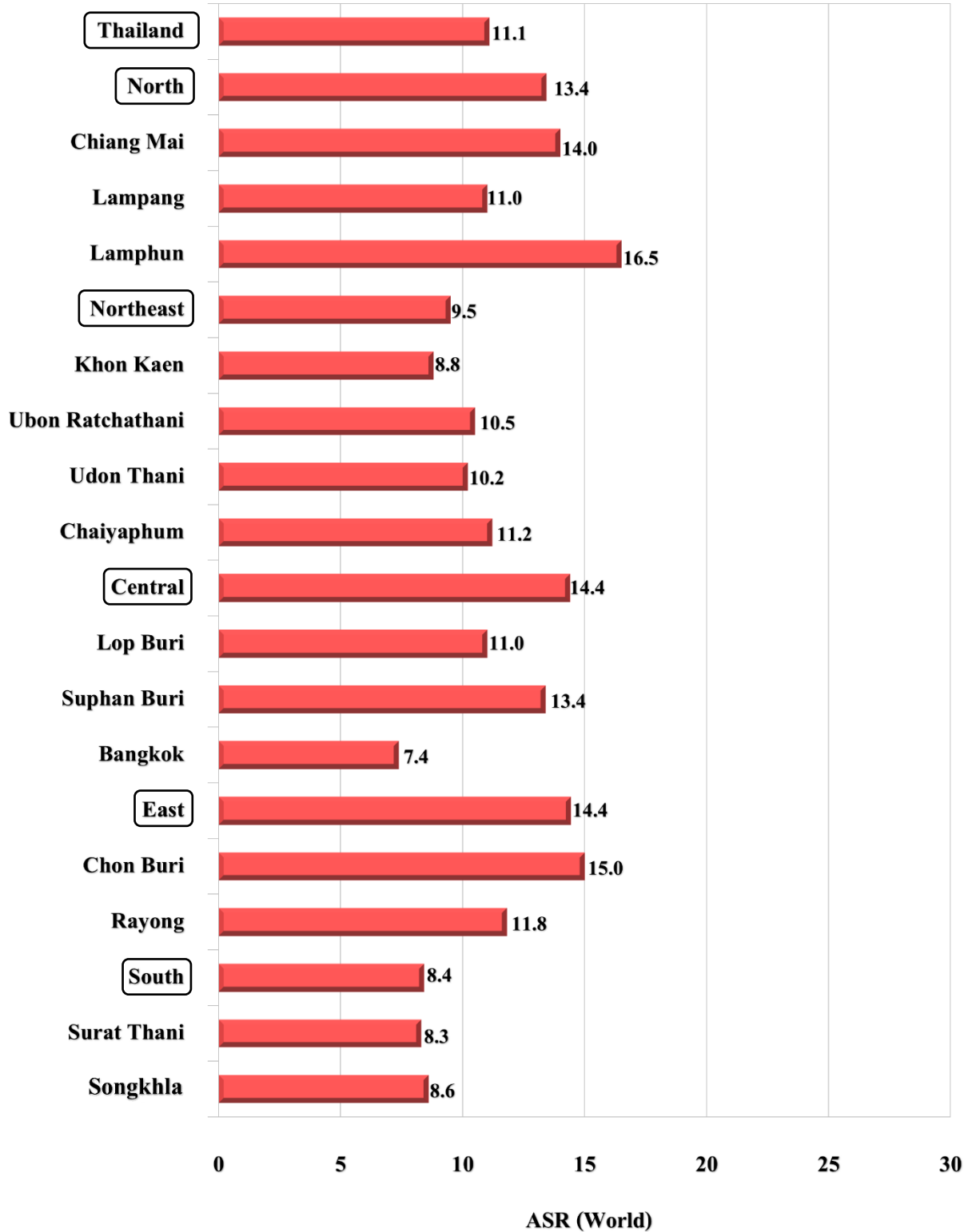
**Figure 2.12.3** Histological types of breast cancer (2016-2018)

**Figure 2.12.4** Stage distribution of breast cancer (2016-2018)

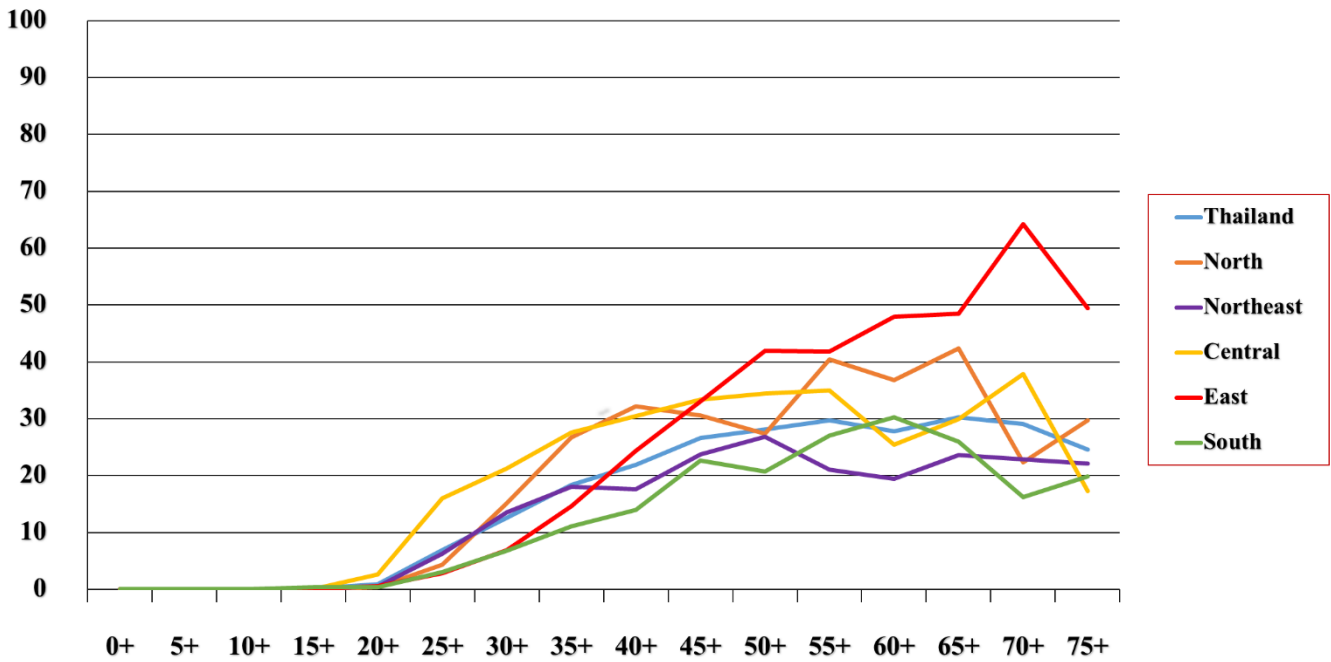


## 2.13 Cervix uteri

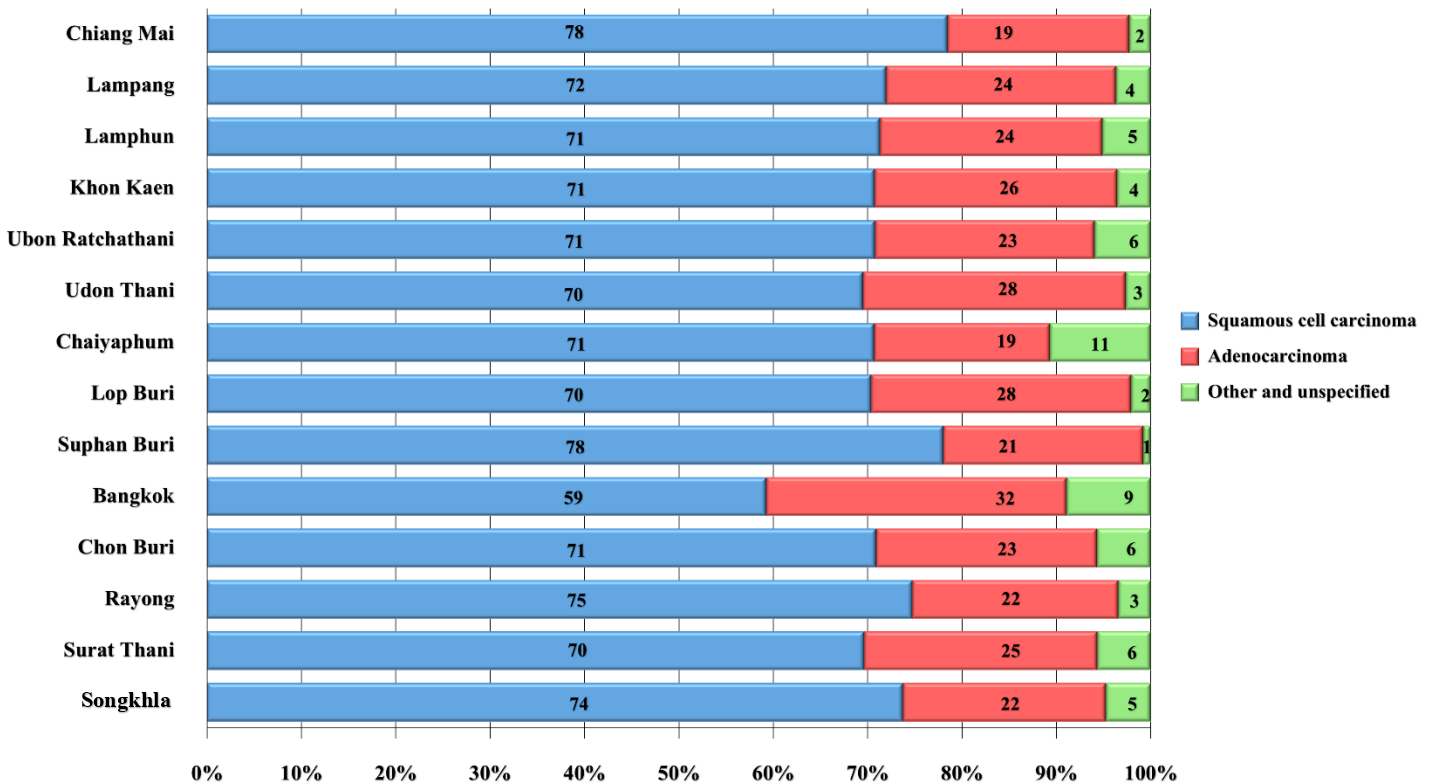
**Figure 2.13.1** Cervical cancer in different regions, mean annual ASR per 100,000 (2016-2018)

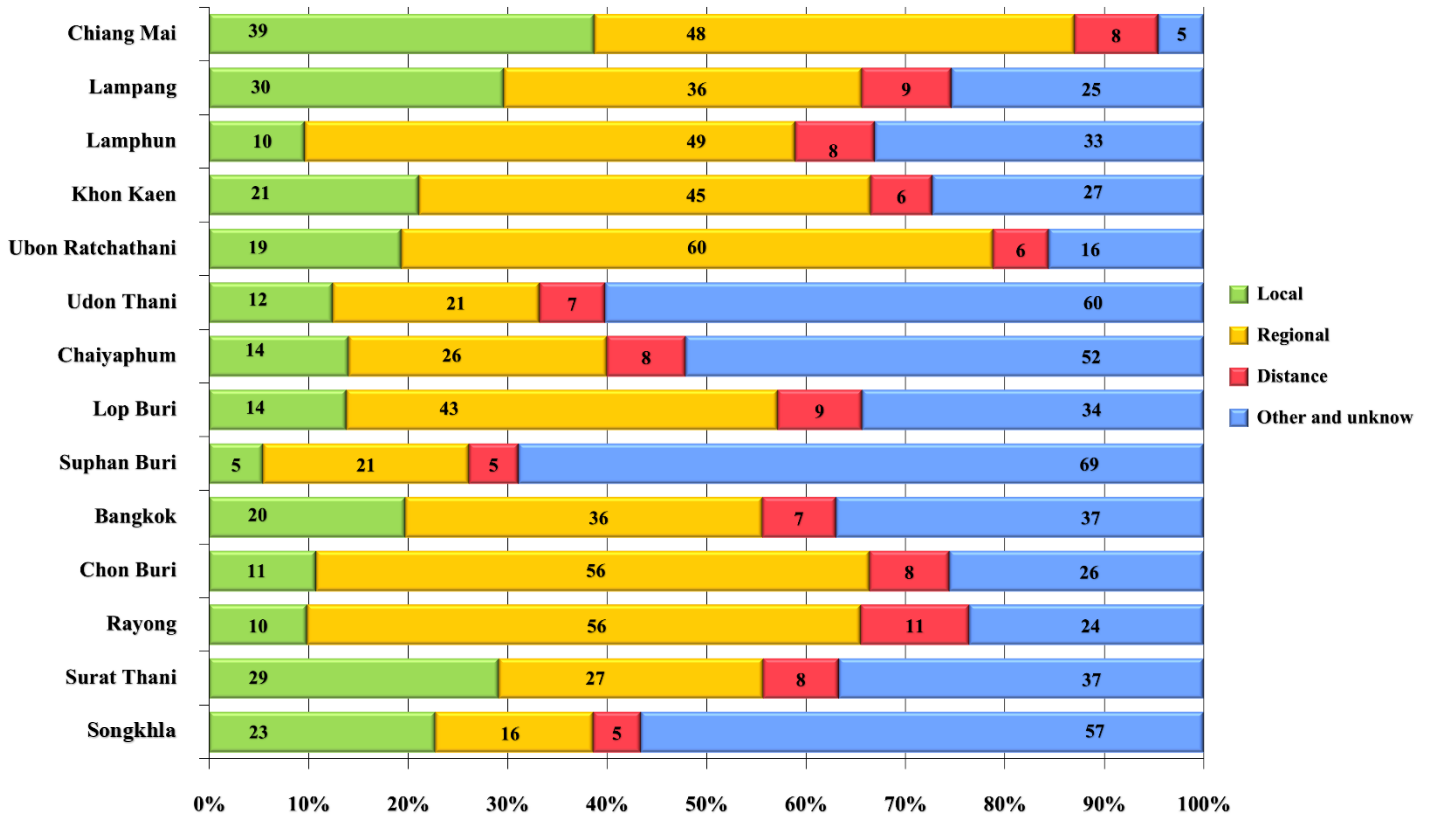


**Figure 2.13.2** Age - specific incidence rates of cervical cancer, mean annual rate per 100,000 (2016-2018)



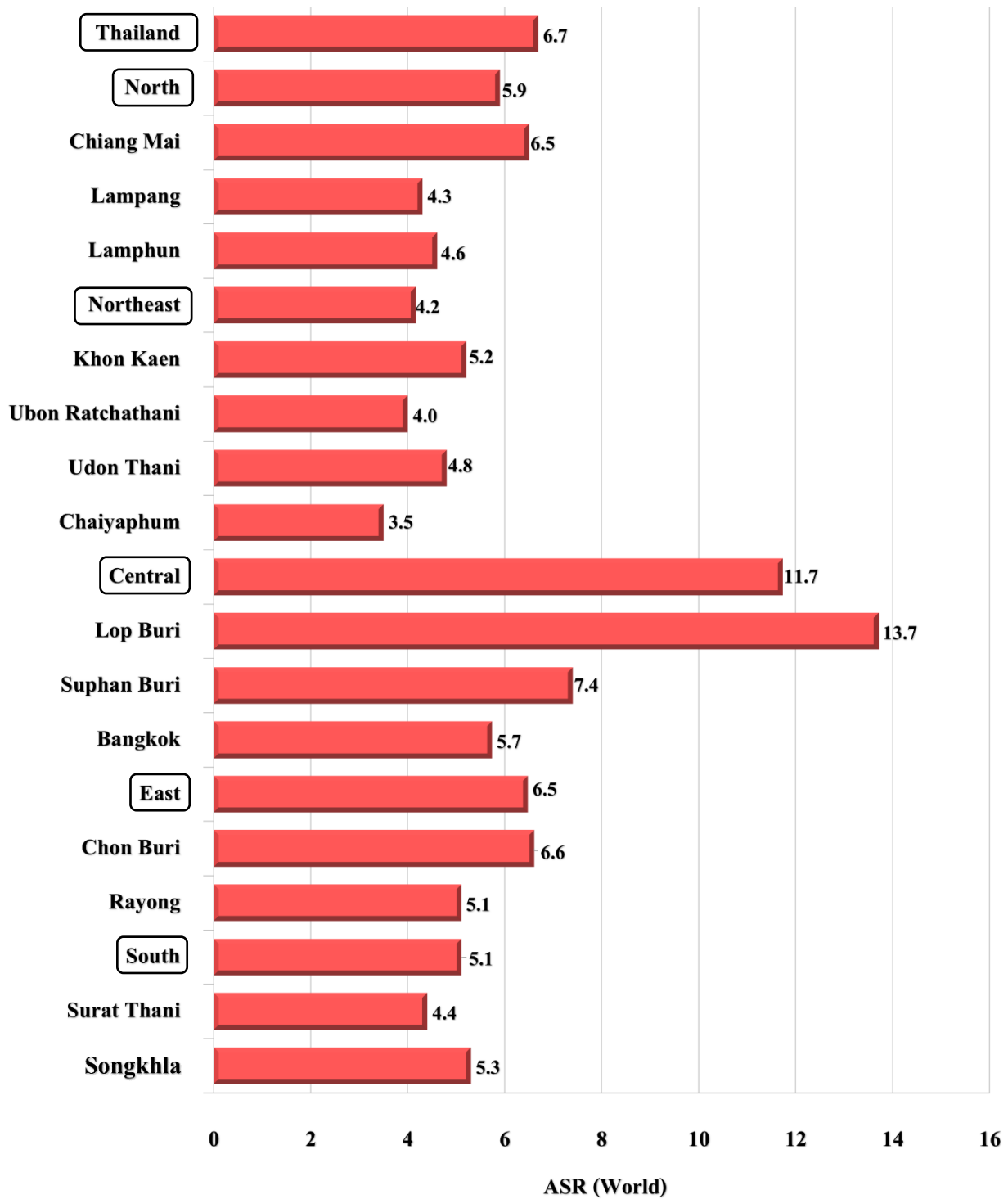
**Figure 2.13.3** Cervical cancer: percentage distribution of histological types among microscopically verified (2016-2018)



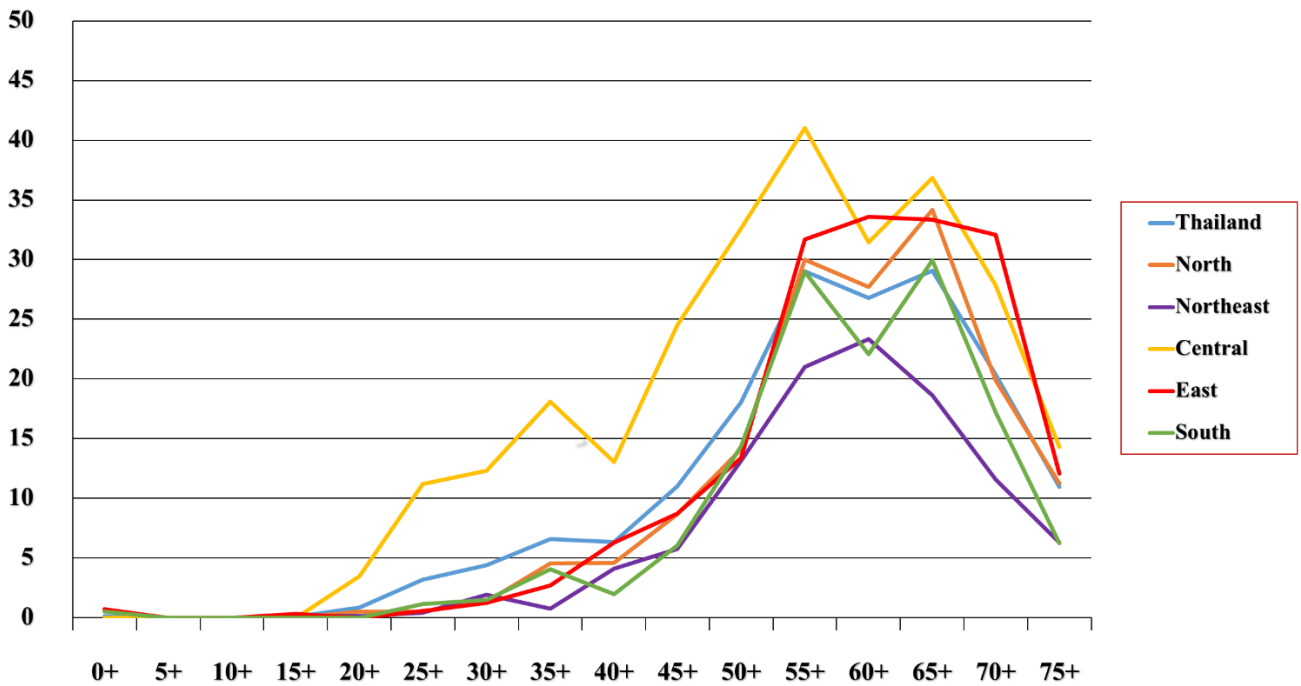
**Figure 2.13.4** Stage distribution of cervical cancer (2016-2018)

## 2.14 Corpus uteri

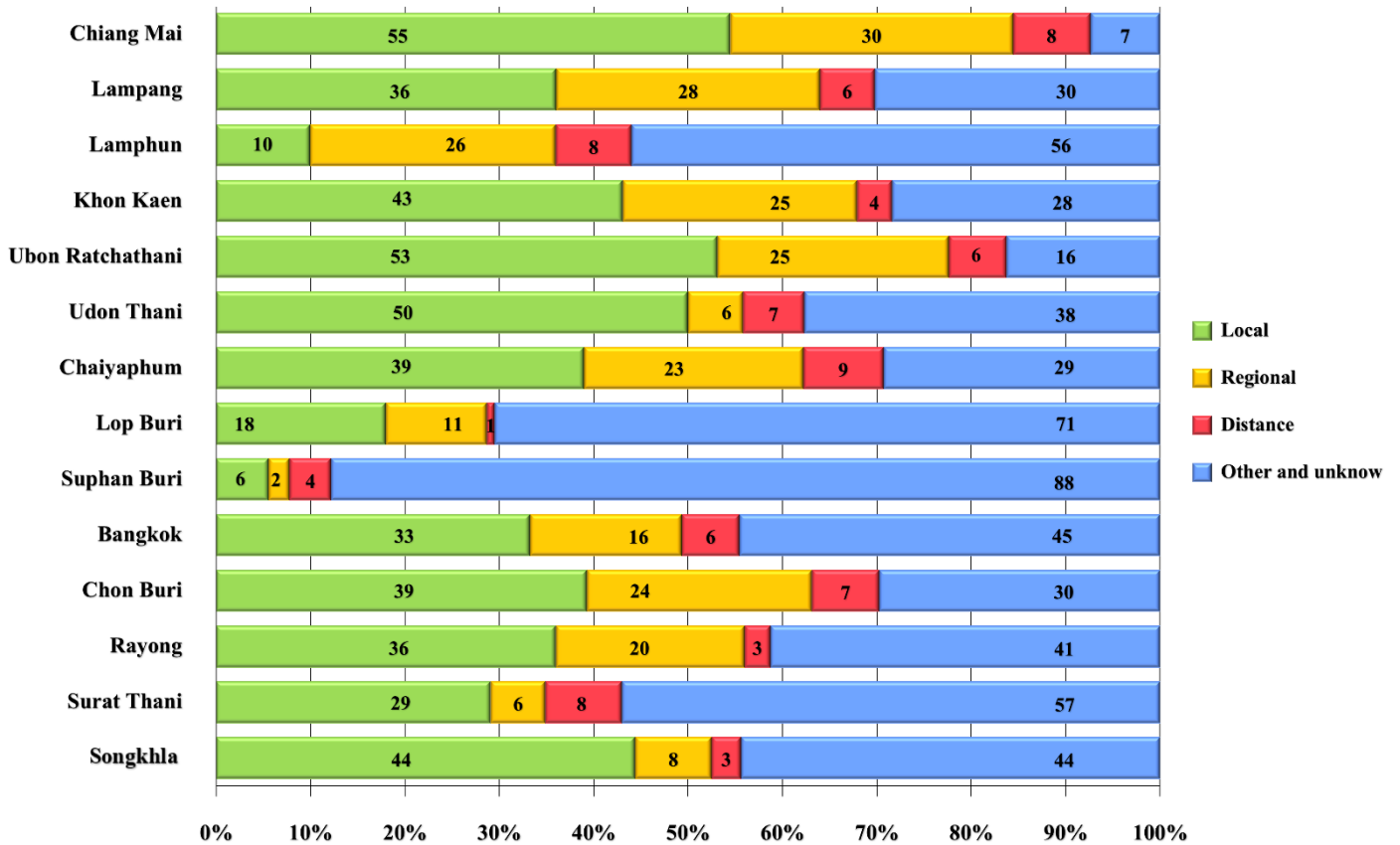
**Figure 2.14.1** Corpus uteri cancer in different regions, mean annual ASR per 100,000 (2016-2018)



**Figure 2.14.2** Age - specific incidence rates of corpus uteri cancer, mean annual rate per 100,000 (2016-2018)

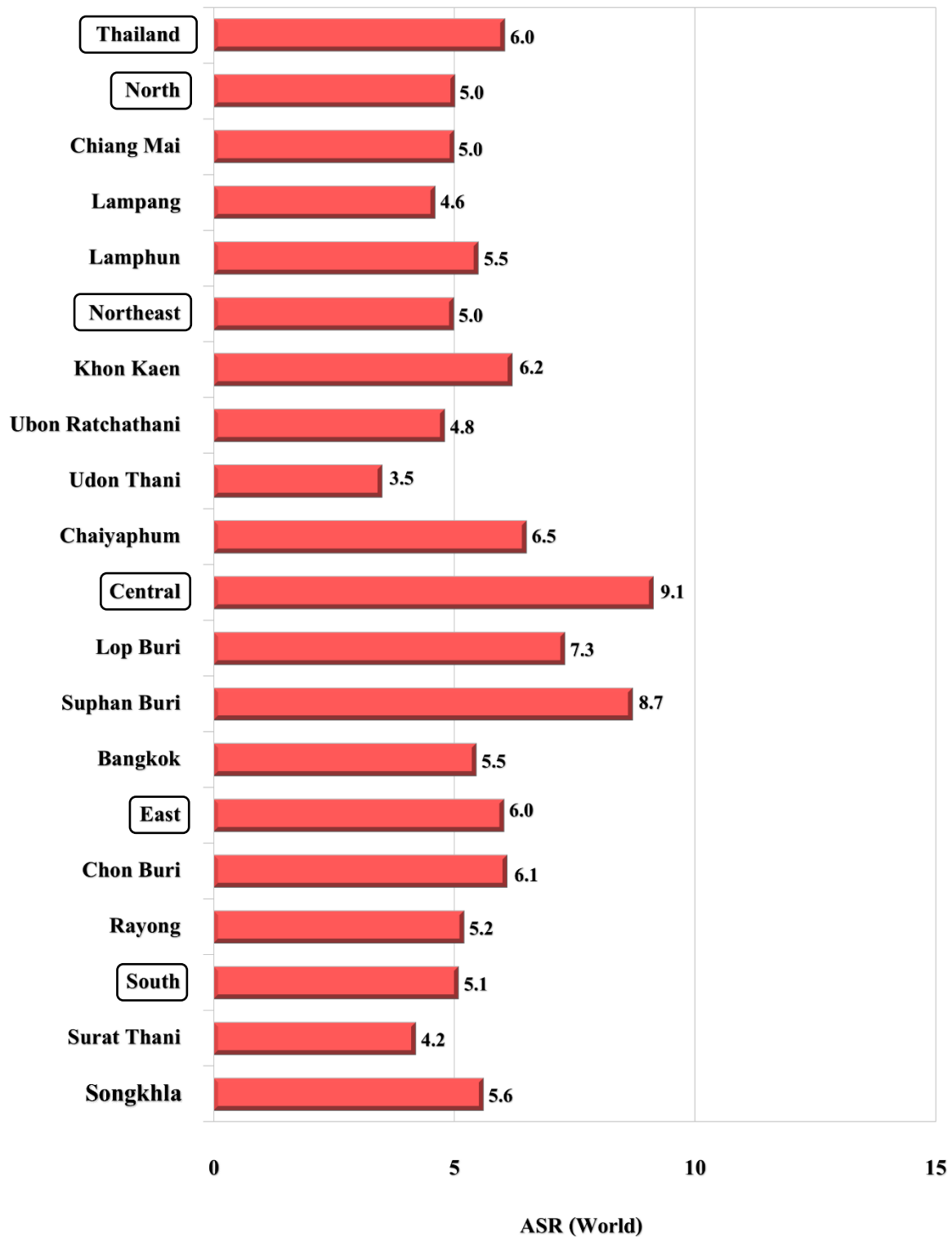


**Figure 2.14.3** Stage distribution of corpus uteri cancer (2016-2018)

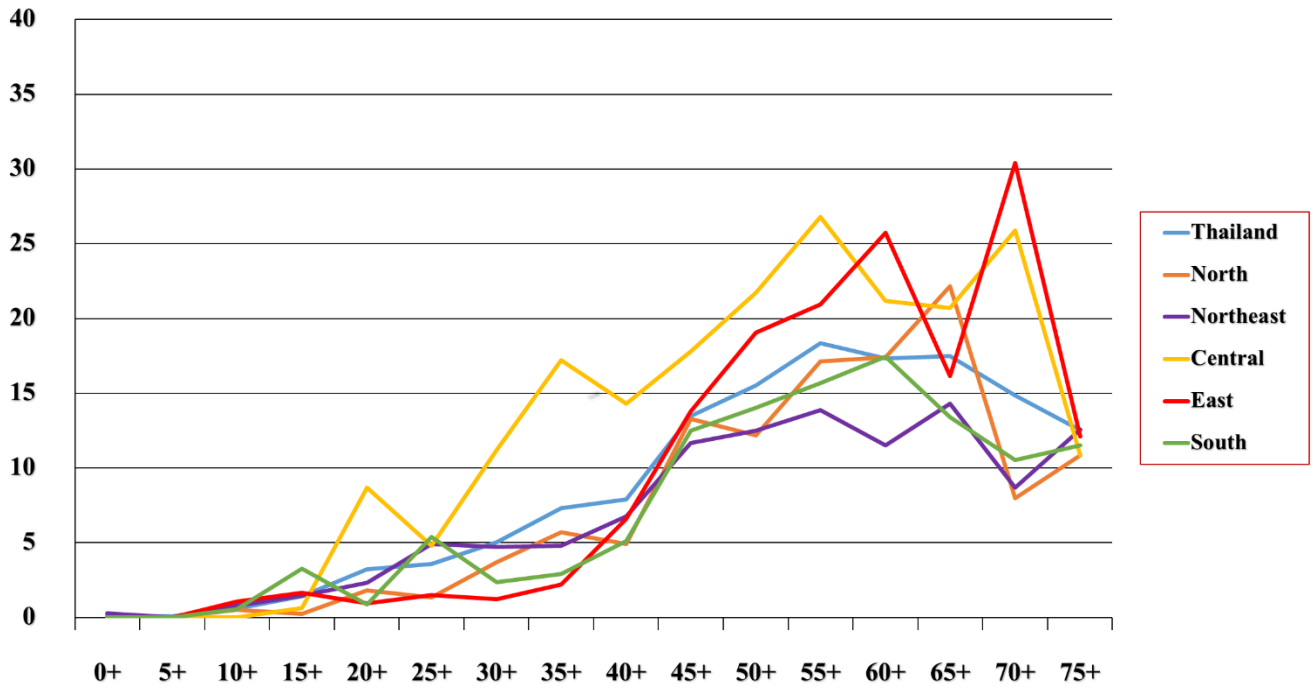


## 2.15 Ovary

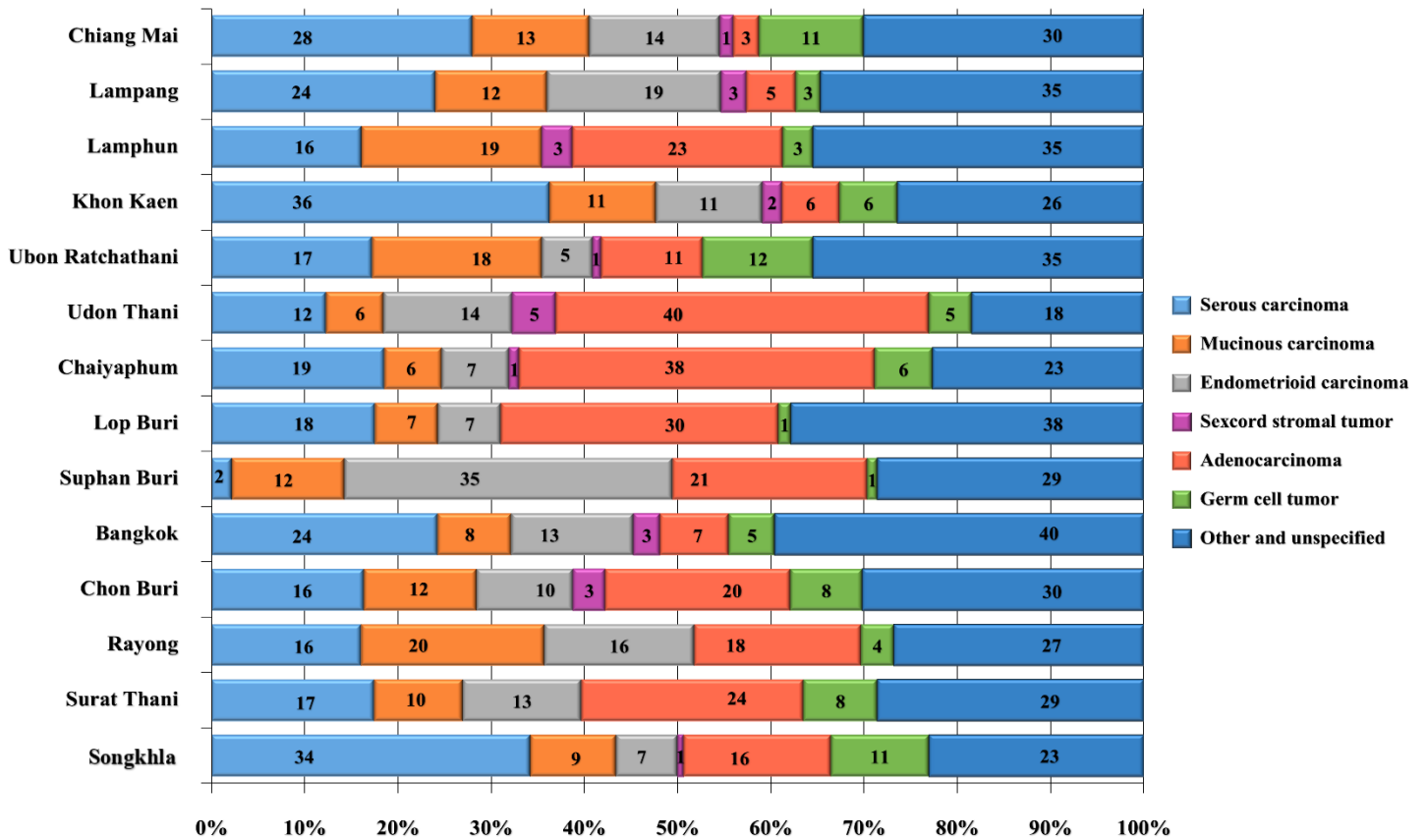
**Figure 2.15.1** Ovarian cancer in different regions, mean annual ASR per 100,000 (2016-2018)



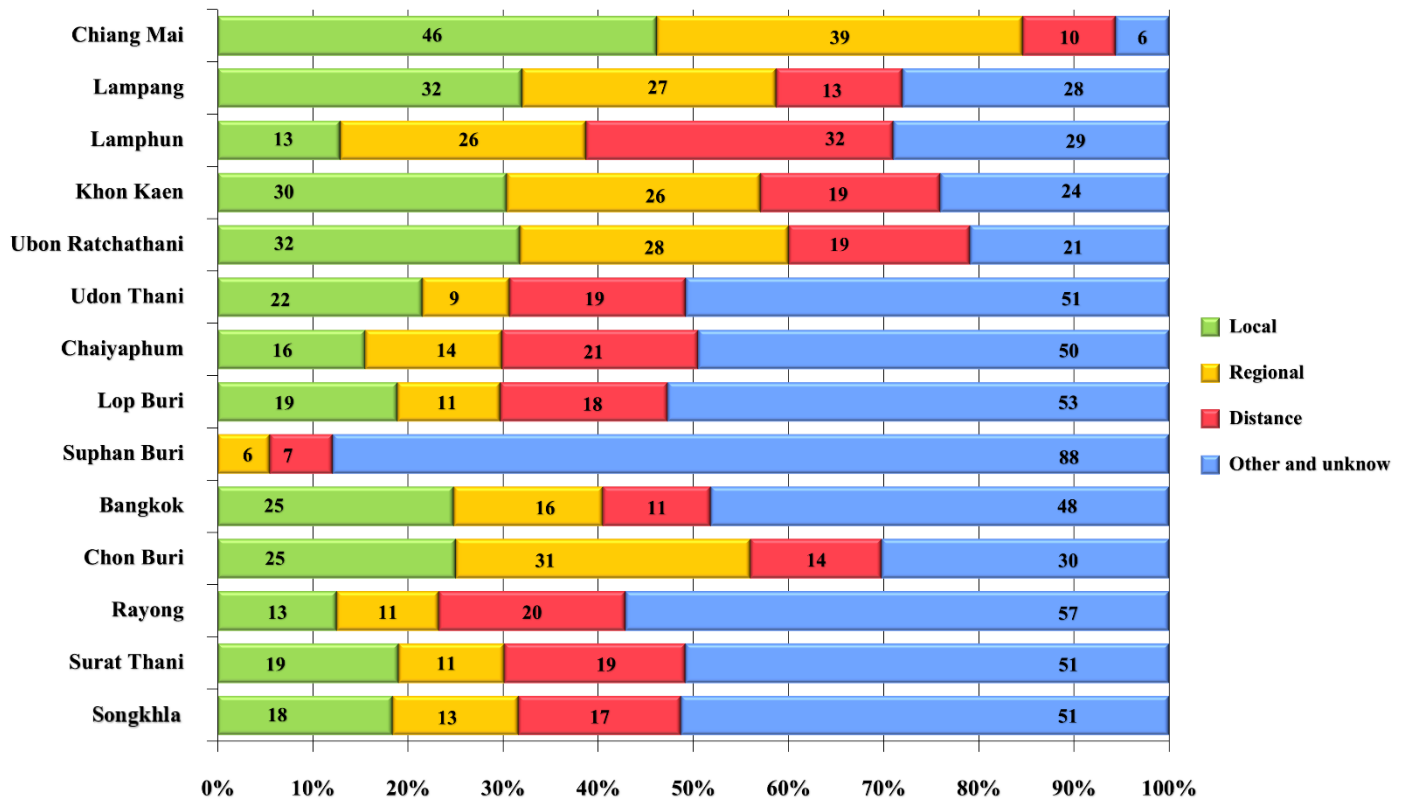
**Figure 2.15.2** Age - specific incidence rates of ovarian cancer, mean annual rate per 100,000 (2016-2018)



**Figure 2.15.3** Histological types of ovarian cancer (2016-2018)

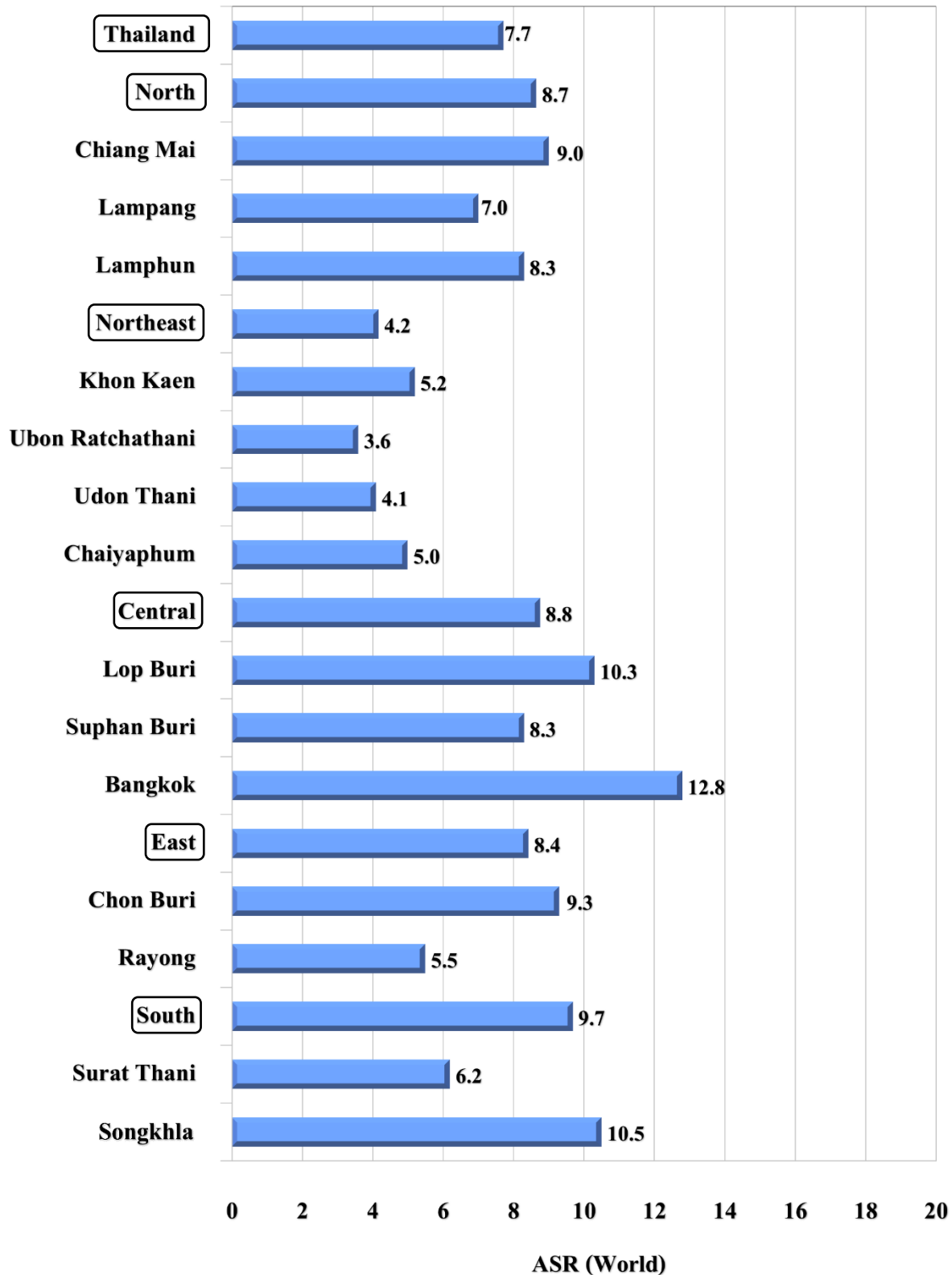


**Figure 2.15.4** Stage distribution of ovarian cancer (2016-2018)

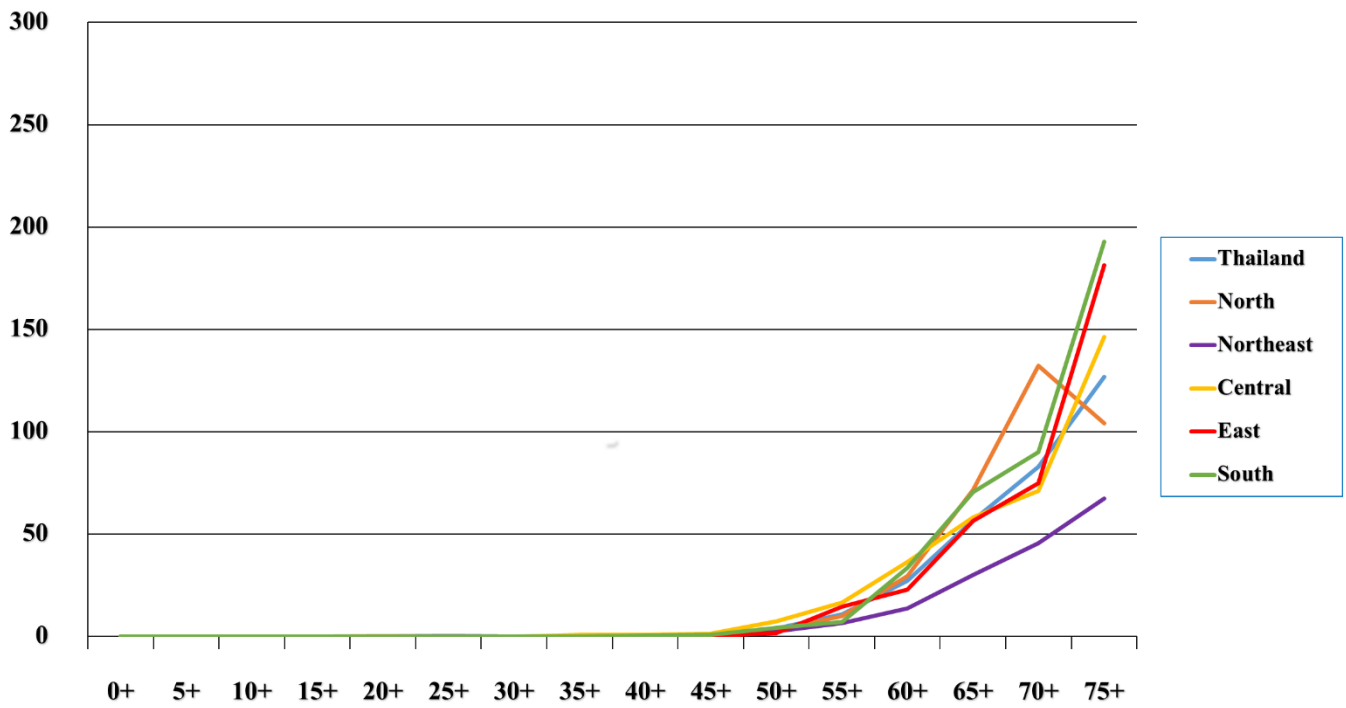


## 2.16 Prostate

**Figure 2.16.1** Prostate cancer in different regions, mean annual ASR per 100,000 (2016-2018)

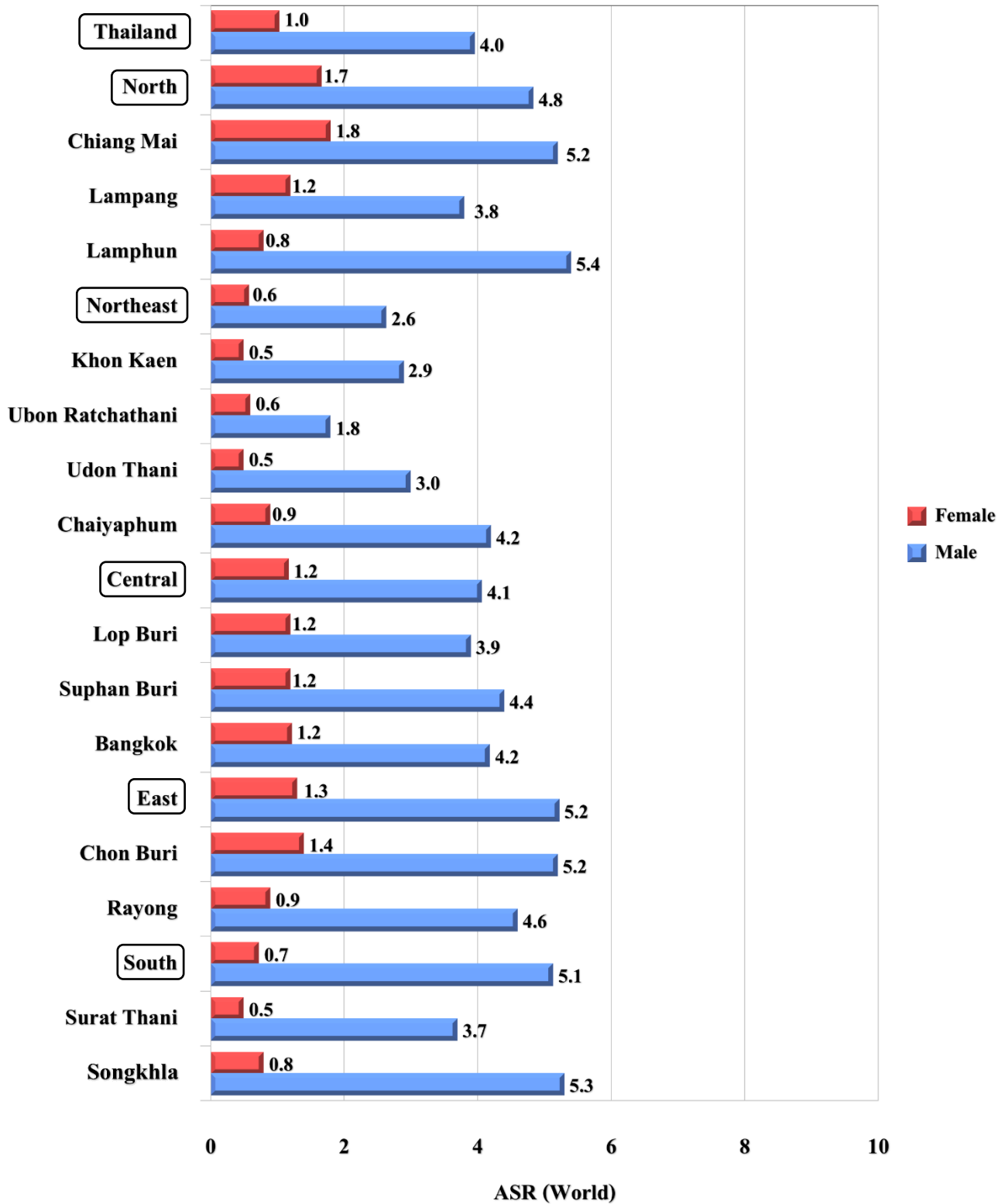


**Figure 2.16.2** Age - specific incidence rates of prostate cancer, mean annual rate per 100,000 (2016-2018)

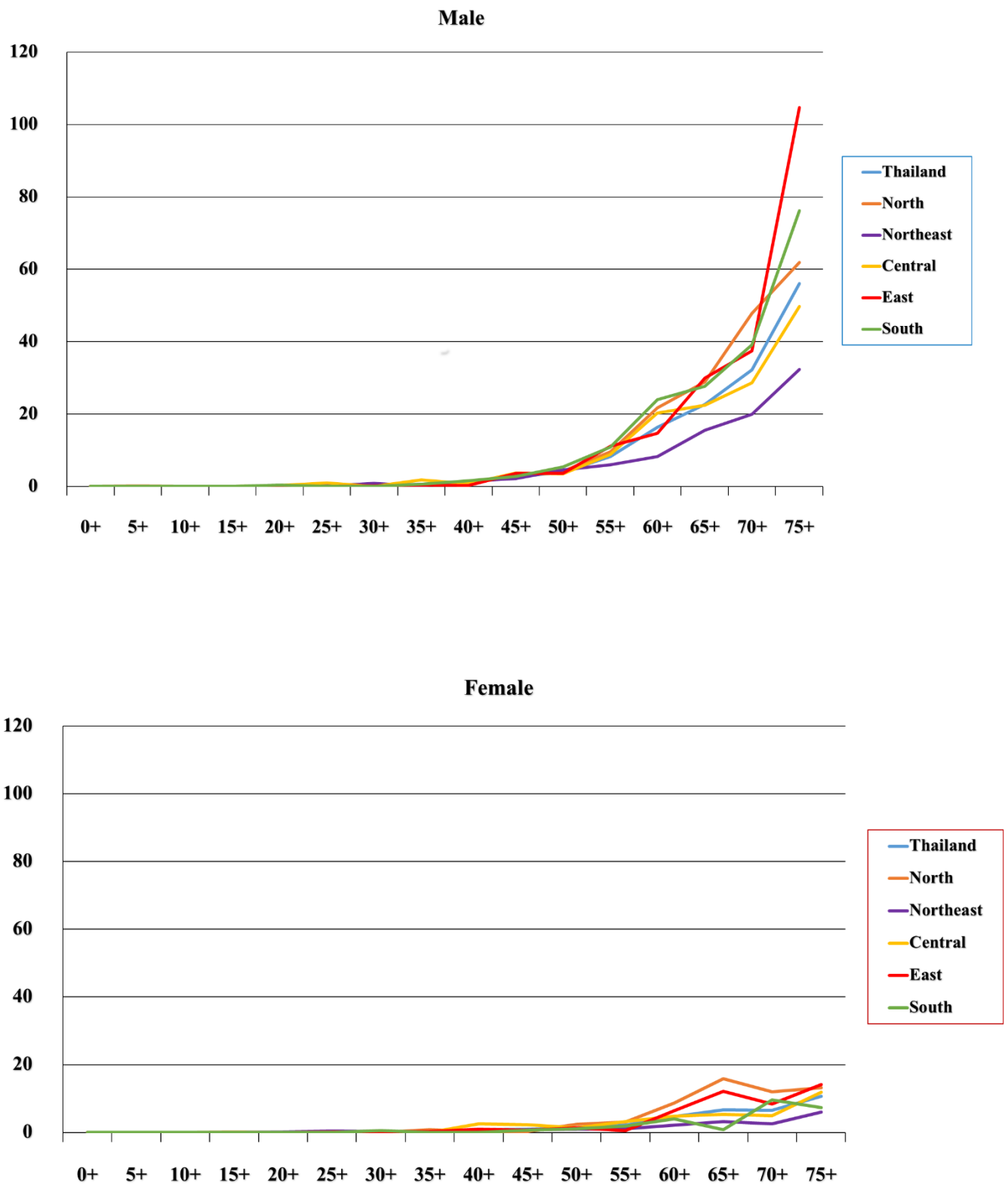


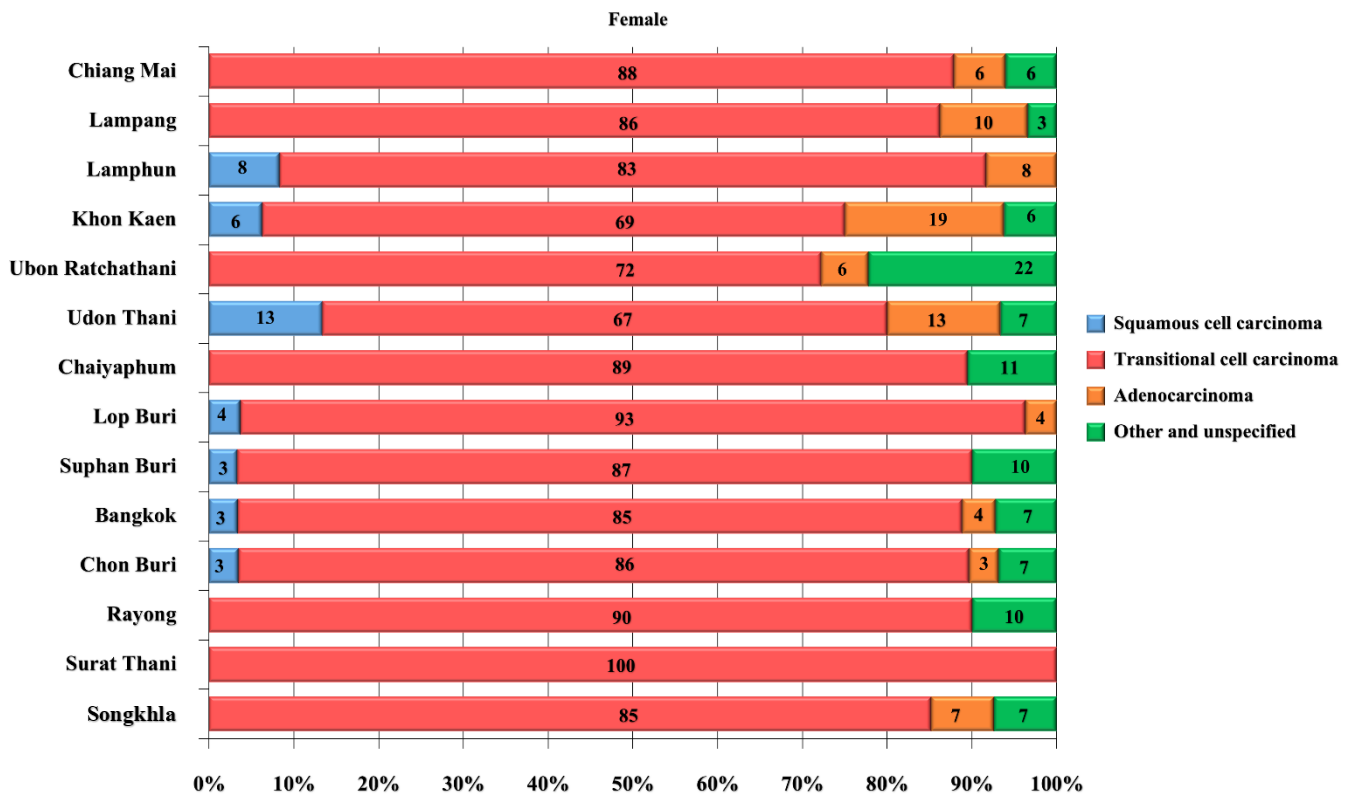
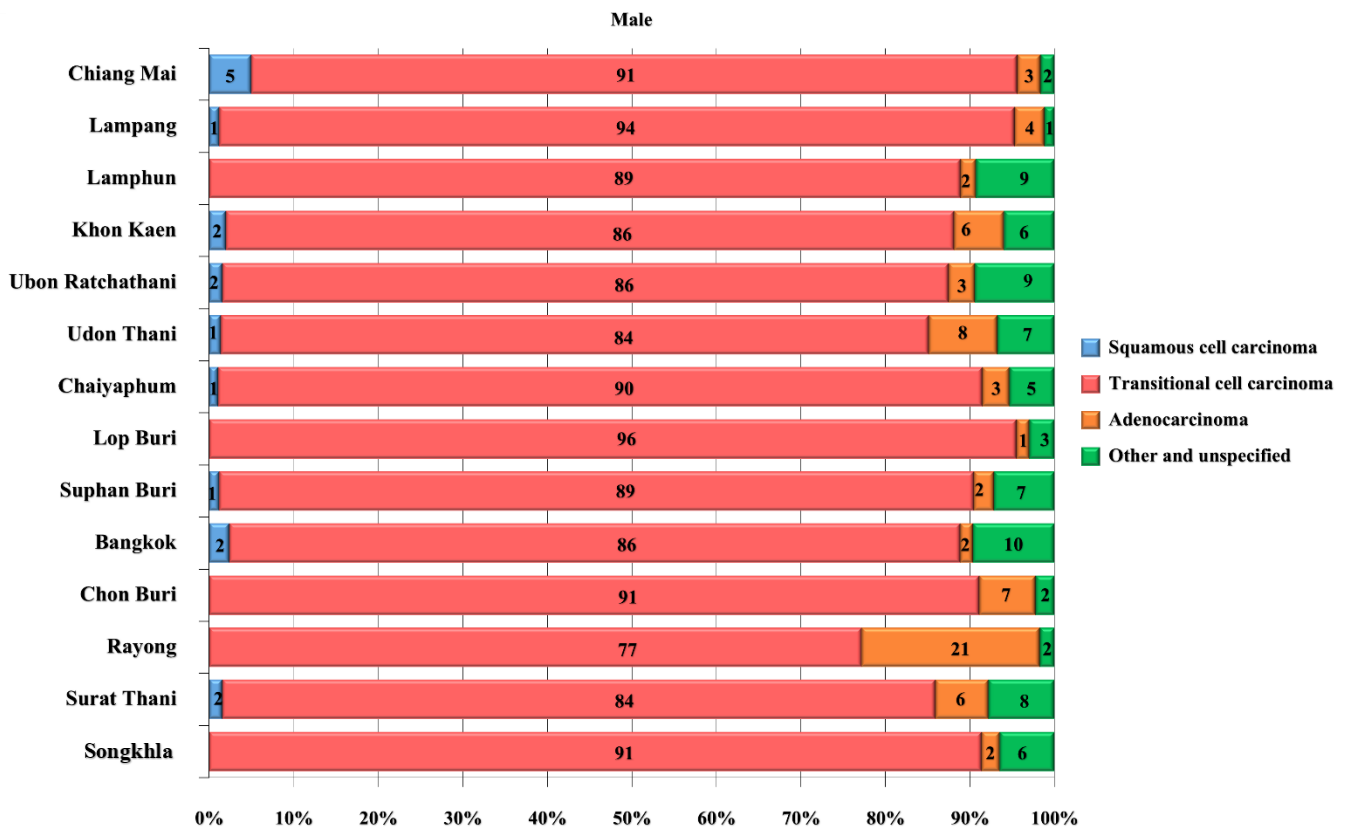
## 2.17 Urinary bladder

**Figure 2.17.1** Urinary bladder cancer in different regions, mean annual ASR per 100,000 (2016-2018)



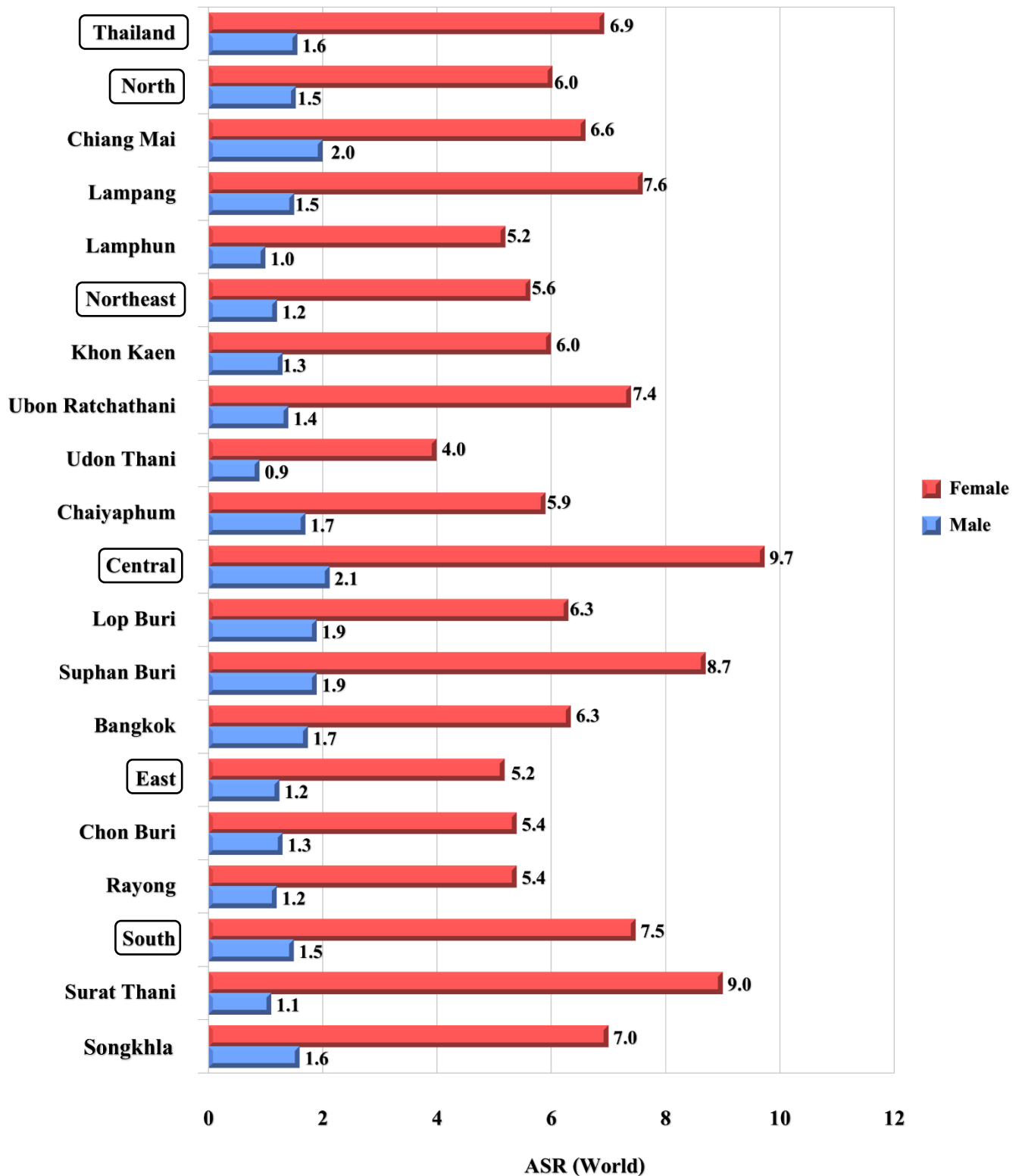
**Figure 2.17.2** Age - specific incidence rates of urinary bladder cancer, mean annual rate per 100,000 (2016-2018)



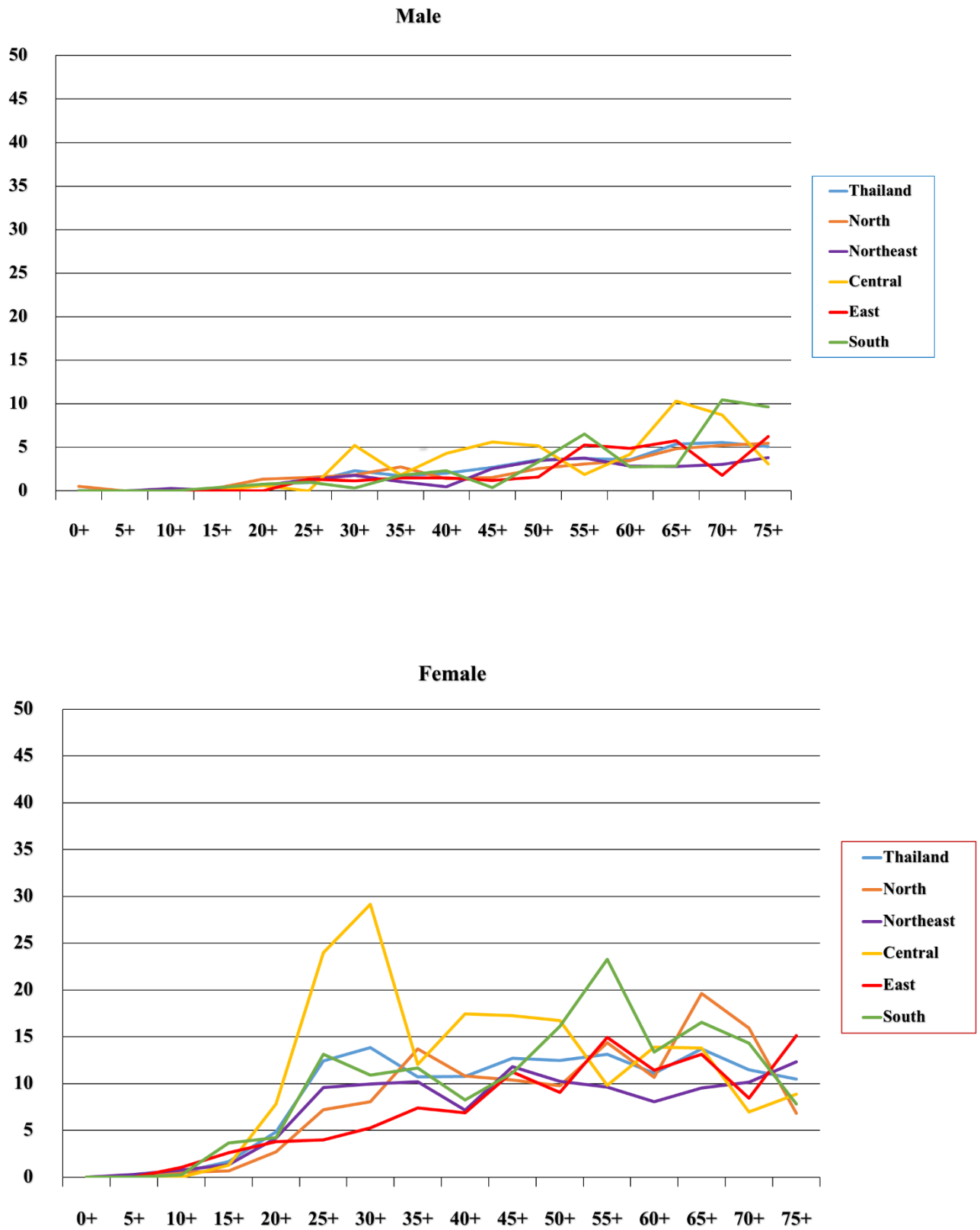
**Figure 2.17.3** Histological types of urinary bladder cancer (2016-2018)

## 2.18 Thyroid gland

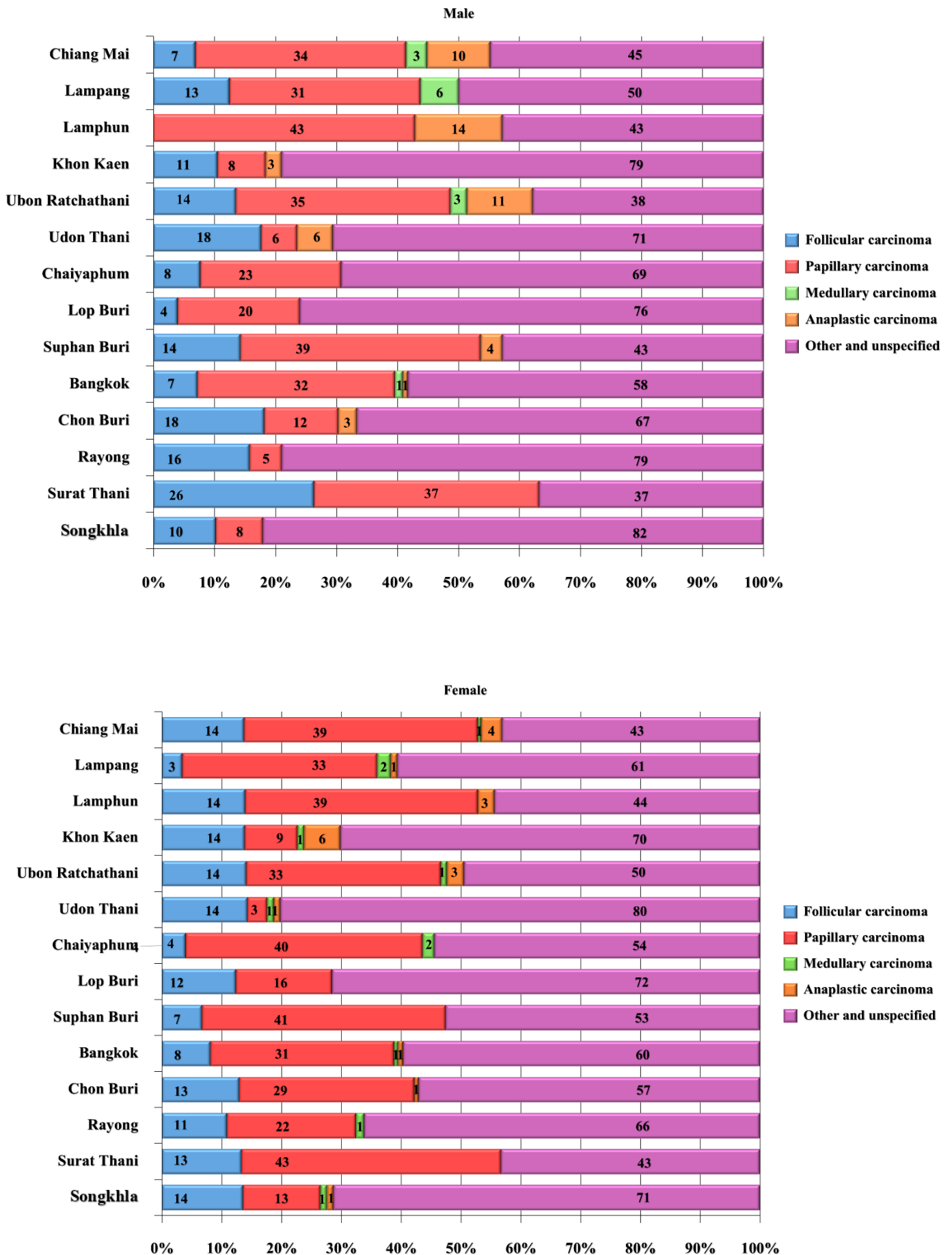
**Figure 2.18.1** Thyroid cancer in different regions, mean annual ASR per 100,000 (2016-2018)



**Figure 2.18.2** Age - specific incidence rates of thyroid cancer, mean annual rate per 100,000 (2016-2018)

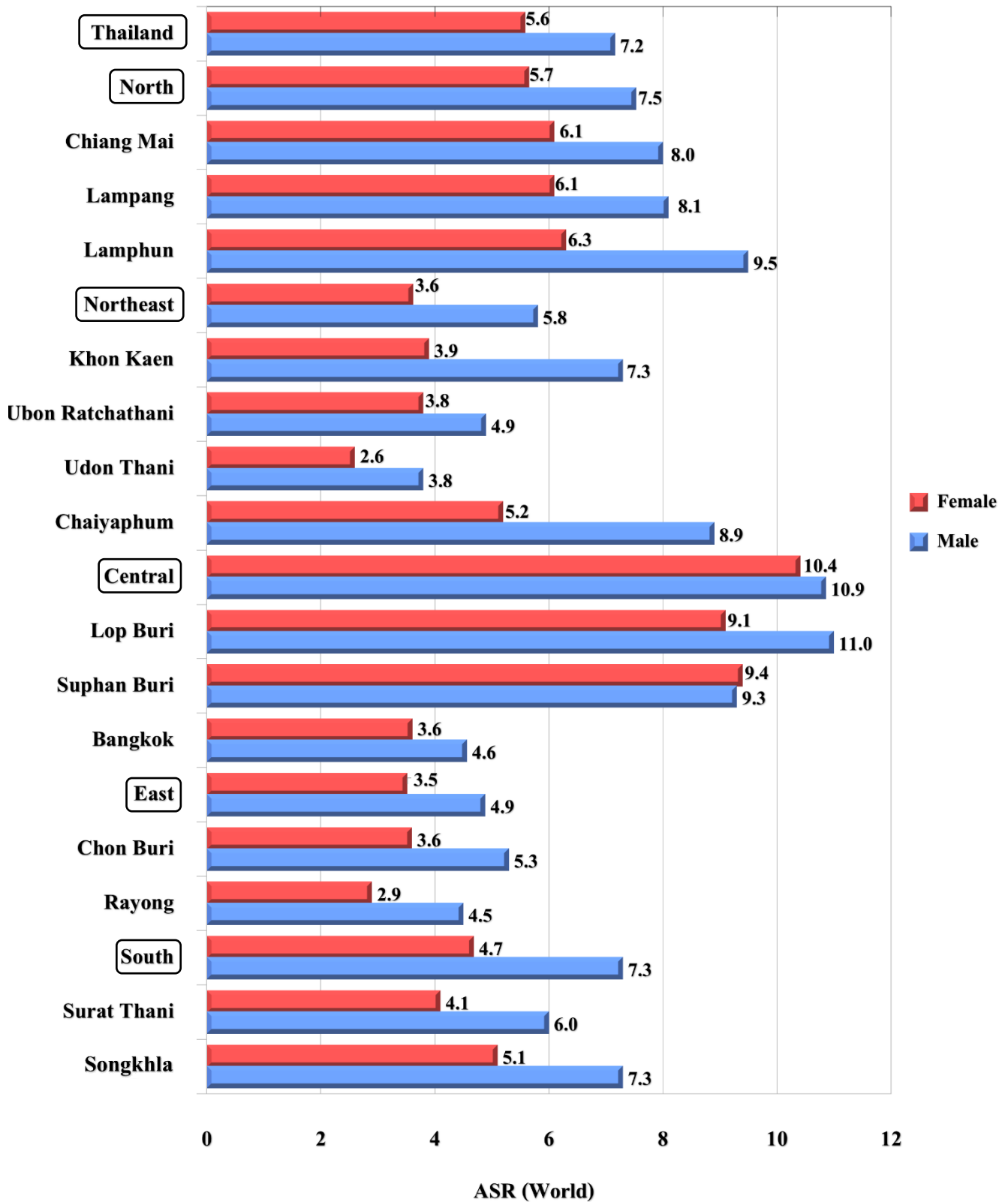


**Figure 2.18.3** Histological types of thyroid cancer (2016-2018)

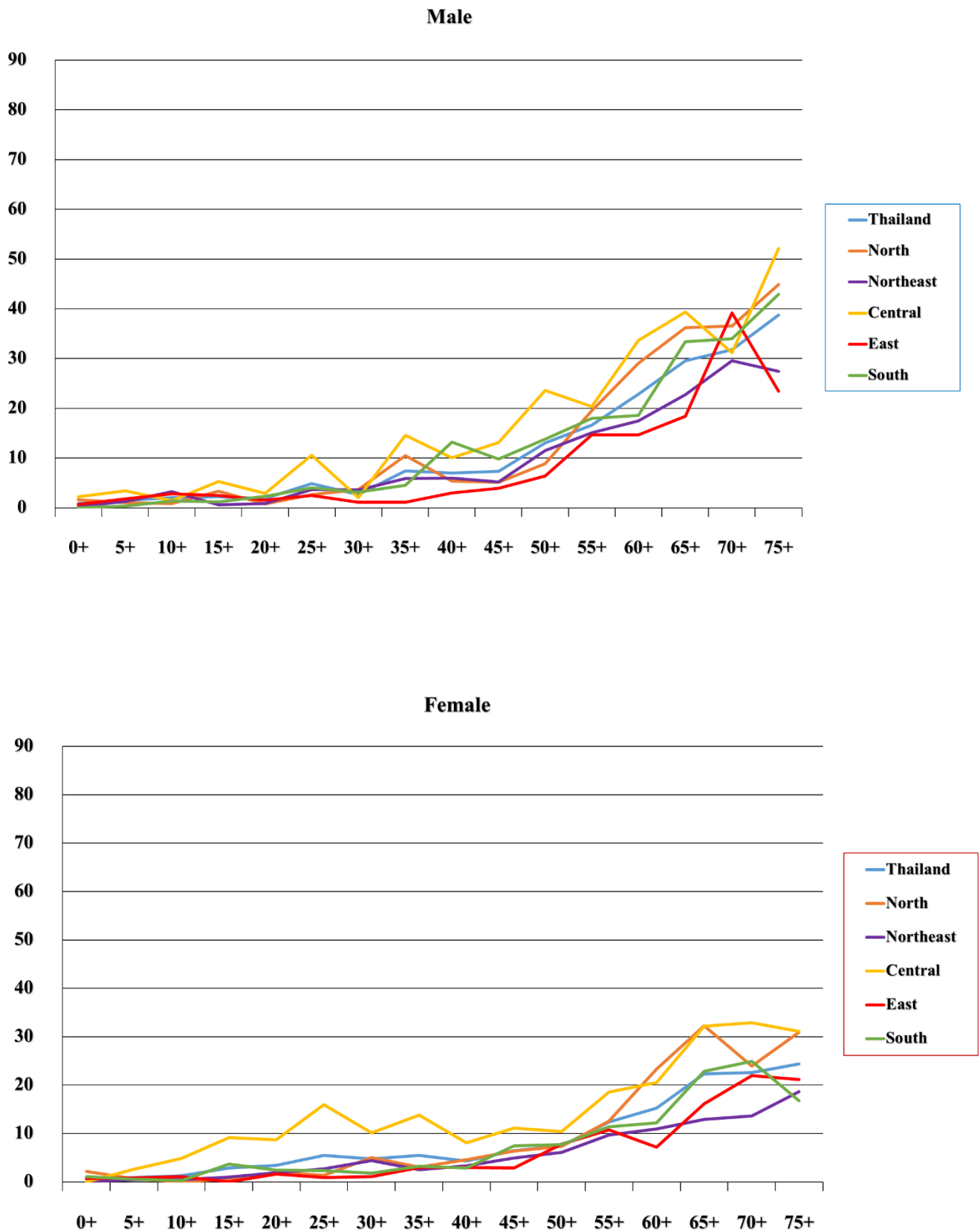


## 2.19 Lymphoma

**Figure 2.19.1** Lymphoma cancer in different regions, mean annual ASR per 100,000 (2016-2018)

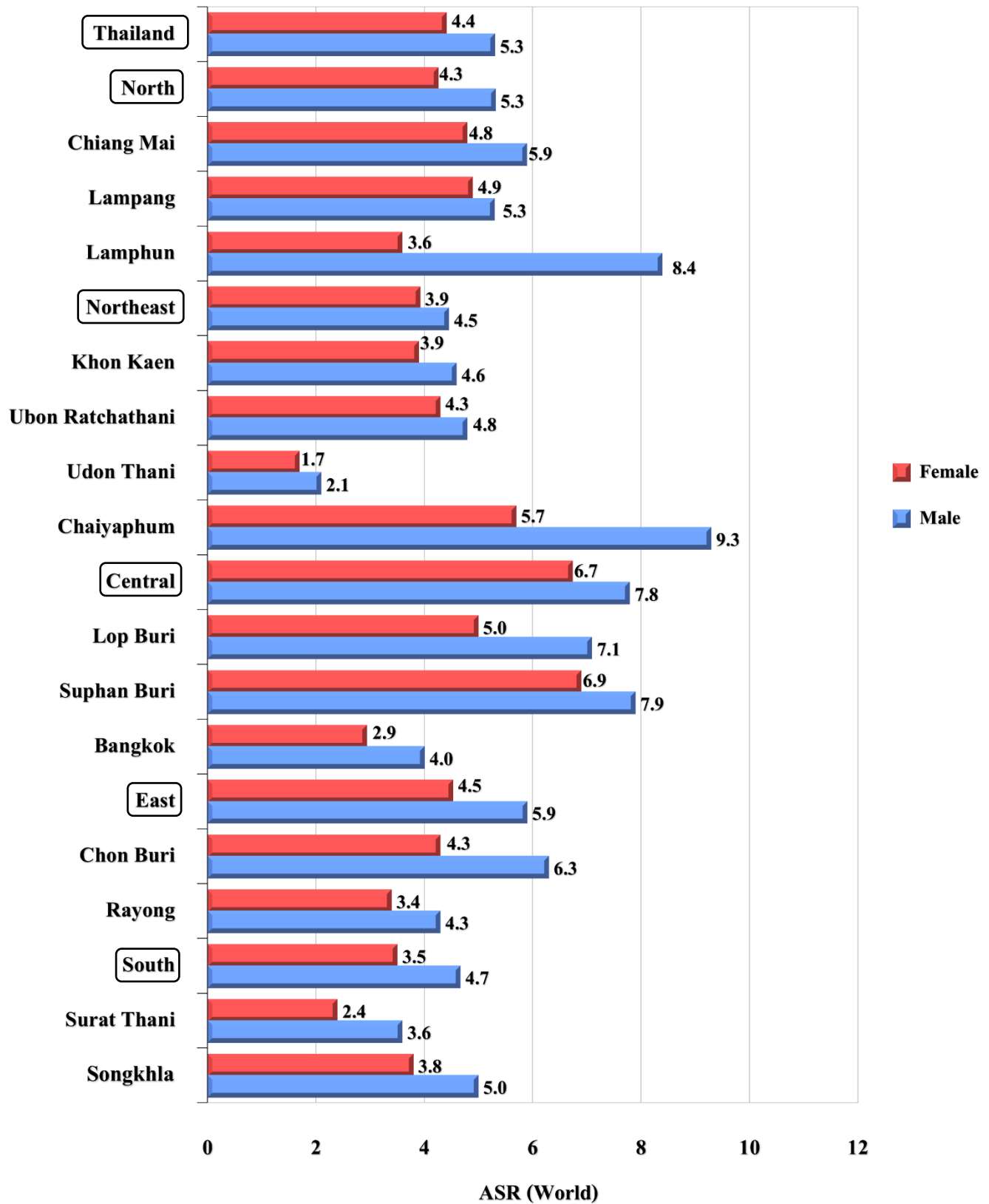


**Figure 2.19.2** Age - specific incidence rates of lymphoma cancer, mean annual rate per 100,000 (2016-2018)

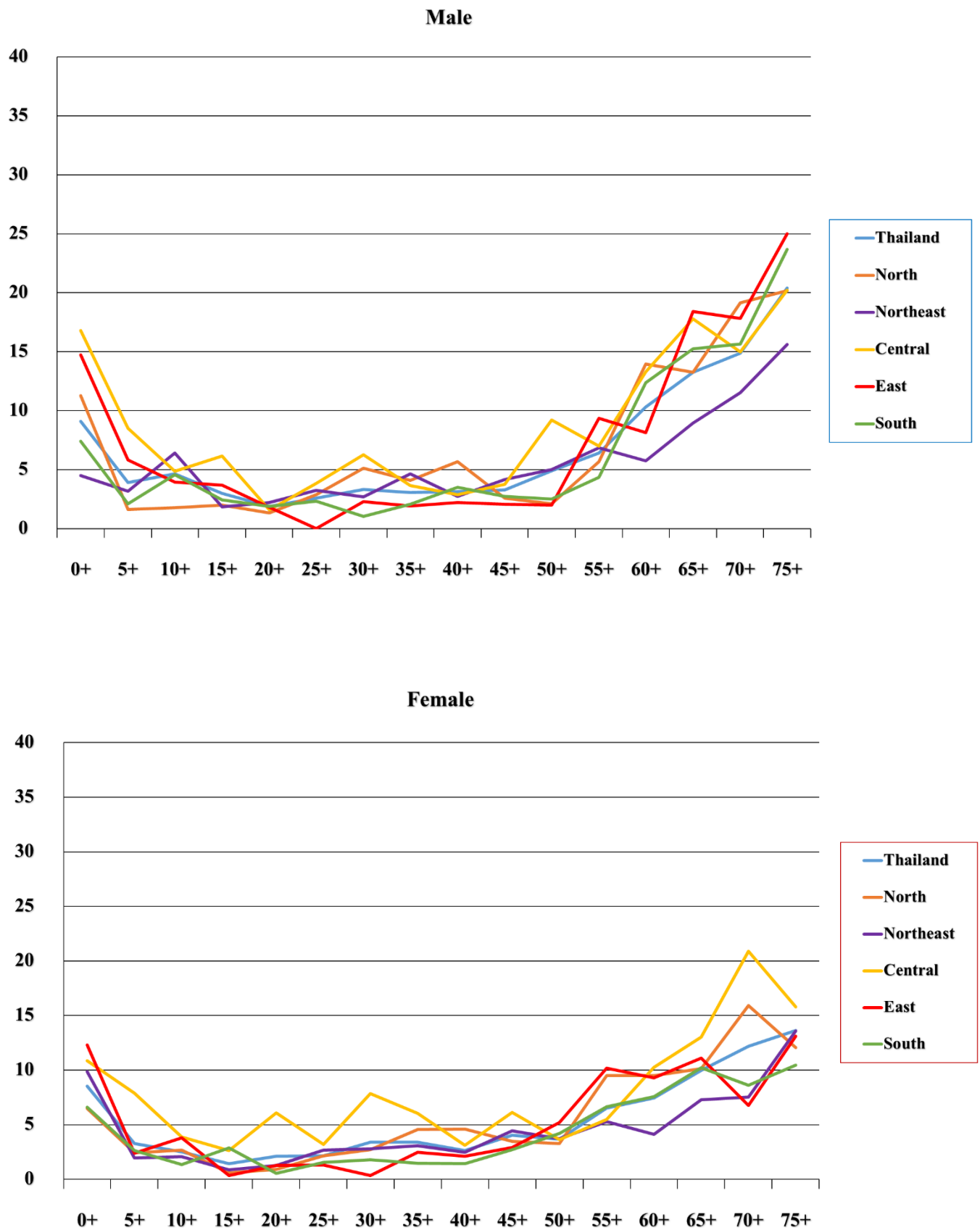


## 2.20 Leukemia

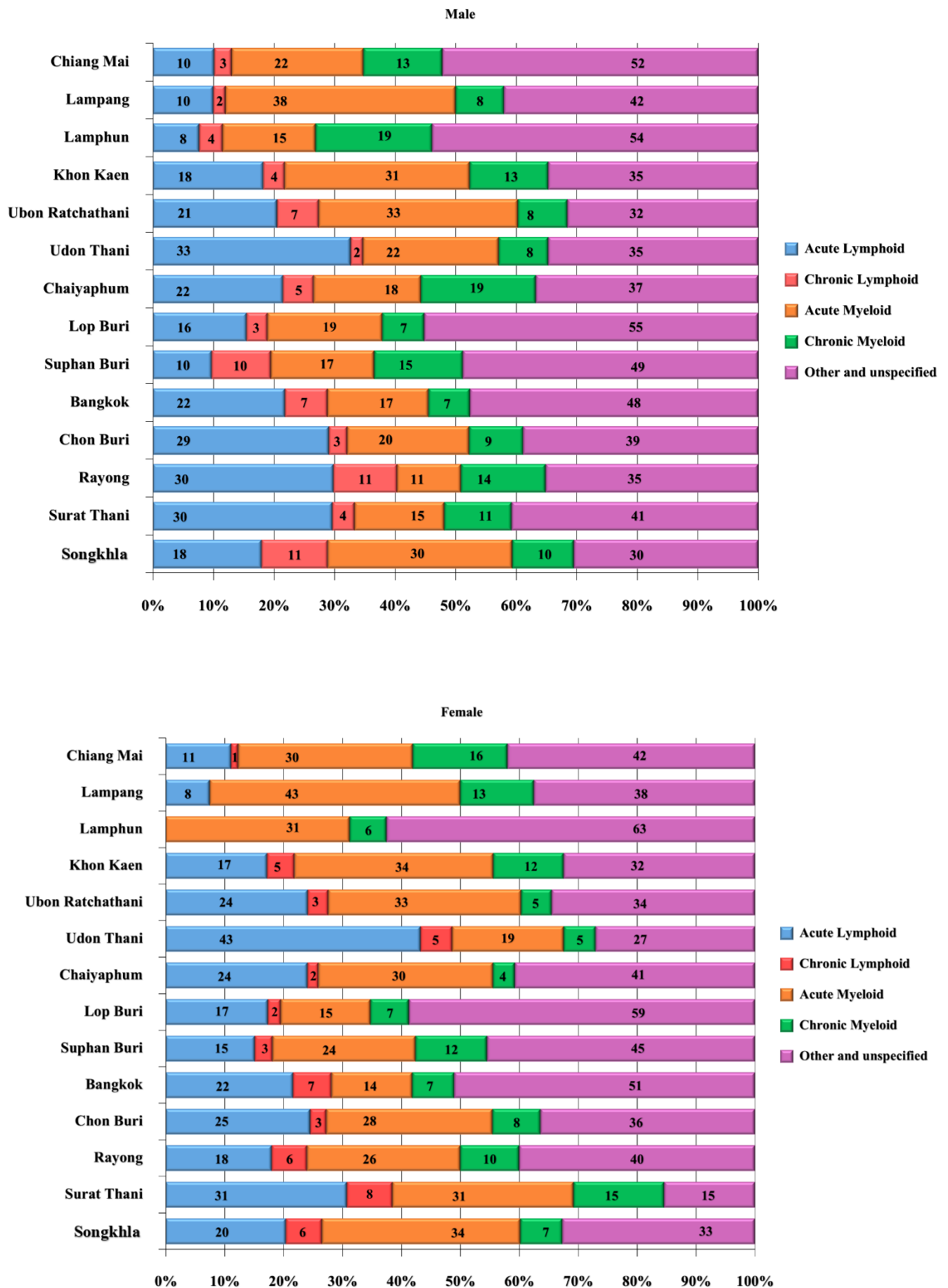
**Figure 2.20.1** Leukemia cancer in different regions, mean annual ASR per 100,000 (2016-2018)



**Figure 2.20.2** Age - specific incidence rates of leukemia cancer, mean annual rate per 100,000 (2016-2018)



**Figure 2.20.3** Histological types of leukemia cancer (2016-2018)



# Chapter 3

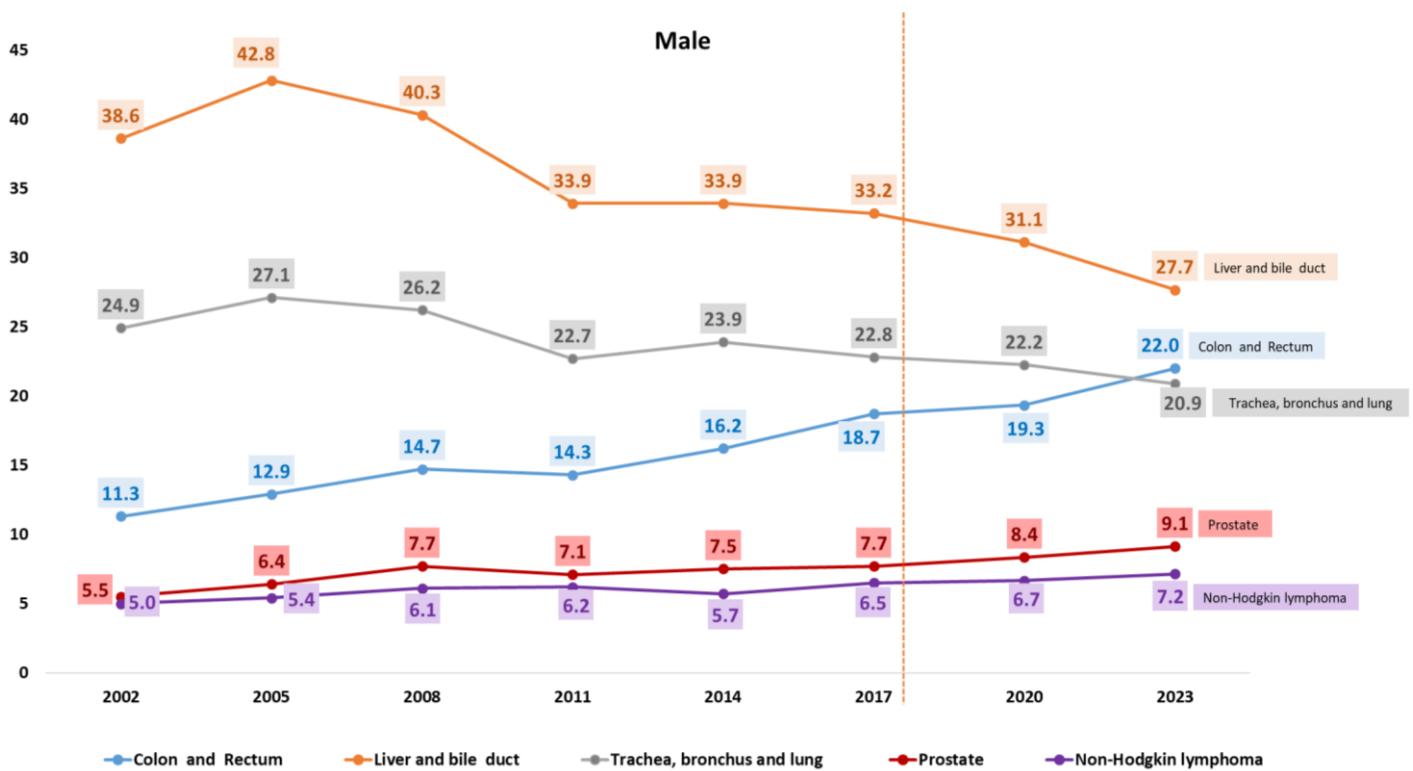
## Projection of Cancer

## Projection of Cancer

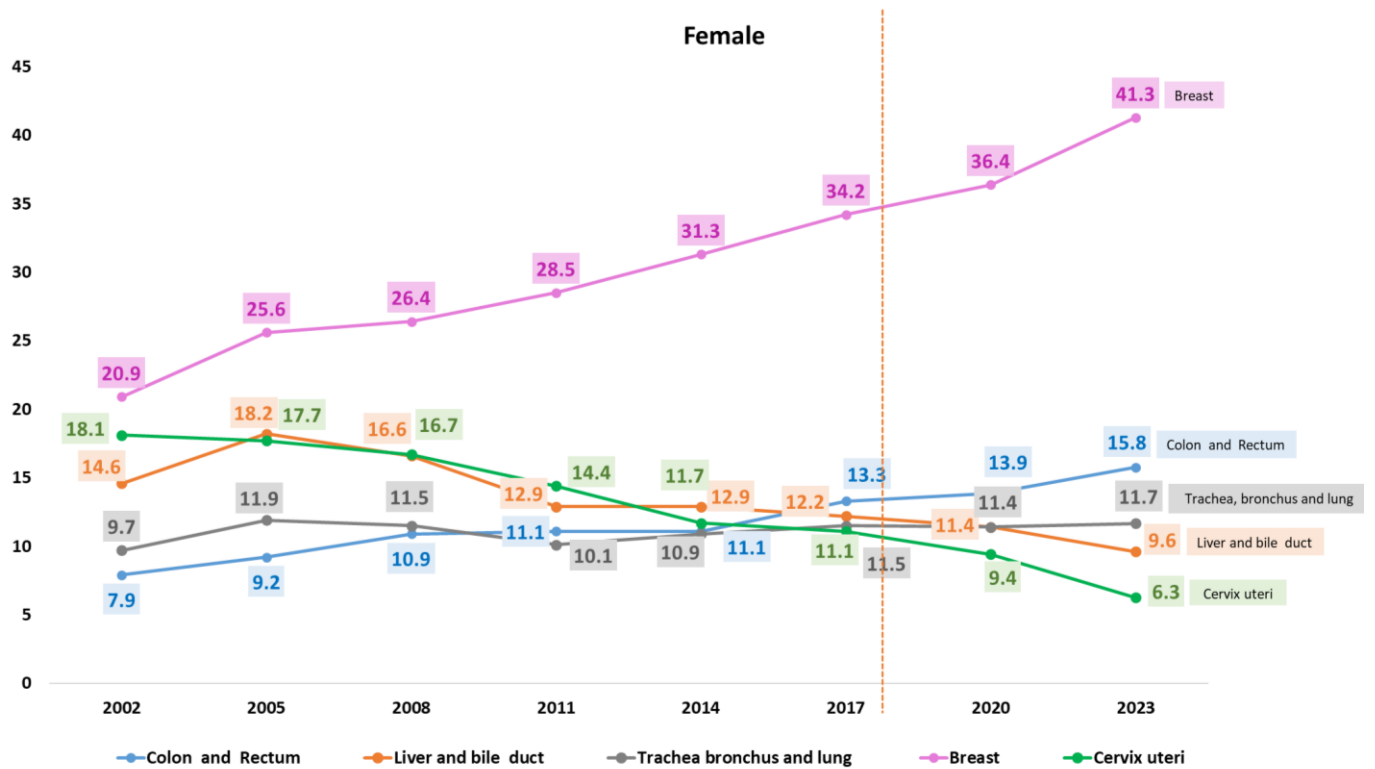
*Suleeporn Sangrajang, Ph.D.*  
*Krittika Suwanrungruang, Ph.D.*  
*Rangsiya Buasom, R.N.*

In this volume, we used the data from 2002-2018 and projected the data to 2 periods 2019-2021 and 2022-2024. Age specific incidence rates (ASR) of each 5 year age group were projected by fitting a linear regression model for common cancer sites including liver, lung, colorectal, breast and cervical cancer. Top five of these common cancer and number of cases were shown in Figure 3.1, 3.2 and Table 3.1, 3.2 respectively.

The incidence of liver cancer is expected to continuously decrease in both sexes, with an expected ASR and new number was shown in Figure 3.1, 3.2 and Table 3.1, 3.2 respectively. Lung cancer incidence is also expected to decrease in both sexes. Colorectal cancer incidence is increasing, with over 8,984 new cases in 2020 and 11,276 in 2023 among male and 7,779 in 2020 and 9561 in 2023 cases among female. In women, breast cancer is rapidly increasing with ASR = 36.4 and 18,577 new cases in 2020 ; ASR = 41.3 and 22,363 new cases in 2023. In contrast, the number of cervical cancer cases are sharply decreasing, 5,320 new cases in 2020 and 4,847 new cases in 2023 have been expected.

**Figure 3.1** ASR projection of 5 common cancers among male**Table 3.1** Number of new cases projection of 5 common cancers among male

Cancer	Year							
	2002	2005	2008	2011	2014	2017	2020	2023
Colon and Rectum	3,188	3,949	4,790	5,577	6,874	8,658	9,197	11,307
Liver and bile duct	11,104	13,294	13,281	13,152	14,293	15,358	15,827	17,207
Trachea, bronchus and lung	6,867	8,099	8,403	8,724	9,779	10,766	11,259	12,679
Prostate	1,435	1,834	2,400	2,762	3,233	3,755	4,186	5,109
Non-Hodgkin lymphoma	1,606	1,875	2,137	2,415	2,382	2,855	3,016	3,476

**Figure 3.2** ASR projection of 5 common cancers among female**Table 3.2** Number of new cases projection of 5 common cancers among female

Cancer	Year							
	2002	2005	2008	2011	2014	2017	2020	2023
Colon and Rectum	2,604	3,295	4,144	5,047	5,593	7,281	7,779	9,561
Liver and bile duct	4,709	6,413	6,143	5,765	6,378	6,855	7,069	7,654
Trachea, bronchus and lung	3,118	4,219	4,322	4,624	5,509	6,456	6,794	7,986
Breast	7,322	9,722	10,193	12,613	14,804	17,043	18,577	22,363
Cervix uteri	6,337	6,738	6,453	6,426	5,513	5,422	5,320	4,847

# Chapter 4

## Cancer Incidence in 14 Cancer Registries

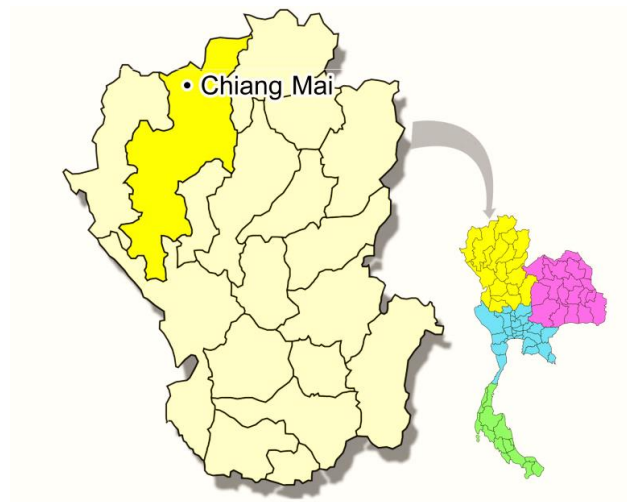
1. Chiang Mai Cancer Registry
2. Lampang Cancer Registry
3. Lamphun Cancer Registry
4. Khon Kaen Cancer Registry
5. Ubon Ratchathani Cancer Registry
6. Udon Thani Cancer Registry
7. Chaiyaphum Cancer Registry
8. Lop Buri Cancer Registry
9. Suphan Buri Cancer Registry
10. Bangkok Cancer Registry
11. Chon Buri Cancer Registry
12. Rayong Cancer Registry
13. Surat Thani Cancer Registry
14. Songkhla Cancer Registry

## 4.1 Chiang Mai Cancer Registry

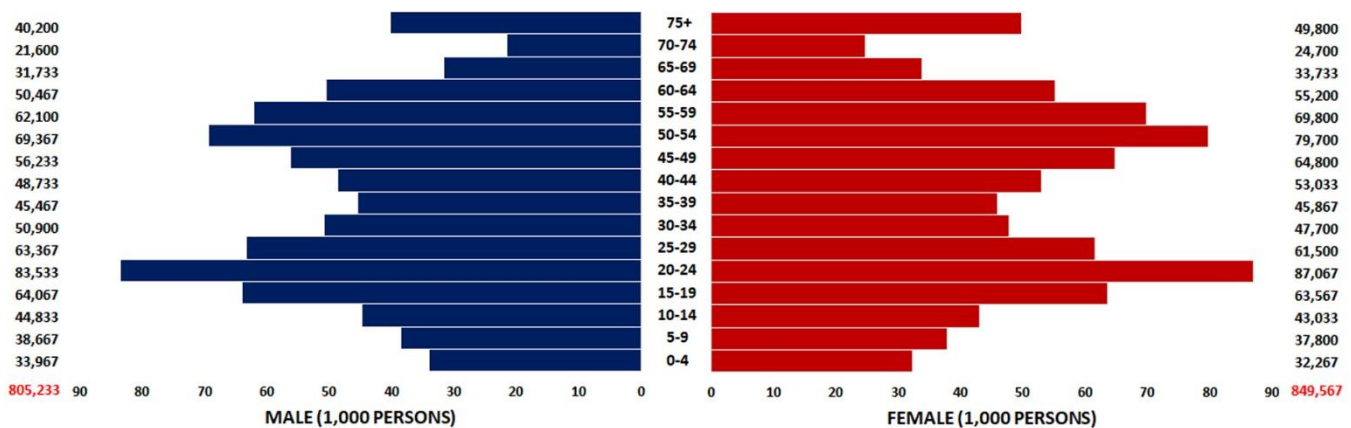
### Registration area

Chiang Mai province is the second largest in Thailand, famous for its situation in the mountainous upper part of the north of Thailand. It is 310 meters above sea level at latitude 16-18 N and longitude 99 E. To the north of Chiang Mai is the country of Myanmar. The land area is 20,107 square kilometers, divided into 25 districts. In the year 2017 the estimated population of Chiang Mai was 1,654,800 of which 849,567 were females and 805,233 were males. The most crowded district was Mueang district. The population is mainly Thai, but others include Chinese, and hill tribe minority groups.

The geography of Chiang Mai is a plain surrounded by high mountains that tend to collect polluting agents. Eighty percent of the population in Chiang Mai are farmers who grow rice, onions, longans, lychees, oranges, etc. ( [www.chiangmai.go.th](http://www.chiangmai.go.th) )



Population pyramid Chiang Mai  
estimated population in 2017 (2016 – 2018)



## Cancer care facilities

General health care in Thailand is mainly provided by the government. In each district of Chiang Mai, there is one community hospital with network health care facilities except for Mae Rim district. In the urban area (Mueang district) of Chiang Mai, there are 1 university hospital, 1 municipal hospital, 3 military hospitals and 13 private hospitals. The total number of hospital beds in Chiang Mai was 6,305 beds with 1,169 doctors in the year 2014. Most of the cancer cases are referred to provincial, university or big private hospitals which can provide surgery and chemotherapy. Radiotherapy can be performed only in Chiang Mai University Hospital.

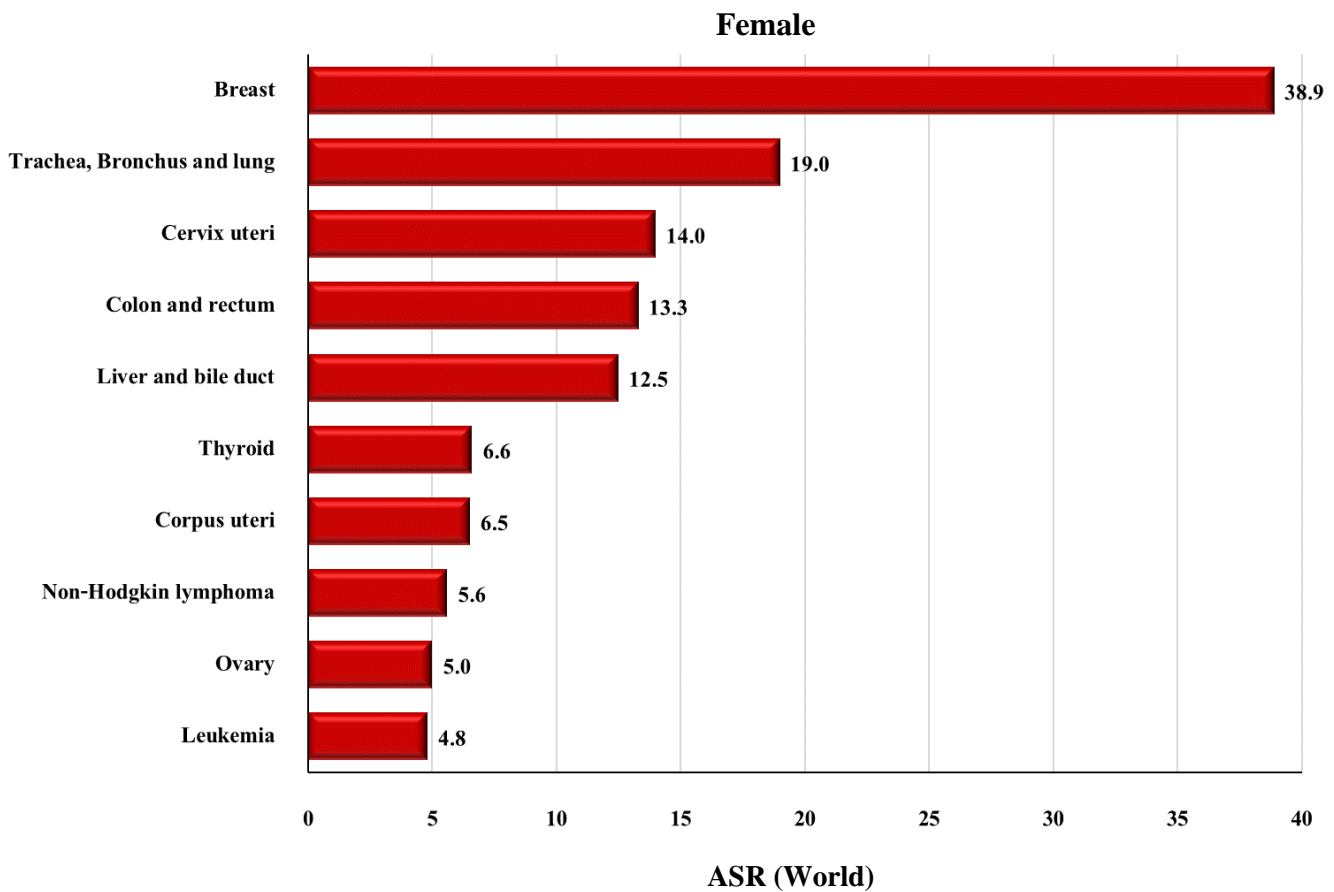
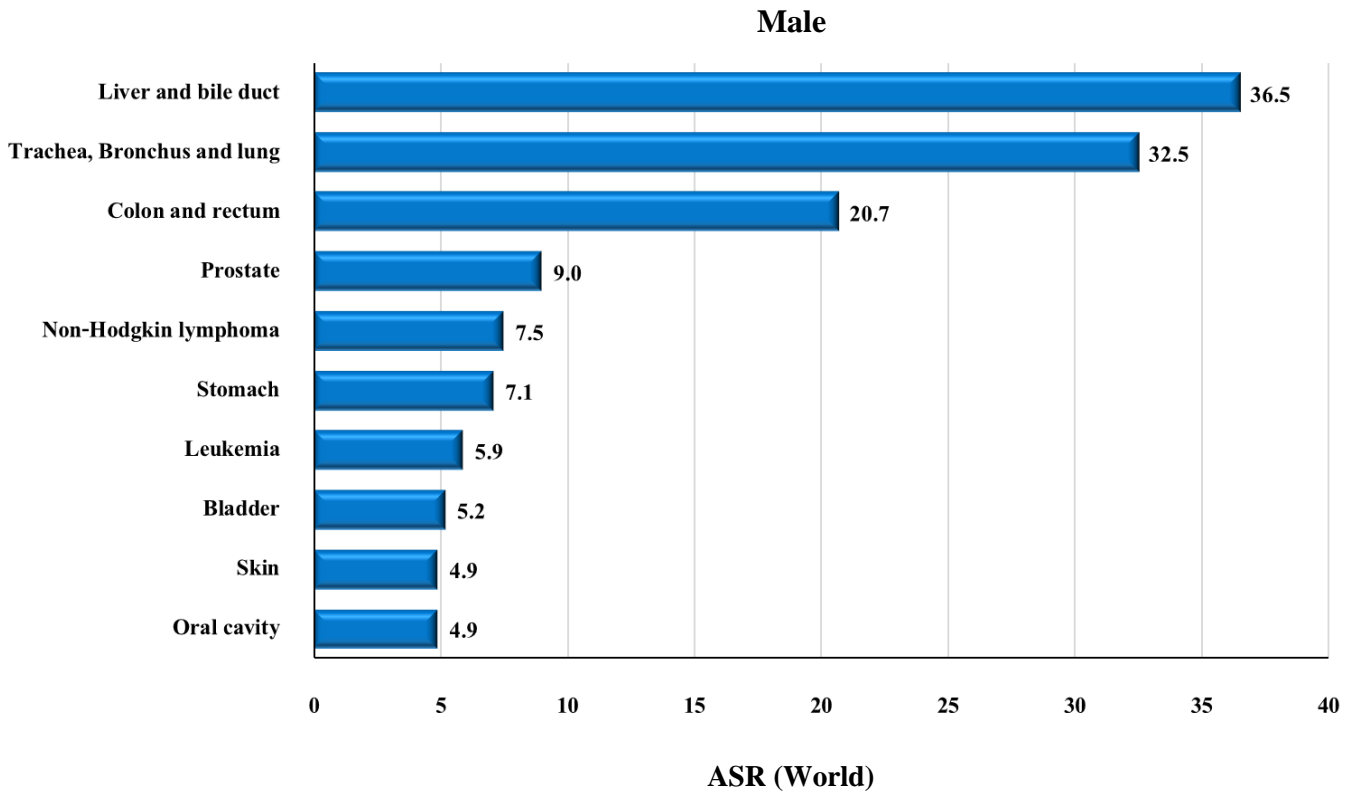
## Registry procedures

The cancer unit, Faculty of Medicine, Chiang Mai University has been maintaining a hospital-based cancer registry since 1963. Data on cancer patients are now collected actively from every hospital in Chiang Mai. The data of Chiang Mai residents are extracted from the hospital-based cancer registry of Chiang Mai University hospital. The registry personnel visit every hospital in Chiang Mai to review the medical records of cancer patients to fill the registration forms. Lists of pathological diagnoses from every pathological center in Chiang Mai are also explored for cancer cases. The case record form includes the patient's demography, date of diagnoses, tumor site, histology, extent of disease, method of diagnosis and treatment modalities. Follow-up is also conducted to update the patients' status as dead or alive. ICD-O version 3 is used in coding of the primary sites of tumor and histology types. The record forms are reviewed by a surgeon who is the chief of the cancer registry.

All data are checked for duplication, verified, coded and keyed into a fox-based program and converted to the CanReg5 program. Death certificates specifying cancer are collected from Bureau of Policy and Strategy, Ministry of Public Health (Thailand). The information is matched with the existing records, unmatched cases being registered as death certificate only (DCO).

## Summary of results

New cases registered in 2017; 2,145 were males and 2,121 were females, making 4,266 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 173.2 per 100,000, with liver and bile duct cancer ranking first (ASR = 36.5) followed by trachea, bronchus and lung (ASR = 32.5) and colon and rectum (ASR = 20.7). The ASR of all cancer sites in females was 161.8 per 100,000, the three leading cancer sites being breast (ASR = 38.9), trachea, bronchus and lung (ASR = 19.0) and cervix uteri (ASR = 14.0)

**Figure 4.1.1** Leading cancer in Chiang Mai (mean annual ASR 2016-2018)

**Table 4.1.1** Chiang Mai (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.8	0.1	0.1	C00	0.0	0.0
Tongue	26	0.0	0.0	0.0	0.0	0.8	0.0	0.7	0.7	6.2	5.9	6.2	3.8	10.6	11.6	4.6	5.0	3.3	2.3	C01-02	0.2	0.3
Mouth	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.6	6.2	5.4	7.3	10.5	6.2	5.0	2.5	1.6	C03-06	0.1	0.2
Salivary glands	10	0.0	0.0	0.0	0.5	0.8	0.5	1.3	0.0	0.7	0.6	0.5	3.2	3.3	6.3	1.5	3.3	1.3	0.9	C07-08	0.1	0.1
Tonsil	13	0.0	0.0	0.0	0.0	0.4	0.0	0.7	1.5	1.4	3.6	1.9	2.7	4.6	3.2	7.7	1.7	1.6	1.1	C09	0.1	0.1
Other oropharynx	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.8	1.9	1.1	2.0	1.1	1.5	1.7	0.7	0.5	C10	0.0	0.1
Nasopharynx	32	1.0	0.0	0.0	0.0	0.0	0.5	1.3	5.9	4.1	4.1	5.3	9.1	11.9	11.6	9.3	6.6	4.0	2.9	C11	0.2	0.3
Hypopharynx	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.4	0.6	2.9	3.2	4.6	10.5	6.2	6.6	1.9	1.2	C12-13	0.1	0.2
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	C14	0.0	0.0
Oesophagus	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.7	5.3	4.3	5.9	10.6	18.9	12.3	10.0	3.8	2.5	C15	0.2	0.3
Stomach	90	0.0	0.0	0.0	0.0	0.0	1.6	3.3	4.4	4.8	10.1	15.4	21.5	29.1	37.8	40.1	44.8	11.2	7.1	C16	0.5	0.8
Small intestine	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	1.4	0.5	1.3	2.1	1.5	0.8	0.5	0.4	C17	0.0	0.0
Colon	144	0.0	0.0	0.0	1.0	0.4	0.5	2.0	5.9	6.2	8.3	16.3	32.2	56.1	88.2	71.0	69.7	17.8	11.3	C18	0.6	1.4
Rectum	115	0.0	0.0	0.0	0.5	0.8	0.5	2.0	5.1	7.5	7.1	20.2	28.4	52.2	56.7	37.0	45.6	14.2	9.0	C19-20	0.6	1.1
Anus	4	0.0	0.0	0.0	0.0	0.0	0.5	0.7	0.7	0.0	0.6	1.0	2.1	0.7	1.1	1.5	0.0	0.5	0.4	C21	0.0	0.0
Liver and bile duct	456	0.0	0.0	0.0	0.5	0.4	2.1	10.5	24.2	34.2	51.0	87.9	133.1	165.8	195.4	185.2	157.5	56.7	36.5	C22,C24	2.5	4.5
Gallbladder	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	1.0	1.6	2.6	1.1	6.2	7.5	1.0	0.6	C23	0.0	0.1
Pancreas	46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.1	4.7	7.7	13.4	14.5	20.0	13.9	25.7	5.7	3.5	C25	0.2	0.4
Nose, sinuses etc.	8	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.6	1.4	2.1	2.6	6.3	3.1	1.7	1.0	0.6	C30-31	0.0	0.1
Larynx	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.1	0.0	5.3	5.4	7.3	10.5	9.3	8.3	2.6	1.6	C32	0.1	0.2
Trachea, Bronchus and lung	431	0.0	0.0	0.0	0.0	0.4	1.1	1.3	2.2	12.3	23.7	43.7	80.5	131.4	272.1	260.8	296.8	53.5	32.5	C33-34	1.5	4.1
Other thoracic organs	4	0.0	0.0	0.0	1.0	0.4	0.5	0.0	0.7	0.0	1.8	0.5	0.5	0.7	0.0	1.5	0.8	0.5	0.4	C37-38	0.0	0.0
Bone	5	0.0	0.0	0.7	1.0	0.8	0.0	0.0	0.0	0.7	0.6	1.0	0.0	1.3	1.1	1.5	0.8	0.6	0.5	C40-C41	0.0	0.0
Melanoma of skin	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.0	1.6	1.3	2.1	3.1	5.0	0.7	0.4	C43	0.0	0.0
Other skin	64	1.0	0.0	0.0	0.5	0.0	0.5	1.3	0.0	3.4	3.6	7.2	7.5	13.2	23.1	21.6	74.6	7.9	4.5	C44	0.2	0.4
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	4	0.0	0.0	0.0	0.0	0.8	0.5	2.6	0.7	1.4	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.5	0.4	C46	0.0	0.0
Connective tissue	12	2.0	0.0	0.0	1.0	0.4	0.5	0.7	0.7	1.4	1.8	2.4	2.1	0.7	4.2	6.2	4.1	1.5	1.2	C47,C49	0.1	0.1
Breast	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.5	2.0	2.1	1.5	0.8	0.4	0.3	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	15	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	3.4	3.0	1.9	2.1	4.0	7.4	7.7	7.5	1.9	1.3	C60	0.1	0.2
Prostate	121	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	1.2	3.4	11.3	29.7	77.7	128.1	108.6	15.1	9.0	C61	0.2	1.3
Testis	7	1.0	0.0	0.0	1.0	0.0	1.1	2.0	2.2	2.7	3.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	0.9	C62	0.1	0.1
Other male genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.8	0.1	0.0	C63	0.0	0.0
Kidney	30	1.0	0.0	0.0	0.0	0.4	0.0	0.0	2.2	2.7	0.6	3.4	11.3	9.9	20.0	12.3	9.1	3.8	2.5	C64	0.2	0.3
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.8	0.1	0.1	C65	0.0	0.0
Ureter	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.5	1.3	0.0	1.5	3.3	0.4	0.2	C66	0.0	0.0
Bladder	71	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	1.4	4.1	6.7	10.2	24.4	27.3	49.4	62.2	8.9	5.2	C67	0.2	0.6
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.8	0.1	0.0	C68	0.0	0.0
Eye	3	2.9	0.0	0.0	0.0	0.4	0.0	0.0	0.7	0.7	0.6	0.0	0.5	0.7	1.1	0.0	0.0	0.4	0.6	C69	0.0	0.0
Brain, nervous system	26	1.0	0.9	3.0	0.5	1.2	1.1	2.0	2.9	2.7	3.6	5.3	7.0	4.6	3.2	7.7	7.5	3.2	2.5	C70-72	0.2	0.2
Thyroid	22	1.0	0.0	0.0	0.5	2.0	1.6	1.3	2.9	2.7	3.0	2.9	4.8	4.6	7.4	6.2	5.8	2.7	2.0	C73	0.1	0.2
Adrenal gland	2	2.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.8	0.2	0.3	C74	0.0	0.0
Hodgkin disease	5	0.0	0.0	0.0	1.6	0.0	0.0	1.3	0.7	0.0	0.0	0.0	0.5	2.6	2.1	1.5	0.8	0.6	0.5	C81	0.0	0.1
Non-Hodgkin lymphoma	86	2.0	2.6	0.7	2.6	1.2	1.6	4.6	10.3	8.2	7.1	13.5	19.3	26.4	26.3	34.0	37.3	10.7	7.5	C82-85,C96	0.5	0.8
Multiple myeloma	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	1.9	3.2	4.6	9.5	9.3	9.1	1.9	1.1	C90	0.1	0.1
Lymphoid leukemia	13	9.8	3.4	1.5	0.0	0.0	2.1	1.3	0.0	0.0	0.6	0.0	0.5	4.0	0.0	1.5	5.8	1.6	2.3	C91	0.1	0.1
Myeloid leukemia	34	2.9	0.0	2.2	2.1	0.4	2.1	4.6	3.7	4.8	3.0	1.9	4.3	6.6	12.6	23.1	11.6	4.2	3.5	C92-94	0.2	0.4
Leukemia unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.7	1.1	1.5	0.8	0.2	0.1	C95	0.0	0.0
Myelodysplastic disease	48	2.0	0.0	0.0	0.0	2.0	0.5	2.6	2.9	2.7	4.7	5.3	9.1	16.5	20.0	10.8	29.9	5.9	3.9	D45-D47	0.2	0.4
Other and unspecified	61	0.0	0.0	0.7	1.0	0.0	1.1	3.9	2.9	4.8	4.7	5.3	9.7	19.8	28.4	46.3	30.7	7.6	5.1	O&U	0.3	0.6
All sites	2,145	29.4	6.9	8.9	15.6	14.4	21.0	53.7	96.0	132.0	180.8	294.6	464.8	699.5	1,043.1	1,060.2	1,119.4	266.4	173.2	ALL	10.1	20.6

**Table 4.1.2** Chiang Mai (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.3	0.1	0.1	C00	0.0	0.0
Tongue	9	0.0	0.0	0.0	0.0	0.4	0.0	0.7	1.5	0.0	1.0	0.8	2.9	3.6	3.0	0.0	3.3	1.1	0.7	C01-02	0.1	0.1
Mouth	12	0.0	0.0	0.8	0.0	0.4	0.0	0.0	0.0	1.3	1.5	0.4	2.4	2.4	4.9	5.4	7.4	1.5	0.9	C03-06	0.0	0.1
Salivary glands	9	0.0	0.0	0.0	0.5	0.0	0.0	1.4	2.2	0.6	2.1	0.8	4.3	1.2	1.0	0.0	2.0	1.1	0.8	C07-08	0.1	0.1
Tonsil	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.0	0.0	2.0	0.2	0.1	C09	0.0	0.0
Other oropharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.5	0.6	0.0	1.3	1.3	0.3	0.1	C10	0.0	0.0
Nasopharynx	15	0.0	0.0	0.0	1.0	0.0	0.5	2.1	3.6	4.4	2.1	1.3	2.9	2.4	4.9	2.7	2.7	1.8	1.4	C11	0.1	0.1
Hypopharynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	1.2	0.0	2.7	1.3	0.3	0.2	C12-13	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14	0.0	0.0
Oesophagus	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.4	1.9	1.8	3.0	4.0	4.0	0.9	0.5	C15	0.0	0.1
Stomach	65	0.0	0.0	0.0	0.0	0.0	1.1	4.2	4.4	8.2	7.2	6.3	16.7	17.5	21.7	12.1	28.8	7.6	4.7	C16	0.3	0.5
Small intestine	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.0	0.8	0.0	2.4	1.0	0.0	0.7	0.4	0.3	C17	0.0	0.0
Colon	102	0.0	0.0	0.0	0.0	0.8	2.7	2.1	4.4	6.9	11.3	10.0	21.0	30.2	46.4	39.1	42.8	12.0	7.3	C18	0.4	0.9
Rectum	78	0.0	0.0	0.0	0.0	0.0	2.2	5.6	3.6	6.9	7.7	8.4	21.5	23.6	34.6	24.3	23.4	9.2	5.8	C19-20	0.4	0.7
Anus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.5	0.0	0.0	1.2	0.0	2.7	2.7	0.4	0.2	C21	0.0	0.0
Liver and bile duct	184	1.0	0.0	0.8	0.5	0.0	0.0	2.1	1.5	6.3	14.9	23.4	38.7	62.8	85.0	63.4	88.4	21.7	12.5	C22,C24	0.8	1.5
Gallbladder	23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.0	0.8	7.2	4.2	10.9	5.4	18.7	2.7	1.4	C23	0.1	0.2
Pancreas	29	0.0	0.0	0.0	0.5	0.0	0.0	0.7	1.5	0.6	2.6	5.0	4.3	10.3	13.8	13.5	10.7	3.5	2.1	C25	0.1	0.3
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.4	0.5	2.4	2.0	1.3	1.3	0.5	0.3	C30-31	0.0	0.0
Larynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.4	0.5	0.6	0.0	2.7	1.3	0.3	0.2	C32	0.0	0.0
Trachea, Bronchus and lung	287	0.0	0.0	0.0	0.0	0.4	1.1	1.4	7.3	7.5	12.3	20.9	44.9	81.5	151.2	148.4	180.1	33.8	19.0	C33-34	0.9	2.4
Other thoracic organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.3	0.0	0.1	0.1	C37-38	0.0	0.0
Bone	7	1.0	0.0	2.3	1.6	0.8	0.0	0.0	0.0	0.0	1.0	0.8	1.4	0.0	3.0	1.3	0.7	0.8	0.8	C40-C41	0.0	0.1
Melanoma of skin	6	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.5	0.0	1.5	0.4	1.4	1.2	1.0	4.0	2.0	0.7	0.5	C43	0.0	0.1
Other skin	62	0.0	0.0	0.0	1.6	0.8	2.2	0.7	2.2	5.0	3.1	2.9	7.2	11.5	23.7	29.7	48.9	7.3	4.2	C44	0.2	0.5
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	9	2.1	0.0	0.0	0.5	0.4	0.5	1.4	0.0	3.1	0.0	0.4	1.4	0.0	5.9	4.0	1.3	1.1	1.0	C47,C49	0.0	0.1
Breast	490	0.0	0.0	0.0	0.0	1.9	4.9	32.1	61.8	75.4	96.7	104.1	114.6	128.6	141.3	89.1	71.6	57.7	38.9	C50	3.1	4.3
Vulva	11	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.5	0.6	0.5	1.3	1.9	3.0	4.9	1.3	6.0	1.3	0.8	C51	0.0	0.1
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	C52	0.0	0.0
Cervix uteri	164	0.0	0.0	0.0	0.0	0.4	6.5	20.3	34.2	39.6	32.4	29.7	31.0	31.4	31.6	10.8	33.5	19.3	14.0	C53	1.1	1.3
Corpus uteri	87	0.0	0.0	0.0	0.0	0.8	0.5	1.4	5.8	7.5	11.8	16.7	26.7	24.8	38.5	25.6	12.0	10.2	6.5	C54	0.5	0.8
Uterus unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.3	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.2	0.2	C55	0.0	0.0
Ovary	65	0.0	0.0	0.0	0.5	3.4	1.6	5.6	5.8	5.7	9.8	15.5	15.3	15.7	20.8	5.4	11.4	7.6	5.0	C56	0.4	0.5
Other female genital organs	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	0.0	0.4	0.0	3.0	1.0	5.4	0.7	0.5	0.4	C57	0.0	0.1
Placenta	1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	14	1.0	0.9	0.0	0.0	0.0	0.0	0.7	0.0	1.3	2.6	0.4	1.9	4.2	6.9	9.4	4.0	1.6	1.2	C64	0.1	0.1
Renal pelvis	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.0	0.0	0.7	0.2	0.1	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.3	0.1	0.1	C66	0.0	0.0
Bladder	27	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.5	0.0	0.5	2.5	3.3	9.7	14.8	12.1	15.4	3.1	1.8	C67	0.1	0.2
Other urinary organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.8	0.0	1.3	0.7	0.2	0.1	C68	0.0	0.0
Eye	2	2.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.0	0.2	0.4	C69	0.0	0.0
Brain, nervous system	20	2.1	0.9	0.8	0.0	0.4	0.5	2.1	2.2	3.1	3.6	5.0	1.9	2.4	4.9	5.4	4.0	2.3	1.9	C70-72	0.1	0.2
Thyroid	73	0.0	0.0	0.8	2.1	4.6	9.8	7.7	15.3	11.9	9.3	10.5	13.4	9.7	19.8	17.5	8.7	8.6	6.6	C73	0.5	0.7
Adrenal gland	2	1.0	0.9	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.0	0.0	0.0	0.0	0.2	0.3	C74	0.0	0.0
Hodgkin disease	4	1.0	0.0	0.0	0.0	1.1	0.5	2.1	0.0	0.0	0.5	0.4	0.5	1.2	0.0	0.0	0.0	0.5	0.5	C81	0.0	0.0
Non-Hodgkin lymphoma	72	1.0	0.0	0.0	2.1	1.1	0.5	4.9	5.1	7.5	8.7	8.4	10.5	22.9	28.7	18.9	27.4	8.5	5.6	C82-85,C96	0.4	0.6
Multiple myeloma	15	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	2.1	1.3	2.4	4.2	4.0	16.2	5.4	1.7	1.0	C90	0.1	0.2
Lymphoid leukemia	10	6.2	3.5	2.3	0.5	0.8	0.5	0.7	0.0	1.3	0.5	0.4	0.0	0.6	3.0	2.7	2.0	1.2	1.8	C91	0.1	0.1
Myeloid leukemia	31	2.1	0.9	0.8	1.6	0.4	2.7	1.4	7.3	3.1	2.6	2.9	7.6	6.6	5.9	8.1	7.4	3.6	2.9	C92-94	0.2	0.3
Leukemia unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.5	0.6	1.0	0.0	0.7	0.2	0.1	C95	0.0	0.0
Myelodysplastic disease	41	1.0	0.0	0.0	0.0	0.8	0.5	2.1	4.4	3.8	2.1	3.8	6.7	7.9	12.8	18.9	24.1	4.8	3.0	D45-D47	0.2	0.3
Other and unspecified	50	0.0	0.0	0.0	0.5	0.0	0.0	0.7	0.7	0.6	5.1	7.5	9.1	16.9	23.7	14.8	24.1	5.9	3.4	O&U	0.2	0.4
<b>All sites</b>	<b>2,121</b>	<b>21.7</b>	<b>7.1</b>	<b>8.5</b>	<b>14.2</b>	<b>19.9</b>	<b>39.6</b>	<b>108.3</b>	<b>181.0</b>	<b>217.5</b>	<b>262.3</b>	<b>296.9</b>	<b>431.7</b>	<b>562.8</b>	<b>782.6</b>	<b>632.9</b>	<b>739.0</b>	<b>249.7</b>	<b>161.8</b>	<b>ALL</b>	<b>10.9</b>	<b>17.9</b>

**Table 4.1.3** Mean annual incidence, Chiang Mai, 2016-2018

Site	No.Cases Year	Freq. (%)	Male				Female				ICD-10		
			Crude rate (per 100,000)	ASR world	Cum. 0-64	Rate. 0-74 (percent)	No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world		Cum. 0-64	Rate. 0-74 (percent)
Lip	1	0.0	0.1	0.1	0.0	0.0	1	0.0	0.1	0.0	0.0	C00	
Tongue	26	1.2	3.3	2.3	0.2	0.3	9	0.4	1.1	0.7	0.1	0.1	C01-02
Mouth	20	0.9	2.5	1.6	0.1	0.2	12	0.6	1.5	0.9	0.0	0.1	C03-06
Salivary glands	10	0.5	1.3	0.9	0.1	0.1	9	0.4	1.1	0.8	0.1	0.1	C07-08
Tonsil	13	0.6	1.6	1.1	0.1	0.1	2	0.1	0.2	0.1	0.0	0.0	C09
Other oropharynx	6	0.3	0.7	0.5	0.0	0.1	2	0.1	0.3	0.1	0.0	0.0	C10
Nasopharynx	32	1.5	4.0	2.9	0.2	0.3	15	0.7	1.8	1.4	0.1	0.1	C11
Hypopharynx	15	0.7	1.9	1.2	0.1	0.2	3	0.1	0.3	0.2	0.0	0.0	C12-13
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	30	1.4	3.8	2.5	0.2	0.3	7	0.3	0.9	0.5	0.0	0.1	C15
Stomach	90	4.2	11.2	7.1	0.5	0.8	65	3.0	7.6	4.7	0.3	0.5	C16
Small intestine	4	0.2	0.5	0.4	0.0	0.0	4	0.2	0.4	0.3	0.0	0.0	C17
Colon	144	6.7	17.8	11.3	0.6	1.4	102	4.8	12.0	7.3	0.4	0.9	C18
Rectum	115	5.3	14.2	9.0	0.6	1.1	78	3.7	9.2	5.8	0.4	0.7	C19-20
Anus	4	0.2	0.5	0.4	0.0	0.0	3	0.2	0.4	0.2	0.0	0.0	C21
Liver and bile duct	456	21.3	56.7	36.5	2.5	4.5	184	8.7	21.7	12.5	0.8	1.5	C22,C24
Gallbladder	8	0.4	1.0	0.6	0.0	0.1	23	1.1	2.7	1.4	0.1	0.2	C23
Pancreas	46	2.1	5.7	3.5	0.2	0.4	29	1.4	3.5	2.1	0.1	0.3	C25
Nose, sinuses etc.	8	0.4	1.0	0.6	0.0	0.1	4	0.2	0.5	0.3	0.0	0.0	C30-31
Larynx	21	1.0	2.6	1.6	0.1	0.2	3	0.1	0.3	0.2	0.0	0.0	C32
Trachea, Bronchus and lung	431	20.1	53.5	32.5	1.5	4.1	287	13.5	33.8	19.0	0.9	2.4	C33-34
Other thoracic organs	4	0.2	0.5	0.4	0.0	0.0	1	0.0	0.1	0.1	0.0	0.0	C37-38
Bone	5	0.2	0.6	0.5	0.0	0.0	7	0.3	0.8	0.8	0.0	0.1	C40-C41
Melanoma of skin	6	0.3	0.7	0.4	0.0	0.0	6	0.3	0.7	0.5	0.0	0.1	C43
Other skin	64	3.0	7.9	4.5	0.2	0.4	62	2.9	7.3	4.2	0.2	0.5	C44
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C45
Kaposi's sarcoma	4	0.2	0.5	0.4	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	12	0.6	1.5	1.2	0.1	0.1	9	0.4	1.1	1.0	0.0	0.1	C47,C49
Breast	3	0.2	0.4	0.3	0.0	0.0	490	23.1	57.7	38.9	3.1	4.3	C50
Vulva							11	0.5	1.3	0.8	0.0	0.1	C51
Vagina							0	0.0	0.0	0.0	0.0	0.0	C52
Cervix uteri							164	7.7	19.3	14.0	1.1	1.3	C53
Corpus uteri							87	4.1	10.2	6.5	0.5	0.8	C54
Uterus unspecified							2	0.1	0.2	0.2	0.0	0.0	C55
Ovary							65	3.0	7.6	5.0	0.4	0.5	C56
Other female genital organs							5	0.2	0.5	0.4	0.0	0.1	C57
Placenta							1	0.0	0.1	0.1	0.0	0.0	C58
Penis	15	0.7	1.9	1.3	0.1	0.2							C60
Prostate	121	5.7	15.1	9.0	0.2	1.3							C61
Testis	7	0.3	0.9	0.9	0.1	0.1							C62
Other male genital organs	1	0.0	0.1	0.0	0.0	0.0							C63
Kidney	30	1.4	3.8	2.5	0.2	0.3	14	0.7	1.6	1.2	0.1	0.1	C64
Renal pelvis	1	0.0	0.1	0.1	0.0	0.0	2	0.1	0.2	0.1	0.0	0.0	C65
Ureter	3	0.1	0.4	0.2	0.0	0.0	1	0.0	0.1	0.1	0.0	0.0	C66
Bladder	71	3.3	8.9	5.2	0.2	0.6	27	1.3	3.1	1.8	0.1	0.2	C67
Other urinary organs	1	0.0	0.1	0.0	0.0	0.0	2	0.1	0.2	0.1	0.0	0.0	C68
Eye	3	0.2	0.4	0.6	0.0	0.0	2	0.1	0.2	0.4	0.0	0.0	C69
Brain, nervous system	26	1.2	3.2	2.5	0.2	0.2	20	0.9	2.3	1.9	0.1	0.2	C70-72
Thyroid	22	1.0	2.7	2.0	0.1	0.2	73	3.4	8.6	6.6	0.5	0.7	C73
Adrenal gland	2	0.1	0.2	0.3	0.0	0.0	2	0.1	0.2	0.3	0.0	0.0	C74
Hodgkin disease	5	0.2	0.6	0.5	0.0	0.1	4	0.2	0.5	0.5	0.0	0.0	C81
Non-Hodgkin lymphoma	86	4.0	10.7	7.5	0.5	0.8	72	3.4	8.5	5.6	0.4	0.6	C82-85,C96
Multiple myeloma	15	0.7	1.9	1.1	0.1	0.1	15	0.7	1.7	1.0	0.1	0.2	C90
Lymphoid leukemia	13	0.6	1.6	2.3	0.1	0.1	10	0.5	1.2	1.8	0.1	0.1	C91
Myeloid leukemia	34	1.6	4.2	3.5	0.2	0.4	31	1.4	3.6	2.9	0.2	0.3	C92-94
Leukemia unspecified	2	0.1	0.2	0.1	0.0	0.0	2	0.1	0.2	0.1	0.0	0.0	C95
Myelodysplastic disease	48	2.2	5.9	3.9	0.2	0.4	41	1.9	4.8	3.0	0.2	0.3	D45-D47
Other and unspecified	61	2.8	7.6	5.1	0.3	0.6	50	2.4	5.9	3.4	0.2	0.4	O&U
<b>All sites</b>	<b>2,145</b>	<b>100.0</b>	<b>266.4</b>	<b>173.2</b>	<b>10.1</b>	<b>20.6</b>	<b>2,121</b>	<b>100.0</b>	<b>249.7</b>	<b>161.8</b>	<b>10.9</b>	<b>17.9</b>	<b>ALL</b>

**Table 4.1.4** Percentage of morphologically verified and death certificate only cases, Chiang Mai

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	174	97.1	0.0	96	96.9	0.0	C00-C08
Oropharynx	56	92.9	1.8	12	91.7	0.0	C09-C10,C14
Nasopharynx	96	94.8	2.1	46	97.8	2.2	C11
Hypopharynx	46	97.8	0.0	8	87.5	0.0	C12-C13
Esophagus	91	80.2	4.4	22	86.4	4.5	C15
Stomach	270	89.3	1.1	194	87.6	2.6	C16
Small intestine	13	100.0	0.0	11	100.0	0.0	C17
Colon and rectum	788	88.2	0.9	552	89.3	0.9	C18-C21
Liver and bile duct	1,369	17.3	2.3	553	26.8	0.9	C22,C24
Gallbladder	25	56.0	0.0	70	54.3	2.9	C23
pancreas	137	32.8	0.7	88	50.0	0.0	C25
Nose,sinuses etc	23	95.7	4.3	13	100.0	0.0	C30-C31
Larynx	62	93.5	1.6	8	75.0	0.0	C32
Trachea, bronchus and lung	1,292	55.5	2.2	862	56.8	1.6	C33-C34
Other thoracic organs	13	76.9	0.0	2	100.0	0.0	C37-C38
Bone	14	78.6	0.0	21	95.2	4.8	C40-C41
Melanoma of skin	18	100.0	0.0	19	100.0	0.0	C43
Other skin	191	99.0	0.5	187	100.0	0.0	C44
Mesothelioma	1	100.0	0.0	1	100.0	0.0	C45
Kaposi sarcoma	11	100.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	36	100.0	0.0	27	96.3	0.0	C47,C49
Breast	10	100.0	0.0	1,471	97.8	0.6	C50
Vulva				32	96.9	0.0	C51
Vagina				1	100.0	0.0	C52
Cervix uteri				493	97.0	0.6	C53
Corpus uteri				261	98.5	0.8	C54
Uterus unspecified				5	80.0	20.0	C55
Ovary				194	80.4	1.0	C56
Other female genital organs				14	100.0	0.0	C57
Placenta				2	50.0	0.0	C58
Penis	46	100.0	0.0				C60
Prostate	364	84.6	1.1				C61
Testis	21	90.5	0.0				C62
Other male genital organs	2	50.0	0.0				C63
Kidney	91	71.4	2.2	42	78.6	2.4	C64
Renal pelvis	3	100.0	0.0	5	100.0	0.0	C65
Ureter	9	66.7	0.0	3	66.7	0.0	C66
Bladder	214	87.9	0.5	80	85.0	0.0	C67
Other urinary organs	2	50.0	3.0	6		0.0	C68
Eye	10	90.0	23.0	6	100.0	0.0	C69
Brain, nervous system	77	70.1	3.0	59	64.4	3.4	C70-C72
Thyroid	65	100.0	3.0	219	99.1	0.0	C73
Adrenal gland	5	60.0	3.0	5	80.0	0.0	C74
Other endocrine	0	0.0	0.0	0	0.0	0.0	C75
Hodgkin disease	15	100.0	3.0	13	100.0	0.0	C81
Non-Hodgkin lymphoma	258	100.0	3.0	216	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	45	100.0	3.0	44	100.0	0.0	C90
Leukemia	146	100.0	0.0	128	100.0	0.0	C91-C95
Myelodysplastic	143	100.0	0.0	122	100.0	0.0	D45-D47
Other and unspecified	183	51.4	10.9	150	52.7	8.0	O&U
<b>All sites</b>	<b>6,435</b>	<b>65.7</b>	<b>1.7</b>	<b>6,363</b>	<b>81.8</b>	<b>1.0</b>	<b>All</b>
<b>All sites without liver</b>	<b>5,066</b>	<b>78.8</b>	<b>1.5</b>	<b>5,810</b>	<b>87.0</b>	<b>1.0</b>	<b>All</b>

## 4.2 Lampang Cancer Registry

### Registration area

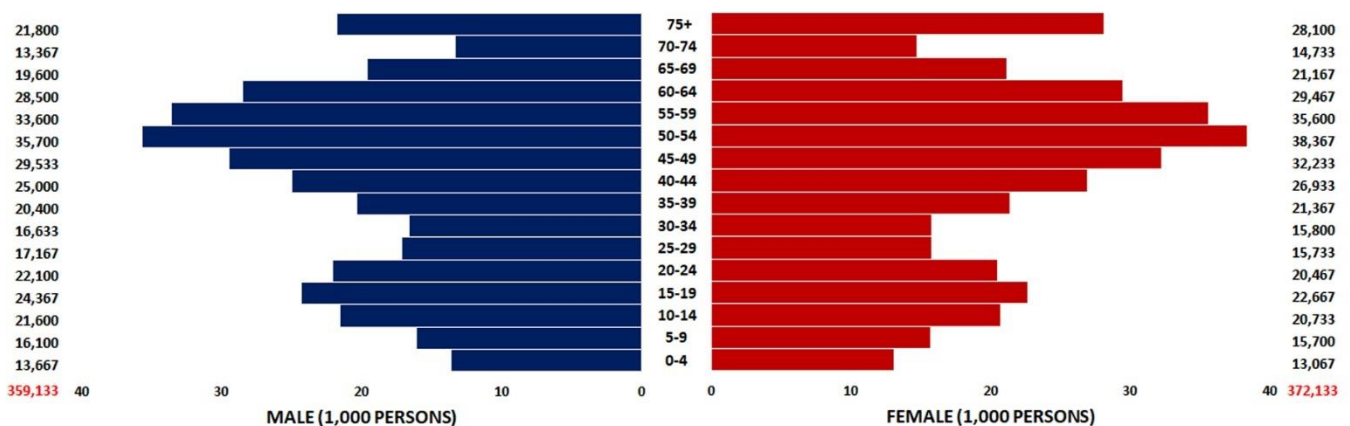
Lampang is one of the 17 provinces of the Northern region of Thailand, located at latitude 17-19 °N and longitude 98-100 °E. It is 268.8 meters above sea level with a land area of 12,534 km<sup>2</sup>. It has common boundary with Chiang Mai and Phayao in the north, Phare in the east, Tak and Sukhothai in the south and Lamphun and Chiang Mai in the west. Lampang cancer registry covers the population of 13 districts.

The estimated population in 2017 was 731,267 with 359,133 males and 372,133 females. About 30% of the populations live in urban areas; 97% are Buddhists, the remainder being mainly Christians or Muslims. The average population density is about 59.75 persons per square kilometer.

Most important occupations are farming of rice, peanuts, sugar beans and pineapple. There are large lignite-generated power plants and lignite mining areas in the Moe Moh district, 36 kilometers from city area. In addition, there are more than 200 ceramic factories, over 100 wood working plants and large cement factories located in Lampang.



Population pyramid Lampang  
estimated population in 2017 (2016 – 2018)



## Cancer care facilities

In Lampang province, health care service is provided in 12 community hospitals, one Lampang provincial hospital, two private hospitals, one military hospital and one cancer hospital (Lampang Cancer Hospital). For cancer care, these hospitals have cancer diagnostic services (including CT scan, clinical consultations and radiological, pathological investigations). Oncologic surgery services, chemotherapy and targeted therapy are available in Lampang cancer hospital and Lampang provincial hospital. Radiation therapy is available only in Lampang Cancer hospital, one high dose rate machine for brachytherapy two dual energy linear accelerator with multi leaf collimator for 3D-conformal (3D-CRT) and Intensity Modulated Radiotherapy (IMRT) one high energy linear accelerator with six degrees of freedom couch for SBRT, SRT, and fully of treatment planning and radiation oncology information system. All hospitals in the province provide palliative care. However, some patients are referred to the National Cancer Institute, and university hospitals in Chiang Mai and Bangkok. The ratio of doctors to population is 1:2,256 the ratio of registered nurses to population is 1:437. (Ministry of Public Health, 2016)

## Registry procedures

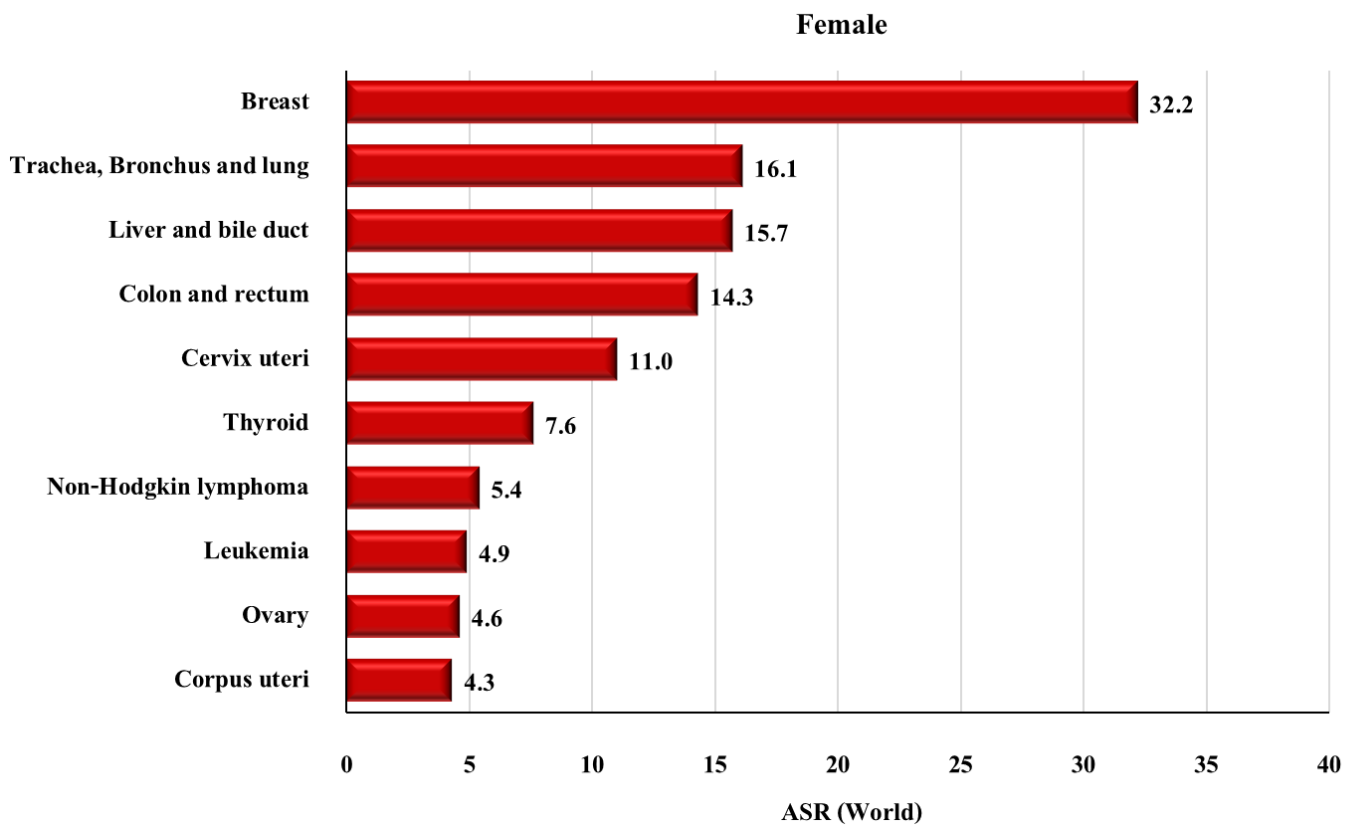
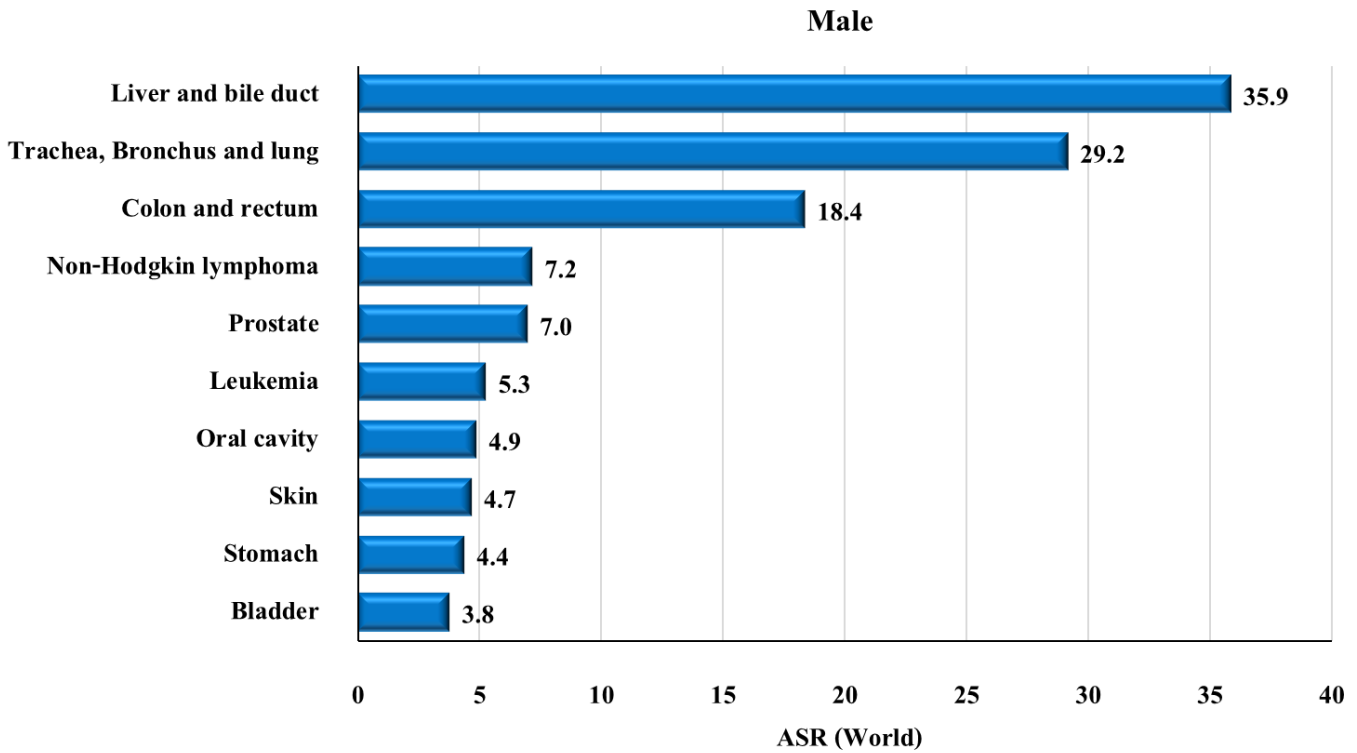
The registry unit is located within Lampang Cancer Hospital. The Lampang registry was established in 1995 with the backup data of cancer cases in Lampang since 1983 which collected by Dr. Nimit Martin. A part time physician, a full-time nurse, five full time health workers responsible for the registry. The registration uses passive methods by notification from 21 sources of data consisting of cancer centers, general hospitals, community hospitals, private hospitals, university hospital, the provincial public health service of Lampang and pathological laboratories.

Data collection consists of: registry number, name, residential address, date of birth, age, sex, date of diagnosis, site of cancer, histology of cancer, staging, extension of disease, method of diagnosis, treatment, date of last contact and vital status of cancer patients. The primary site and histology were coded according to ICD-O 3<sup>rd</sup> edition (*Fritz et al.*, 2013). Second primary cancer was also registered by multiple primary rule (IARC, 2004). Death certificates were obtained from Bureau of Policy and Strategy, Ministry of Public Health. The follow-up of all registered cases was carried out by passive methods with linking database of National Health Security office. The computed data form was checked and extended into data base files, using the CanReg5 program for data entry and analysis.

## Summary of Results

New cases registered in 2017; 1,035 were males and 1,001 were females, making 2,036 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 151.4 per 100,000, with liver and bile duct cancer ranking first (ASR = 35.9) followed by trachea, bronchus and lung (ASR = 29.2) and colon and rectum (ASR = 18.4). The ASR of all cancer sites in females was 147.3 per 100,000, the three leading cancer sites being breast (ASR = 32.2), trachea, bronchus and lung (ASR = 16.1) and liver and bile duct (ASR = 15.7).

**Figure 4.2.1** Leading cancer in Lampung (mean annual ASR 2016-2018)



**Table 4.2.1** Lampung (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.2	0.0	2.5	3.1	0.5	0.2	C00	0.0	0.0
Tongue	11	0.0	0.0	3.1	0.0	0.0	1.9	0.0	1.6	0.0	6.8	8.4	6.0	2.3	3.4	0.0	4.6	3.0	1.9	C01-02	0.2	0.2
Mouth	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	4.0	4.5	2.8	2.0	4.7	5.1	7.5	4.6	2.5	1.5	C03-06	0.1	0.2
Salivary glands	7	0.0	0.0	0.0	0.0	0.0	5.8	2.0	1.6	0.0	2.3	0.0	5.0	1.2	1.7	2.5	7.6	1.9	1.3	C07-08	0.1	0.1
Tonsil	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.1	0.9	0.0	1.2	1.7	0.0	1.5	0.6	0.3	C09	0.0	0.0
Other oropharynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.2	5.1	2.5	4.6	0.8	0.4	C10	0.0	0.0	
Nasopharynx	14	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.3	6.7	3.4	5.6	5.0	8.2	0.0	15.0	7.6	3.8	2.3	C11	0.2	0.3
Hypopharynx	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.8	3.0	5.8	3.4	2.5	0.0	1.5	0.8	C12-13	0.1	0.1
Oesophagus	15	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.6	0.0	1.1	6.5	8.9	9.4	20.4	10.0	1.5	4.1	2.2	C15	0.1	0.3
Stomach	31	0.0	0.0	0.0	0.0	0.0	0.0	4.0	1.6	2.7	4.5	8.4	9.9	23.4	28.9	22.4	29.1	8.6	4.4	C16	0.3	0.5
Small intestine	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.9	5.0	3.5	0.0	2.5	1.5	1.2	0.6	C17	0.1	0.1
Colon	66	0.0	0.0	0.0	0.0	1.5	0.0	10.0	1.6	10.7	10.2	14.9	31.7	40.9	42.5	42.4	76.5	18.5	9.4	C18	0.6	1.0
Rectum	58	0.0	0.0	0.0	2.7	0.0	3.9	2.0	3.3	12.0	10.2	14.9	23.8	36.3	49.3	42.4	47.4	16.1	8.6	C19-20	0.5	1.0
Anus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.0	2.3	1.7	0.0	4.6	0.7	0.4	C21	0.0	0.0
Liver and bile duct	242	2.4	0.0	0.0	0.0	0.0	5.8	8.0	29.4	44.0	47.4	85.9	133.9	149.7	195.6	149.6	146.8	67.5	35.9	C22,C24	2.5	4.3
Gallbladder	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	2.3	0.0	3.0	9.4	10.2	17.5	18.3	3.6	1.7	C23	0.1	0.2
Pancreas	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	5.3	3.4	3.7	10.9	8.2	10.2	15.0	24.5	5.4	2.7	C25	0.2	0.3
Nose, sinuses etc.	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.4	0.0	3.1	0.5	0.2	C30-31	0.0	0.0
Larynx	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.9	5.0	3.5	3.4	12.5	21.4	2.9	1.2	C32	0.1	0.1
Trachea, Bronchus and lung	224	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.6	16.0	21.4	25.2	73.4	115.8	202.4	251.9	336.4	62.5	29.2	C33-34	1.3	3.5
Other thoracic organs	1	0.0	0.0	1.5	0.0	1.5	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.4	0.5	C37-38	0.0	0.0
Bone	3	0.0	0.0	0.0	0.0	1.5	1.9	0.0	0.0	0.0	0.0	0.9	1.0	2.3	3.4	5.0	0.0	0.9	0.7	C40-C41	0.0	0.1
Melanoma of skin	2	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.9	1.0	2.3	1.7	0.0	1.5	0.6	0.4	C43	0.0	0.0
Other skin	35	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	2.7	2.3	4.7	10.9	14.0	20.4	27.4	74.9	9.7	4.3	C44	0.2	0.4
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	1	0.0	0.0	0.0	0.0	0.0	3.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	C46	0.0	0.0
Connective tissue	6	0.0	0.0	1.5	1.4	0.0	1.9	0.0	1.6	4.0	0.0	0.9	4.0	1.2	1.7	2.5	3.1	1.6	1.2	C47,C49	0.1	0.1
Breast	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	3.0	1.2	1.7	5.0	1.5	0.8	0.4	C50	0.0	0.1
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.3	3.7	1.0	2.3	8.5	7.5	6.1	2.0	1.1	C60	0.1	0.1
Prostate	56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	9.9	22.2	40.8	112.2	102.4	15.7	7.0	C61	0.2	0.9
Testis	4	0.0	0.0	0.0	0.0	0.0	1.9	2.0	6.5	2.7	0.0	0.9	2.0	0.0	0.0	0.0	0.0	1.0	1.0	C62	0.1	0.1
Kidney	12	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	1.1	2.8	5.0	5.8	18.7	7.5	10.7	3.3	1.7	C64	0.1	0.2
Renal pelvis	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.9	3.0	0.0	0.0	2.5	1.5	0.6	0.3	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	1.5	0.2	0.1	C66	0.0	0.0
Bladder	29	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.3	1.9	7.9	15.2	20.4	27.4	58.1	8.2	3.8	C67	0.2	0.4
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.1	0.0	C68	0.0	0.0
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.0	0.0	0.0	0.0	3.1	0.4	0.2	C69	0.0	0.0
Brain, nervous system	10	0.0	4.1	0.0	1.4	3.0	0.0	0.0	1.6	1.3	5.6	3.7	3.0	3.5	3.4	5.0	4.6	2.7	2.0	C70-72	0.1	0.2
Thyroid	6	0.0	0.0	0.0	0.0	3.0	3.9	4.0	3.3	0.0	0.0	4.7	1.0	1.2	1.7	0.0	4.6	1.8	1.5	C73	0.1	0.1
Adrenal gland	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C74	0.0	0.0
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C75	0.0	0.0
Hodgkin disease	3	2.4	0.0	0.0	1.4	1.5	1.9	0.0	0.0	1.3	0.0	0.0	1.0	1.2	0.0	0.0	1.5	0.7	0.9	C81	0.1	0.1
Non-Hodgkin lymphoma	47	0.0	0.0	1.5	0.0	1.5	7.8	2.0	4.9	2.7	12.4	7.5	23.8	29.2	34.0	27.4	44.3	13.0	7.2	C82-85,C96	0.5	0.8
Multiple myeloma	9	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.1	1.9	4.0	7.0	5.1	5.0	10.7	2.4	1.2	C90	0.1	0.1
Lymphoid leukemia	5	9.8	4.1	0.0	0.0	0.0	1.9	4.0	0.0	1.3	0.0	0.0	0.0	1.2	0.0	0.0	4.6	1.3	2.2	C91	0.1	0.1
Myeloid leukemia	15	2.4	0.0	1.5	1.4	3.0	0.0	0.0	1.6	4.0	3.4	1.9	6.0	11.7	10.2	5.0	12.2	4.3	2.8	C92-94	0.2	0.3
Leukemia unspecified	2	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	2.5	3.1	0.5	0.3	C95	0.0	0.0
Myelodysplastic disease	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.7	2.3	0.9	2.0	2.3	8.5	7.5	9.2	2.2	1.2	D45-D47	0.1	0.1
Other and unspecified	26	0.0	0.0	0.0	0.0	0.8	0.0	1.0	2.5	2.7	1.7	1.4	5.0	5.3	13.6	8.8	16.1	3.7	1.9	O&U	0.1	0.2
<b>All sites</b>	<b>1,035</b>	<b>17.1</b>	<b>10.4</b>	<b>9.3</b>	<b>8.2</b>	<b>24.1</b>	<b>48.5</b>	<b>50.1</b>	<b>81.7</b>	<b>134.7</b>	<b>161.4</b>	<b>230.6</b>	<b>428.6</b>	<b>563.7</b>	<b>797.6</b>	<b>865.3</b>	<b>1,138</b>	<b>288.2</b>	<b>151.4</b>	<b>ALL</b>	<b>8.8</b>	<b>17.2</b>

**Table 4.2.2** Lampang (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	2	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	4.7	2.3	0.0	0.4	0.3	C00	0.0	0.0	
Tongue	7	0.0	0.0	0.0	0.0	0.0	2.1	4.2	1.6	1.2	1.0	1.7	0.9	3.4	1.6	0.0	1.9	1.1	C01-02	0.1	0.1	
Mouth	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.7	0.0	5.7	1.6	4.5	1.7	0.7	C03-06	0.0	0.1	
Salivary glands	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	1.2	1.0	1.7	2.8	0.0	1.6	4.5	4.7	1.5	0.8	C07-08	0.1	0.1
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.2	0.0	C09	0.0	0.0	
Other oropharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.1	0.0	C10	0.0	0.0
Nasopharynx	6	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	1.2	1.0	2.6	2.8	2.3	6.3	4.5	0.0	1.5	0.9	C11	0.1	0.1
Hypopharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C12-13	0.0	0.0
Oesophagus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.1	4.7	0.0	3.6	0.7	0.3	C15	0.0	0.0
Stomach	25	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	5.0	4.1	7.8	13.1	12.4	15.7	13.6	16.6	6.7	3.4	C16	0.2	0.4
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	1.0	0.0	3.7	1.1	0.0	2.3	2.4	0.9	0.5	C17	0.0	0.1
Colon	63	0.0	0.0	1.6	1.5	1.6	10.6	2.1	9.4	6.2	13.4	19.1	26.2	32.8	31.5	61.1	35.6	16.9	9.3	C18	0.6	1.1
Rectum	34	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.7	6.2	4.1	10.4	19.7	14.7	23.6	31.7	17.8	9.2	4.6	C19-20	0.3	0.6
Anus	2	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	1.2	0.0	0.0	0.0	1.1	1.6	2.3	1.2	0.5	0.4	C21	0.0	0.0
Liver and bile duct	120	2.6	0.0	0.0	0.0	1.6	2.1	2.1	15.6	13.6	16.5	20.9	36.5	74.7	80.3	104.1	111.5	32.3	15.7	C22,C24	0.9	1.9
Gallbladder	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	7.5	5.7	6.3	13.6	19.0	3.8	1.5	C23	0.1	0.2
Pancreas	21	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.2	2.1	0.9	5.6	15.8	15.7	13.6	24.9	5.6	2.5	C25	0.1	0.3
Nose, sinuses etc.	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.2	2.1	0.9	0.0	1.1	1.6	0.0	2.4	0.8	0.5	C30-31	0.0	0.0
Larynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.3	0.0	2.3	2.4	0.5	0.2	0.2	C32	0.0	0.0
Trachea, Bronchus and lung	135	0.0	0.0	0.0	0.0	0.0	2.1	6.3	6.2	7.4	13.4	27.8	39.3	56.6	94.5	129.0	162.5	36.3	16.1	C33-34	0.8	1.9
Other thoracic organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.1	0.0	0.0	1.2	0.3	0.1	0.1	C37-38	0.0	0.0
Bone	3	0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.6	0.0	2.1	0.0	0.9	1.1	1.6	4.5	1.2	0.9	0.6	C40-C41	0.0	0.1
Melanoma of skin	3	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	1.1	4.7	0.0	3.6	0.7	0.4	C43	0.0	0.0
Other skin	34	0.0	0.0	1.6	1.5	1.6	2.1	0.0	4.7	1.2	1.0	1.7	8.4	11.3	18.9	29.4	55.8	9.1	4.1	C44	0.2	0.4
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.1	0.0	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.1	0.0	C46	0.0	0.0
Connective tissue	6	0.0	0.0	0.0	1.5	1.6	0.0	0.0	1.6	1.2	3.1	0.9	2.8	3.4	1.6	2.3	3.6	1.7	1.1	C47,C49	0.1	0.1
Breast	210	0.0	0.0	0.0	0.0	0.0	4.2	27.4	45.2	63.1	88.9	106.0	102.1	88.2	97.6	76.9	51.0	56.3	32.2	C50	2.6	3.5
Vulva	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	6.8	3.6	0.7	0.3	0.3	C51	0.0	0.0
Vagina	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.1	1.6	0.0	1.2	0.4	0.2	C52	0.0	0.0
Cervix uteri	68	0.0	0.0	0.0	0.0	1.6	2.1	12.7	20.3	28.5	26.9	28.7	41.2	22.6	20.5	27.1	15.4	18.4	11.0	C53	0.9	1.2
Corpus uteri	31	0.0	0.0	0.0	0.0	1.6	2.1	4.2	3.1	2.5	4.1	14.8	21.5	18.1	14.2	11.3	11.9	8.2	4.3	C54	0.4	0.5
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C55	0.0	0.0
Ovary	29	0.0	0.0	1.6	1.5	0.0	0.0	4.2	6.2	5.0	16.5	11.3	17.8	11.3	11.0	4.5	10.7	7.9	4.6	C56	0.4	0.5
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.2	0.1	C57	0.0	0.0
Placenta	1	0.0	0.0	0.0	0.0	0.0	2.1	2.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Kidney	5	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	1.2	0.0	1.7	1.9	2.3	1.6	9.0	2.4	1.3	0.7	C64	0.0	0.1
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.1	0.0	0.0	0.0	0.2	0.1	C65	0.0	0.0
Ureter	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.1	1.6	2.3	2.4	0.6	0.3	C66	0.0	0.0
Bladder	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	4.3	1.9	3.4	14.2	11.3	4.7	2.6	1.2	C67	0.1	0.2
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.1	0.0	C68	0.0	0.0
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.0	0.0	0.0	0.0	0.0	2.3	1.2	0.4	0.2	C69	0.0	0.0
Brain, nervous system	10	2.6	2.1	0.0	1.5	0.0	0.0	4.2	1.6	2.5	3.1	3.5	2.8	4.5	3.1	0.0	5.9	2.6	2.0	C70-72	0.1	0.2
Thyroid	34	0.0	0.0	0.0	1.5	4.9	16.9	23.2	15.6	9.9	13.4	10.4	12.2	9.0	12.6	6.8	3.6	9.0	7.6	C73	0.6	0.7
Adrenal gland	0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	C74	0.0	0.0
Other endocrine	0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C75	0.0	0.0
Hodgkin disease	3	0.0	0.0	0.0	0.0	1.6	2.1	2.1	0.0	0.0	1.0	0.9	0.0	1.1	3.1	0.0	1.2	0.8	0.7	C81	0.0	0.1
Non-Hodgkin lymphoma	33	2.6	4.2	0.0	1.5	3.3	4.2	4.2	3.1	1.2	5.2	7.0	10.3	18.1	17.3	22.6	30.8	9.0	5.4	C82-85,C96	0.3	0.5
Multiple myeloma	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	2.1	2.6	1.9	3.4	3.1	2.3	4.7	1.6	0.8	C90	0.1	0.1
Lymphoid leukemia	3	7.7	6.4	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.2	0.9	1.8	C91	0.1	0.1
Myeloid leukemia	16	2.6	0.0	1.6	0.0	1.6	2.1	6.3	1.6	1.2	3.1	3.5	6.6	4.5	7.9	20.4	9.5	4.4	2.9	C92-94	0.2	0.3
Leukemia unspecified	1	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	2.3	0.0	0.3	0.2	C95	0.0	0.0
Myelodysplastic disease	5	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.0	0.0	0.9	2.3	3.1	4.5	5.9	1.4	1.2	D45-D47	0.1	0.1
Other and unspecified	24	0.0	0.0	0.0	0.8	0.0	1.1	2.1	0.0	0.6	1.1	2.6	4.2	5.1	7.1	11.4	12.5	3.2	1.6	O&U	0.1	0.2
<b>All sites</b>	<b>1,001</b>	<b>25.5</b>	<b>12.7</b>	<b>6.4</b>	<b>13.2</b>	<b>24.4</b>	<b>63.6</b>	<b>128.7</b>	<b>149.8</b>	<b>170.8</b>	<b>235.8</b>	<b>303.2</b>	<b>409.2</b>	<b>452.5</b>	<b>549.6</b>	<b>658.4</b>	<b>686.8</b>	<b>268.9</b>	<b>147.3</b>	<b>ALL</b>	<b>10.0</b>	<b>16.0</b>

**Table 4.2.3** Mean annual incidence, Lampung, 2016-2018

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	
Lip	2	0.2	0.5	0.2	0.0	0.0	2	0.2	0.4	0.3	0.0	0.0	C00
Tongue	11	1.0	3	1.9	0.2	0.2	7	0.7	1.9	1.1	0.1	0.1	C01-02
Mouth	9	0.9	2.5	1.5	0.1	0.2	6	0.6	1.7	0.7	0.0	0.1	C03-06
Salivary glands	7	0.6	1.9	1.3	0.1	0.1	6	0.6	1.5	0.8	0.1	0.1	C07-08
Tonsil	2	0.2	0.6	0.3	0.0	0.0	1	0.1	0.2	0.0	0.0	0.0	C09
Other oropharynx	3	0.3	0.8	0.4	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C10
Nasopharynx	14	1.3	3.8	2.3	0.2	0.3	6	0.6	1.5	0.9	0.1	0.1	C11
Hypopharynx	5	0.5	1.5	0.8	0.1	0.1	0	0.0	0.1	0	0.0	0.0	C12-13
Oesophagus	15	1.4	4.1	2.2	0.1	0.3	3	0.3	0.7	0.3	0.0	0.0	C15
Stomach	31	3.0	8.6	4.4	0.3	0.5	25	2.5	6.7	3.4	0.2	0.4	C16
Small intestine	4	0.4	1.2	0.6	0.1	0.1	3	0.3	0.9	0.5	0.0	0.1	C17
Colon	66	6.4	18.5	9.4	0.6	1.0	63	6.3	16.9	9.3	0.6	1.1	C18
Rectum	58	5.6	16.1	8.6	0.5	1.0	34	3.4	9.2	4.6	0.3	0.6	C19-20
Anus	3	0.3	0.7	0.4	0.0	0.0	2	0.2	0.5	0.4	0.0	0.0	C21
Liver and bile duct	242	23.4	67.5	35.9	2.5	4.3	120	12.0	32.3	15.7	0.9	1.9	C22,C24
Gallbladder	13	1.3	3.6	1.7	0.1	0.2	14	1.4	3.8	1.5	0.1	0.2	C23
Pancreas	19	1.9	5.4	2.7	0.2	0.3	21	2.1	5.6	2.5	0.1	0.3	C25
Nose, sinuses etc.	2	0.2	0.5	0.2	0.0	0.0	3	0.3	0.8	0.5	0.0	0.0	C30-31
Larynx	10	1.0	2.9	1.2	0.1	0.1	2	0.2	0.5	0.2	0.0	0.0	C32
Trachea, Bronchus and lung	224	21.7	62.5	29.2	1.3	3.5	135	13.5	36.3	16.1	0.8	1.9	C33-34
Other thoracic organs	1	0.1	0.4	0.5	0.0	0.0	1	0.1	0.3	0.1	0.0	0.0	C37-38
Bone	3	0.3	0.9	0.7	0.0	0.1	3	0.3	0.9	0.6	0.0	0.1	C40-C41
Melanoma of skin	2	0.2	0.6	0.4	0.0	0.0	3	0.3	0.7	0.4	0.0	0.0	C43
Other skin	35	3.4	9.7	4.3	0.2	0.4	34	3.4	9.1	4.1	0.2	0.4	C44
Mesothelioma	0	0.0	0	0	0.0	0.0	0	0.0	0.1	0	0.0	0.0	C45
Kaposi's sarcoma	1	0.1	0.3	0.4	0.0	0.0	0	0.0	0.1	0	0.0	0.0	C46
Connective tissue	6	0.5	1.6	1.2	0.1	0.1	6	0.6	1.7	1.1	0.1	0.1	C47,C49
Breast	3	0.3	0.8	0.4	0.0	0.1	210	21.0	56.3	32.2	2.6	3.5	C50
Vulva							3	0.3	0.7	0.3	0.0	0.0	C51
Vagina							2	0.2	0.4	0.2	0.0	0.0	C52
Cervix uteri							68	6.8	18.4	11.0	0.9	1.2	C53
Corpus uteri							31	3.1	8.2	4.3	0.4	0.5	C54
Uterus unspecified							0	0.0	0.1	0.1	0.0	0.0	C55
Ovary							29	2.9	7.9	4.6	0.4	0.5	C56
Other female genital organs							1	0.1	0.2	0.1	0.0	0.0	C57
Placenta							1	0.1	0.3	0.4	0.0	0.0	C58
Penis	7	0.7	2	1.1	0.1	0.1							C60
Prostate	56	5.4	15.7	7	0.2	0.9							C61
Testis	4	0.4	1	1	0.1	0.1							C62
Kidney	12	1.2	3.3	1.7	0.1	0.2	5	0.5	1.3	0.7	0.0	0.1	C64
Renal pelvis	2	0.2	0.6	0.3	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C65
Ureter	1	0.1	0.2	0.1	0.0	0.0	2	0.2	0.6	0.3	0.0	0.0	C66
Bladder	29	2.8	8.2	3.8	0.2	0.4	10	1.0	2.6	1.2	0.1	0.2	C67
Other urinary organs	0	0.0	0.1	0	0.0	0.0	0	0.0	0.1	0	0.0	0.0	C68
Eye	1	0.1	0.4	0.2	0.0	0.0	1	0.1	0.4	0.2	0.0	0.0	C69
Brain, nervous system	10	0.9	2.7	2	0.1	0.2	10	1.0	2.6	2	0.1	0.2	C70-72
Thyroid	6	0.6	1.8	1.5	0.1	0.1	34	3.4	9	7.6	0.6	0.7	C73
Adrenal gland	0	0.0	0.1	0	0.0	0.0	0	0.0	0.1	0.3	0.0	0.0	C74
Other endocrine	0	0.0	0.1	0.1	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0	C75
Hodgkin disease	3	0.3	0.7	0.9	0.1	0.1	3	0.3	0.8	0.7	0.0	0.1	C81
Non-Hodgkin lymphoma	47	4.5	13	7.2	0.5	0.8	33	3.3	9	5.4	0.3	0.5	C82-85,C96
Multiple myeloma	9	0.8	2.4	1.2	0.1	0.1	6	0.6	1.6	0.8	0.1	0.1	C90
Lymphoid leukemia	5	0.5	1.3	2.2	0.1	0.1	3	0.3	0.9	1.8	0.1	0.1	C91
Myeloid leukemia	15	1.5	4.3	2.8	0.2	0.3	16	1.6	4.4	2.9	0.2	0.3	C92-94
Leukemia unspecified	2	0.2	0.5	0.3	0.0	0.0	1	0.1	0.3	0.2	0.0	0.0	C95
Myelodysplastic disease	8	0.8	2.2	1.2	0.1	0.1	5	0.5	1.4	1.2	0.1	0.1	D45-D47
Other and unspecified	26	2.5	3.65	1.9	0.1	0.2	24	2.4	3.15	1.6	0.1	0.2	O&U
<b>All sites</b>	<b>1,035</b>	<b>100.0</b>	<b>288.2</b>	<b>151.4</b>	<b>8.8</b>	<b>17.2</b>	<b>1,001</b>	<b>100.0</b>	<b>268.9</b>	<b>147.3</b>	<b>10.0</b>	<b>16.0</b>	<b>ALL</b>

**Table 4.2.4** Percentage of morphologically verified and death certificate only cases, Lampung

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	84	88.1	4.8	62	90.3	3.2	C00-C08
Oropharynx	15	100.0	0.0	3	100.0	0.0	C09-C10,C14
Nasopharynx	41	95.1	2.4	17	100.0	0.0	C11
Hypopharynx	16	93.8	0.0	1	100.0	0.0	C12-C13
Esophagus	44	84.1	6.8	8	75.0	0.0	C15
Stomach	93	88.2	1.1	75	82.7	0.0	C16
Small intestine	13	84.6	0.0	10	90.0	0.0	C17
Colon and rectum	380	92.9	0.5	298	93.6	1.0	C18-C21
Liver and bile duct	727	22.0	2.5	361	25.8	4.2	C22,C24
Gallbladder	39	66.7	0.0	42	57.1	0.0	C23
pancrease	58	43.1	0.0	62	38.7	3.2	C25
Nose,sinuses etc	5	100.0	0.0	9	100.0	0.0	C30-C31
Larynx	31	90.3	0.0	6	100.0	0.0	C32
Trachea, bronchus and lung	673	51.1	3.1	405	51.9	4.0	C33-C34
Other thoracic organs	4	100.0	0.0	3	66.7	33.3	C37-C38
Bone	10	90.0	0.0	10	60.0	0.0	C40-C41
Melanoma of skin	7	100.0	0.0	8	100.0	0.0	C43
Other skin	105	97.1	1.0	102	96.1	1.0	C44
Mesothelioma	0	0.0	0.0	1	100.0	0.0	C45
Kaposi sarcoma	3	100.0	0.0	1	100.0	0.0	C46
Connective and soft tissue	17	88.2	0.0	19	100.0	0.0	C47,C49
Breast	9	100.0	0.0	629	97.0	0.6	C50
Vulva				8	100.0	0.0	C51
Vagina				5	100.0	0.0	C52
Cervix uteri				205	92.2	1.5	C53
Corpus uteri				92	93.5	0.0	C54
Uterus unspecified				1	100.0	0.0	C55
Ovary				88	87.5	0.0	C56
Other female genital organs				2	100.0	0.0	C57
Placenta				3	66.7	0.0	C58
Penis	22	100.0	0.0				C60
Prostate	169	91.7	0.0				C61
Testis	11	90.9	0.0				C62
Other male genital organs	0	0.0	0.0				C63
Kidney	36	91.7	0.0	15	93.3	0.0	C64
Renal pelvis	7	85.7	0.0	2	100.0	0.0	C65
Ureter	2	100.0	0.0	7	100.0	0.0	C66
Bladder	88	96.6	0.0	29	100.0	0.0	C67
Other urinary organs	1	0.0	0.0	1	100.0	0.0	C68
Eye	4	75.0	0.0	4	100.0	0.0	C69
Brain, nervous system	29	62.1	3.4	29	72.4	0.0	C70-C72
Thyroid	19	89.5	0.0	101	96.0	0.0	C73
Adrenal gland	1	100.0	0.0	1	100.0	0.0	C74
Other endocrine	1	100.0	0.0	1	100.0	0.0	C75
Hodgkin disease	8	100.0	0.0	9	100.0	0.0	C81
Non-Hodgkin lymphoma	140	100.0	0.0	100	98.0	1.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	26	100.0	0.0	18	100.0	0.0	C90
Leukemia	65	98.5	1.5	62	100.0	0.0	C91-C95
Myelodysplastic	24	100.0	0.0	16	100.0	0.0	D45-D47
Other and unspecified	75	52.0	10.7	64	53.1	15.6	O&U
<b>All sites</b>	<b>3,102</b>	<b>65.0</b>	<b>2.0</b>	<b>2,995</b>	<b>77.7</b>	<b>1.9</b>	<b>All</b>
<b>All sites without liver</b>	<b>2,375</b>	<b>78.2</b>	<b>1.8</b>	<b>2,634</b>	<b>84.9</b>	<b>1.6</b>	<b>All</b>

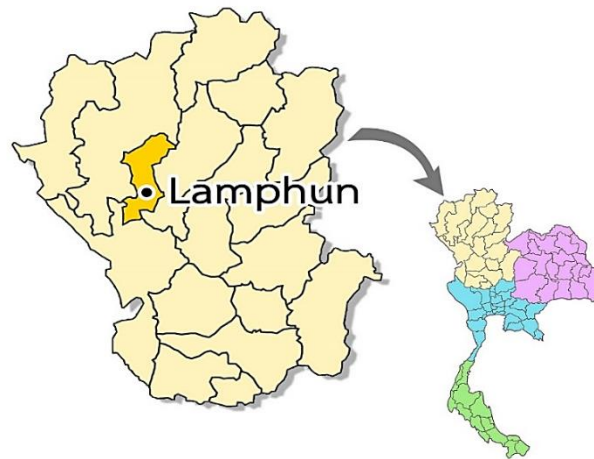
## 4.3 Lamphun Cancer Registry

### Registration area

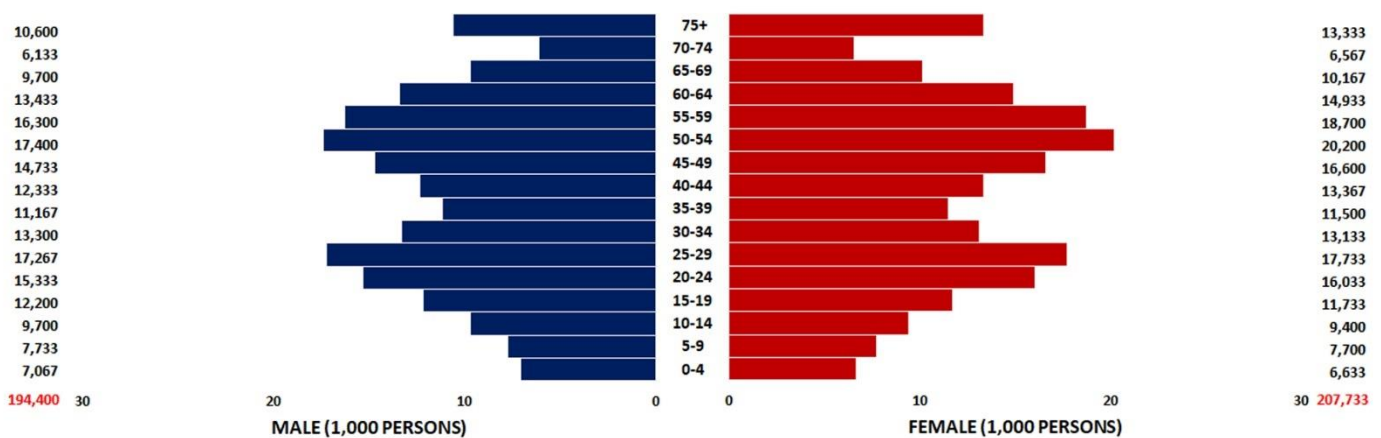
Lamphun is a small province among 17 provinces located in the northern region of Thailand, between 17.5°-18.5°N and 98°-99.3° E, it is 200-400 meters above sea level with land area of 4,505.08 square kilometers. It situated between Chiang Mai and Lampang. It has common boundary with Chiang Mai in the north and west and common boundary with Lampang in the east, Tak and Lampang in the south. Lamphun population-based cancer registry covers the population of 8 districts.

The estimated population in 2017 was 402,133 with 194,400 males and 207,733 females. The average population density is about 89.8 persons per square kilometer

The most important occupations are farming of rice, garlic, longan and vegetables. Weaving, wood furniture, wood-carving and handicrafts are the main home industries. Industrial Estate Authority of Northern Thailand is situated in this province. In Lamphun province, there are 848 factories, 83 in the Industrial Estate Authority and 765 out of the region (Lamphun Provincial Industrial Office, 2014).



Population pyramid Lamphun  
estimated population in 2017 (2016 – 2018)



### **Cancer care facilities**

The total number of hospitals in Lamphun province was 10 hospitals composed of 6 community hospitals, 3 private hospitals and 1 provincial hospital. Cancer diagnostic services: X-ray and ultrasound are available in Lamphun province. Cancer radiotherapy equipment and pathologist are not available, only cancer surgery and chemotherapy can be performed in the province. Most of cancer patients were referred to Chiang Mai provincial hospital or to Chiang Mai University hospital which providing clinical consultations, radiological and pathological investigations for cancer diagnosis including cancer surgery services, radiotherapy and chemotherapy for cancer treatment. All hospitals in the province provide palliative care. The ratio of doctors to population is 1:1,774. The ratio between registered nurses to population is 1:406 (Ministry of public Health, 2019).

### **Registry procedures**

Population-based cancer registration of Lamphun province was established by Cancer Registry Unit of Lampang Cancer Hospital in 2004 with the back-up cancer data since 1983 to 1994 of all cancer cases in Lamphun province, which was collected by Dr. Nimit Martin, the expert consultant. All data on cancer patients were collected by passive methods involving notification by the staff of Lamphun provincial hospital, 3 private hospitals, 6 community hospitals under supervision of Lamphun Provincial Public Health Service and including data from Cancer Registry Unit of Maharaj Nakorn Chiang Mai University Hospital. New cancer cases were collected from out and in patient departments, radiotherapy unit, surgery unit, cytology unit, hematology unit, medical record, pathological unit and autopsy service. The data information collected includes demographic details for each cancer patient that consists of registry number, name, residential address, date of birth, age, sex, date of diagnosis, site of cancer, histology of cancer, staging, extension of disease, method of diagnosis, treatment, date of last contact and vital status of cancer patients. In addition, all death certificates are matched with the incidence case records of the registry which obtained from Bureau of Policy and Strategy, Ministry of Public Health. The follow-up of all registered cases was carried out by passive methods with linking database of National Health Security office.

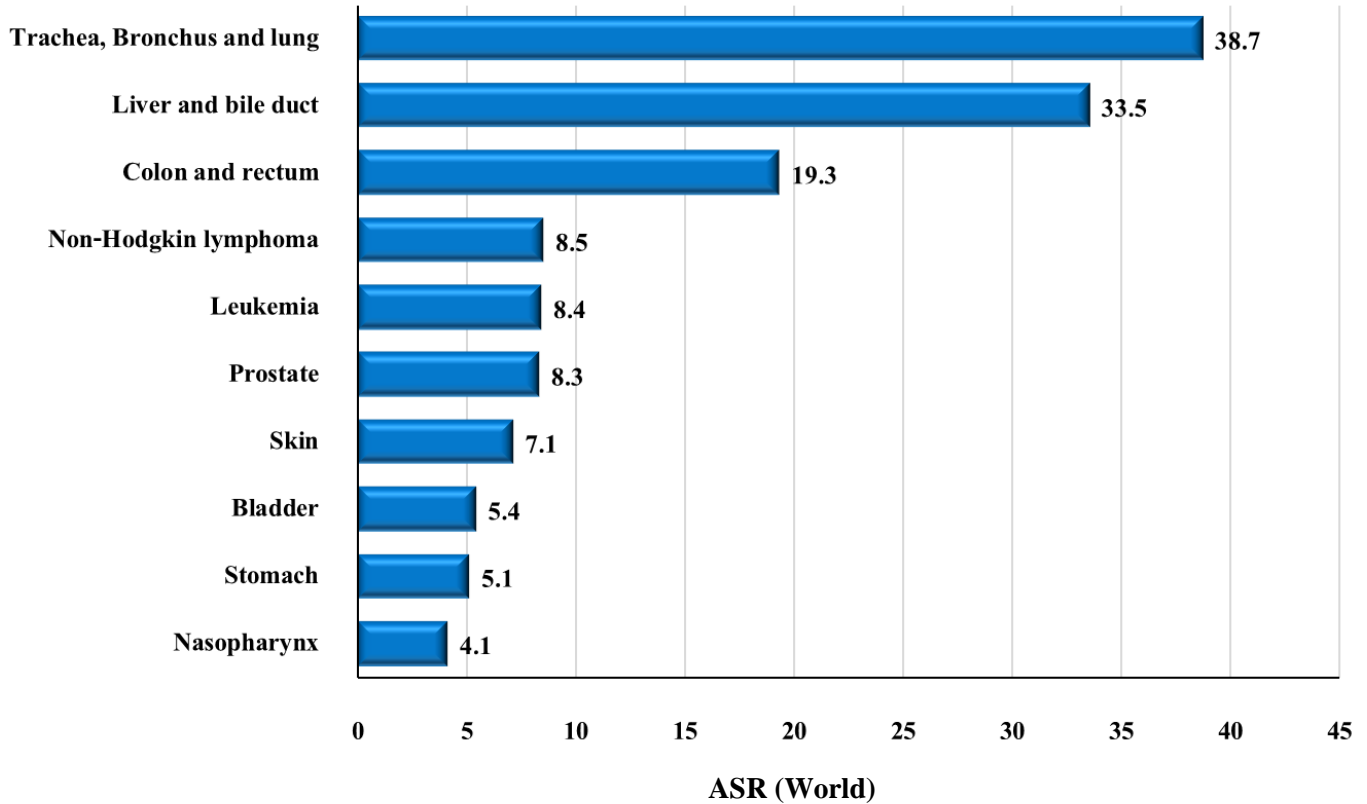
The primary site and histology were coded according to ICD-O 3 first revision edition (Fritz et al., 2013). Second primary cancer was also registered; a new registration number was given for each new primary cancer (IARC, 2004). The completed data forms were checked manually and entered into the database file in a personal computer at Cancer Registry Unit of Lampang Cancer Hospital. CanReg5 software was using input, store, check and analyze cancer registry data. IARCcrgTools program was using validate data and quality control.

### **Summary of Results**

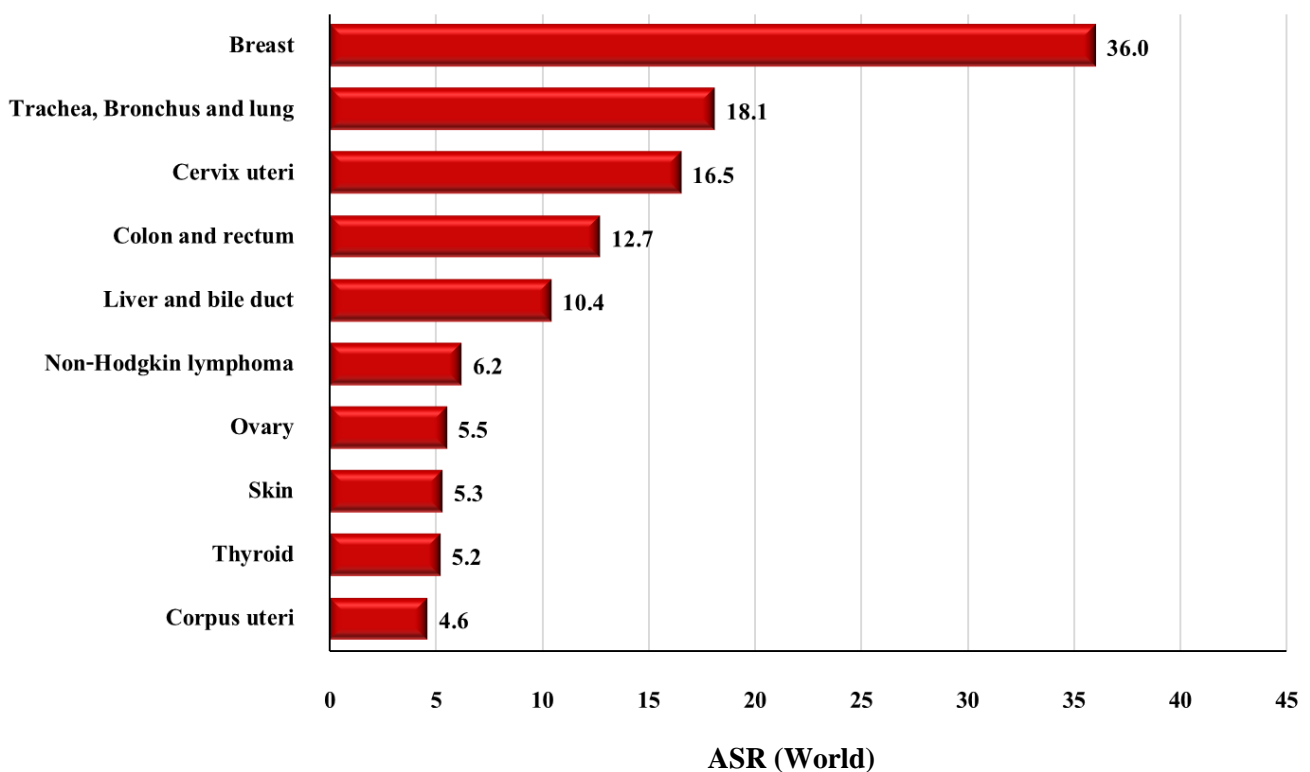
New cases registered in 2017; 572 were males and 539 were females, making 1,111 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 171.9 per 100,000, with trachea, bronchus and lung cancer ranking first (ASR = 38.7) followed by liver and bile duct (ASR = 33.5) and colon and rectum (ASR = 19.3). The ASR of all cancer sites in females was 152.3 per 100,000, the three leading cancer sites being breast (ASR = 36.0), trachea, bronchus and lung (ASR = 18.1) and cervix uteri (ASR = 16.5).

**Figure 4.3.1** Leading cancer in Lamphun (mean annual ASR 2016-2018)

### Male



### Female



**Table 4.3.1** Lamphun (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.2	0.1	C00	0.0	0.0
Tongue	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	5.7	4.1	5.0	3.4	0.0	3.1	1.7	1.0	C01-02	0.1	0.1
Mouth	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.9	0.0	0.0	13.7	0.0	6.3	1.4	0.8	C03-06	0.0	0.1
Salivary glands	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	3.8	4.1	0.0	6.9	0.0	0.0	1.2	0.7	C07-08	0.1	0.1
Tonsil	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	3.8	8.2	5.0	0.0	0.0	3.1	1.7	0.9	C09	0.1	0.1
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.0	0.0	0.0	0.0	0.0	0.3	0.2	C10	0.0	0.0
Nasopharynx	11	0.0	0.0	3.4	5.5	0.0	1.9	2.5	3.0	10.8	6.8	3.8	16.4	14.9	3.4	5.4	3.1	5.5	4.1	C11	0.3	0.4
Hypopharynx	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	6.1	2.5	10.3	0.0	6.3	1.9	1.0	C12-13	0.1	0.1
Oesophagus	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	4.5	3.8	10.2	7.4	3.4	16.3	3.1	3.1	1.8	C15	0.1	0.2
Stomach	17	0.0	0.0	0.0	0.0	0.0	1.9	2.5	0.0	2.7	9.0	13.4	18.4	19.9	20.6	38.0	25.2	8.9	5.1	C16	0.3	0.6
Small intestine	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	5.4	3.1	0.7	0.4	C17	0.0	0.1
Colon	31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	5.4	15.8	11.5	24.5	39.7	55.0	59.8	66.0	15.8	8.8	C18	0.5	1.1
Rectum	36	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	2.7	4.5	26.8	47.0	39.7	37.8	81.5	72.3	18.3	9.8	C19-20	0.6	1.2
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	3.8	4.1	2.5	0.0	0.0	3.1	1.2	0.7	C21	0.1	0.1
Liver and bile duct	111	0.0	0.0	0.0	0.0	2.2	0.0	7.5	35.8	35.1	43.0	82.4	110.4	141.4	195.9	157.6	141.5	57.1	33.5	C22,C24	2.3	4.1
Gallbladder	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.0	7.4	0.0	10.9	3.1	1.4	0.8	C23	0.1	0.1
Pancreas	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	5.7	6.1	7.4	20.6	0.0	15.7	3.6	1.9	C25	0.1	0.2
Nose, sinuses etc.	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	2.5	0.0	0.0	0.0	0.3	0.2	C30-31	0.0	0.0
Larynx	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	4.5	5.7	8.2	17.4	3.4	16.3	15.7	4.5	2.5	C32	0.2	0.3
Trachea, Bronchus and lung	141	0.0	0.0	0.0	0.0	0.0	1.9	2.5	6.0	13.5	27.1	40.2	87.9	173.7	302.4	337.0	367.9	72.4	38.7	C33-34	1.8	5.0
Other thoracic organs	1	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	1.9	2.0	0.0	3.4	0.0	0.0	0.7	0.5	C37-38	0.0	0.0
Bone	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	5.0	0.0	0.0	3.1	0.7	0.4	C40-C41	0.0	0.0
Melanoma of skin	2	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	2.0	0.0	0.0	0.0	9.4	1.0	0.8	C43	0.0	0.0
Other skin	24	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	2.7	4.5	1.9	8.2	12.4	58.4	43.5	100.6	12.2	6.3	C44	0.2	0.7
Mesothelioma	0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C45	0.0	0.0
Connective tissue	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	10.9	3.1	0.7	0.4	C47,C49	0.0	0.1
Breast	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	5.0	0.0	0.0	6.3	0.9	0.4	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Penis	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.9	0.0	0.0	6.9	5.4	6.3	1.2	0.7	C60	0.0	0.1
Prostate	31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	8.2	29.8	72.2	130.4	91.2	15.8	8.3	C61	0.2	1.2
Testis	2	0.0	0.0	0.0	0.0	2.2	0.0	5.0	0.0	0.0	0.0	1.9	0.0	2.5	3.4	0.0	0.0	1.0	0.8	C62	0.1	0.1
Other male genital organs	0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C63	0.0	0.0
Kidney	8	0.0	4.3	0.0	0.0	0.0	0.0	2.5	0.0	2.7	6.8	3.8	10.2	9.9	13.7	10.9	6.3	4.3	2.9	C64	0.2	0.3
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C66	0.0	0.0
Bladder	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.3	3.8	14.3	14.9	34.4	65.2	69.2	10.5	5.4	C67	0.2	0.7
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.2	0.1	C68	0.0	0.0
Eye	1	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.3	0.6	C69	0.0	0.0
Brain, nervous system	5	4.7	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	9.0	0.0	2.0	9.9	3.4	0.0	6.3	2.4	2.0	C70-72	0.1	0.2
Thyroid	3	0.0	0.0	0.0	0.0	0.0	1.9	2.5	0.0	0.0	2.3	0.0	2.0	2.5	0.0	10.9	6.3	1.5	1.0	C73	0.1	0.1
Adrenal gland	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.3	0.2	C74	0.0	0.0
Hodgkin disease	2	0.0	4.3	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.9	5.4	0.0	1.0	1.0	C81	0.0	0.1
Non-Hodgkin lymphoma	27	0.0	4.3	6.9	2.7	0.0	1.9	2.5	14.9	5.4	0.0	9.6	18.4	24.8	37.8	43.5	75.5	13.7	8.5	C82-85,C96	0.5	0.9
Multiple myeloma	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	7.4	6.9	16.3	3.1	1.9	1.1	C90	0.1	0.2
Lymphoid leukemia	2	4.7	0.0	3.4	0.0	2.2	1.9	0.0	0.0	2.7	0.0	0.0	0.0	2.5	0.0	5.4	0.0	1.2	1.6	C91	0.1	0.1
Myeloid leukemia	9	4.7	0.0	0.0	0.0	2.2	0.0	5.0	6.0	8.1	2.3	5.7	6.1	14.9	3.4	0.0	9.4	4.5	3.4	C92-94	0.3	0.3
Leukemia unspecified	6	4.7	8.6	3.4	2.7	2.2	1.9	2.5	3.0	0.0	0.0	0.0	0.0	2.5	6.9	5.4	18.9	3.3	3.4	C95	0.2	0.2
Myelodysplastic disease	10	4.7	4.3	0.0	0.0	0.0	1.9	0.0	0.0	10.8	2.3	7.7	6.1	9.9	6.9	16.3	22.0	5.3	3.9	D45-D47	0.2	0.4
Other and unspecified	16	0.0	4.3	0.0	0.0	0.0	0.0	0.0	3.0	0.0	9.0	15.3	14.3	9.9	17.2	38.0	31.4	8.1	4.8	O&U	0.3	0.6
<b>All sites</b>	<b>572</b>	<b>28.3</b>	<b>34.5</b>	<b>20.6</b>	<b>16.4</b>	<b>17.4</b>	<b>19.3</b>	<b>35.1</b>	<b>80.6</b>	<b>110.8</b>	<b>174.2</b>	<b>281.6</b>	<b>460.1</b>	<b>657.6</b>	<b>965.6</b>	<b>1,135.9</b>	<b>1,213.8</b>	<b>294.2</b>	<b>171.9</b>	<b>ALL</b>	<b>9.7</b>	<b>20.2</b>

**Table 4.3.2** Lamphun (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.5	0.3	0.1	C00	0.0	0.0
Tongue	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.7	5.3	4.5	3.3	0.0	0.0	1.3	0.7	C01-02	0.1	0.1
Mouth	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	9.8	10.2	5.0	1.4	0.7	C03-06	0.0	0.1
Salivary glands	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	10.2	0.0	0.5	0.3	C07-08	0.0	0.1
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.5	0.3	0.2	C09	0.0	0.0
Other oropharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	C10	0.0	0.0
Nasopharynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	3.3	3.6	2.2	3.3	10.2	0.0	1.4	0.8	C11	0.1	0.1
Hypopharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C12-13	0.0	0.0
Oesophagus	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	2.2	0.0	0.0	5.0	0.6	0.3	C15	0.0	0.0
Stomach	14	0.0	0.0	0.0	0.0	0.0	1.9	5.1	11.6	0.0	4.0	13.2	3.6	17.9	13.1	20.3	20.0	6.9	4.1	C16	0.3	0.5
Small intestine	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	C17	0.0	0.0
Colon	30	0.0	0.0	0.0	2.8	0.0	1.9	2.5	8.7	0.0	4.0	16.5	26.7	40.2	36.1	30.5	57.5	14.6	7.7	C18	0.5	0.8
Rectum	18	0.0	0.0	0.0	0.0	0.0	0.0	5.1	5.8	2.5	6.0	14.9	16.0	13.4	26.2	25.4	20.0	8.5	4.8	C19-20	0.3	0.6
Anus	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.3	0.0	2.5	0.5	0.2	C21	0.0	0.0
Liver and bile duct	41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	10.0	12.0	19.8	32.1	49.1	72.1	60.9	62.5	19.6	10.4	C22,C24	0.6	1.3
Gallbladder	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.7	0.0	2.2	3.3	5.1	7.5	1.3	0.6	C23	0.0	0.1
Pancreas	8	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.9	2.5	4.0	1.7	7.1	15.6	6.6	15.2	7.5	4.0	2.4	C25	0.2	0.3
Nose, sinuses etc.	2	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	5.0	0.0	0.0	5.1	0.0	0.0	0.8	0.5	C30-31	0.0	0.1
Larynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	5.1	2.5	0.5	0.2	C32	0.0	0.0
Trachea, Bronchus and lung	73	0.0	0.0	0.0	0.0	0.0	1.9	5.1	8.7	12.5	8.0	23.1	33.9	93.8	101.6	167.5	162.5	35.1	18.1	C33-34	0.9	2.3
Other thoracic organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	2.0	0.0	3.6	0.0	0.0	0.0	0.0	0.6	0.4	C37-38	0.0	0.0
Bone	1	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.3	0.3	C40-C41	0.0	0.0
Melanoma of skin	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.5	0.2	C43	0.0	0.0
Other skin	22	0.0	0.0	0.0	0.0	0.0	1.9	2.5	0.0	2.5	2.0	11.6	10.7	20.1	23.0	30.5	70.0	10.8	5.1	C44	0.3	0.5
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Connective tissue	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	1.8	2.2	6.6	0.0	0.0	0.8	0.5	C47,C49	0.0	0.1
Breast	121	0.0	0.0	0.0	0.0	2.1	1.9	25.4	66.7	82.3	90.4	97.4	112.3	125.0	78.7	76.1	80.0	58.1	36.0	C50	3.0	3.8
Vulva	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	6.6	5.1	5.0	1.0	0.5	C51	0.0	0.1
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	5.1	2.5	0.6	0.3	C52	0.0	0.0
Cervix uteri	53	0.0	0.0	0.0	0.0	0.0	5.6	25.4	29.0	29.9	34.1	36.3	42.8	46.9	72.1	40.6	27.5	25.7	16.5	C53	1.3	1.8
Corpus uteri	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	0.0	6.0	13.2	33.9	29.0	19.7	5.1	0.0	8.3	4.6	C54	0.4	0.6
Uterus unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.6	0.0	3.3	0.0	0.0	0.8	0.4	C55	0.0	0.1
Ovary	17	0.0	0.0	0.0	0.0	2.1	3.8	2.5	8.7	5.0	22.1	9.9	8.9	17.9	23.0	20.3	2.5	8.2	5.5	C56	0.4	0.6
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	6.6	0.0	0.0	0.5	0.3	C57	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	4	5.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.5	2.0	1.7	5.3	6.7	3.3	0.0	0.0	1.9	1.7	C64	0.1	0.1
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.3	0.0	2.5	0.5	0.2	C66	0.0	0.0
Bladder	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	6.7	3.3	5.1	15.0	1.9	0.8	C67	0.0	0.1
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C69	0.0	0.0
Brain, nervous system	10	0.0	4.3	0.0	0.0	2.1	1.9	10.2	2.9	2.5	6.0	5.0	5.3	4.5	9.8	10.2	15.0	5.0	3.5	C70-72	0.2	0.3
Thyroid	15	0.0	0.0	0.0	2.8	0.0	1.9	5.1	14.5	15.0	10.0	13.2	10.7	6.7	9.8	20.3	2.5	7.2	5.2	C73	0.4	0.6
Adrenal gland	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C74	0.0	0.0
Hodgkin disease	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.2	0.1	C81	0.0	0.0
Non-Hodgkin lymphoma	21	5.0	0.0	0.0	0.0	4.2	0.0	10.2	2.9	7.5	0.0	6.6	16.0	17.9	36.1	35.5	30.0	9.9	6.2	C82-85,C96	0.4	0.7
Multiple myeloma	3	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	2.5	0.0	1.7	1.8	0.0	6.6	5.1	7.5	1.6	0.9	C90	0.0	0.1
Lymphoid leukemia	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.2	0.1	C91	0.0	0.0
Myeloid leukemia	7	0.0	0.0	0.0	2.8	0.0	0.0	2.5	2.9	12.5	2.0	5.0	1.8	8.9	3.3	5.1	7.5	3.5	2.5	C92-94	0.2	0.2
Leukemia unspecified	4	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	4.0	0.0	5.3	4.5	0.0	5.1	7.5	1.9	1.0	C95	0.1	0.1
Myelodysplastic disease	7	10.1	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.5	0.0	1.7	5.3	2.2	13.1	20.3	12.5	3.5	3.0	D45-D47	0.1	0.3
Other and unspecified	16	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	2.5	10.0	5.0	7.1	13.4	23.0	25.4	37.5	7.7	4.1	O&U	0.2	0.5
<b>All sites</b>	<b>539</b>	<b>20.1</b>	<b>4.3</b>	<b>0.0</b>	<b>8.5</b>	<b>14.6</b>	<b>22.6</b>	<b>116.8</b>	<b>182.6</b>	<b>197.0</b>	<b>241.0</b>	<b>315.2</b>	<b>417.1</b>	<b>567.0</b>	<b>632.8</b>	<b>680.2</b>	<b>687.5</b>	<b>259.3</b>	<b>152.3</b>	<b>ALL</b>	<b>10.5</b>	<b>17.1</b>

**Table 4.3.3** Mean annual incidence, Lamphun, 2016-2018

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. 0-64 (percent)	Rate. 0-74 (percent)	No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. 0-64 (percent)	Rate. 0-74 (percent)	
	Lip	0	0.1	0.2	0.1	0.0	0.0	1	0.1	0.3	0.1	0.0	
Tongue	3	0.6	1.7	1.0	0.1	0.1	3	0.5	1.3	0.7	0.1	0.1	C01-02
Mouth	3	0.5	1.4	0.8	0.0	0.1	3	0.6	1.4	0.7	0.0	0.1	C03-06
Salivary glands	2	0.4	1.2	0.7	0.1	0.1	1	0.2	0.5	0.3	0.0	0.1	C07-08
Tonsil	3	0.6	1.7	0.9	0.1	0.1	1	0.1	0.3	0.2	0.0	0.0	C09
Other oropharynx	1	0.1	0.3	0.2	0.0	0.0	0	0.1	0.2	0.1	0.0	0.0	C10
Nasopharynx	11	1.9	5.5	4.1	0.3	0.4	3	0.6	1.4	0.8	0.1	0.1	C11
Hypopharynx	4	0.6	1.9	1.0	0.1	0.1	0	0.0	0.0	0.0	0.0	0.0	C12-13
Oesophagus	6	1.0	3.1	1.8	0.1	0.2	1	0.2	0.6	0.3	0.0	0.0	C15
Stomach	17	3.0	8.9	5.1	0.3	0.6	14	2.7	6.9	4.1	0.3	0.5	C16
Small intestine	1	0.2	0.7	0.4	0.0	0.1	0	0.1	0.2	0.1	0.0	0.0	C17
Colon	31	5.4	15.8	8.8	0.5	1.1	30	5.6	14.6	7.7	0.5	0.8	C18
Rectum	36	6.2	18.3	9.8	0.6	1.2	18	3.3	8.5	4.8	0.3	0.6	C19-20
Anus	2	0.4	1.2	0.7	0.1	0.1	1	0.2	0.5	0.2	0.0	0.0	C21
Liver and bile duct	111	19.4	57.1	33.5	2.3	4.1	41	7.5	19.6	10.4	0.6	1.3	C22,C24
Gallbladder	3	0.5	1.4	0.8	0.1	0.1	3	0.5	1.3	0.6	0.0	0.1	C23
Pancreas	7	1.2	3.6	1.9	0.1	0.2	8	1.5	4.0	2.4	0.2	0.3	C25
Nose, sinuses etc.	1	0.1	0.3	0.2	0.0	0.0	2	0.3	0.8	0.5	0.0	0.1	C30-31
Larynx	9	1.5	4.5	2.5	0.2	0.3	1	0.2	0.5	0.2	0.0	0.0	C32
Trachea, Bronchus and lung	141	24.6	72.4	38.7	1.8	5.0	73	13.6	35.1	18.1	0.9	2.3	C33-34
Other thoracic organs	1	0.2	0.7	0.5	0.0	0.0	1	0.2	0.6	0.4	0.0	0.0	C37-38
Bone	1	0.2	0.7	0.4	0.0	0.0	1	0.1	0.3	0.3	0.0	0.0	C40-C41
Melanoma of skin	2	0.3	1.0	0.8	0.0	0.0	1	0.2	0.5	0.2	0.0	0.0	C43
Other skin	24	4.1	12.2	6.3	0.2	0.7	22	4.1	10.8	5.1	0.3	0.5	C44
Mesothelioma	0	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C45
Connective tissue	1	0.2	0.7	0.4	0.0	0.1	2	0.3	0.8	0.5	0.0	0.1	C47,C49
Breast	2	0.3	0.9	0.4	0.0	0.0	121	22.4	58.1	36.0	3.0	3.8	C50
Vulva							2	0.4	1.0	0.5	0.0	0.1	C51
Vagina							1	0.2	0.6	0.3	0.0	0.0	C52
Cervix uteri							53	9.9	25.7	16.5	1.3	1.8	C53
Corpus uteri							17	3.2	8.3	4.6	0.4	0.6	C54
Uterus unspecified							2	0.3	0.8	0.4	0.0	0.1	C55
Ovary							17	3.2	8.2	5.5	0.4	0.6	C56
Other female genital organs							1	0.2	0.5	0.3	0.0	0.0	C57
Penis	2	0.4	1.2	0.7	0.0	0.1							C60
Prostate	31	5.4	15.8	8.3	0.2	1.2							C61
Testis	2	0.3	1.0	0.8	0.1	0.1							C62
Other male genital organs	0	0.1	0.2	0.2	0.0	0.0							C63
Kidney	8	1.5	4.3	2.9	0.2	0.3	4	0.7	1.9	1.7	0.1	0.1	C64
Ureter	0	0.0	0.0	0.0	0.0	0.0	1	0.2	0.5	0.2	0.0	0.0	C66
Bladder	20	3.6	10.5	5.4	0.2	0.7	4	0.7	1.9	0.8	0.0	0.1	C67
Other urinary organs	0	0.1	0.2	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C68
Eye	1	0.1	0.3	0.6	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C69
Brain, nervous system	5	0.8	2.4	2.0	0.1	0.2	10	1.9	5.0	3.5	0.2	0.3	C70-72
Thyroid	3	0.5	1.5	1.0	0.1	0.1	15	2.8	7.2	5.2	0.4	0.6	C73
Adrenal gland	1	0.1	0.3	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C74
Hodgkin disease	2	0.3	1.0	1.0	0.0	0.1	0	0.1	0.2	0.1	0.0	0.0	C81
Non-Hodgkin lymphoma	27	4.7	13.7	8.5	0.5	0.9	21	3.8	9.9	6.2	0.4	0.7	C82-85,C96
Multiple myeloma	4	0.6	1.9	1.1	0.1	0.2	3	0.6	1.6	0.9	0.0	0.1	C90
Lymphoid leukemia	2	0.4	1.2	1.6	0.1	0.1	0	0.1	0.2	0.1	0.0	0.0	C91
Myeloid leukemia	9	1.5	4.5	3.4	0.3	0.3	7	1.4	3.5	2.5	0.2	0.2	C92-94
Leukemia unspecified	6	1.1	3.3	3.4	0.2	0.2	4	0.7	1.9	1.0	0.1	0.1	C95
Myelodysplastic disease	10	1.8	5.3	3.9	0.2	0.4	7	1.4	3.5	3.0	0.1	0.3	D45-D47
Other and unspecified	16	2.7	8.1	4.8	0.3	0.6	16	3.0	7.7	4.1	0.2	0.5	O&U
<b>All sites</b>	<b>572</b>	<b>100.0</b>	<b>294.2</b>	<b>171.9</b>	<b>9.7</b>	<b>20.2</b>	<b>539</b>	<b>100.0</b>	<b>259.3</b>	<b>152.3</b>	<b>10.5</b>	<b>17.1</b>	<b>ALL</b>

**Table 4.3.4** Percentage of morphologically verified and death certificate only cases, Lamphun

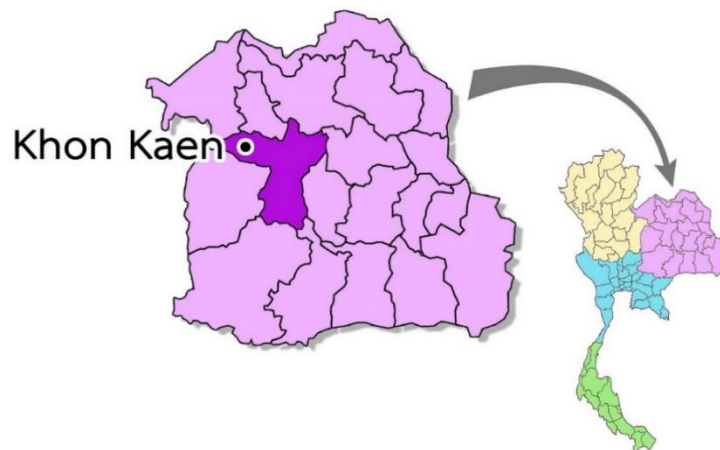
Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	26	96.2	0.0	22	95.5	0.0	C00-C08
Oropharynx	12	91.7	0.0	3	100.0	0.0	C09-C10,C14
Nasopharynx	32	93.8	0.0	9	100.0	0.0	C11
Hypopharynx	11	90.9	0.0	0	0.0	0.0	C12-C13
Esophagus	18	83.3	0.0	4	100.0	0.0	C15
Stomach	52	88.5	3.8	43	88.4	7.0	C16
Small intestine	4	100.0	0.0	1	100.0	0.0	C17
Colon and rectum	206	93.7	0.5	147	89.1	2.0	C18-C21
Liver and bile duct	333	21.0	11.1	122	26.2	16.4	C22,C24
Gallbladder	8	25.0	25.0	8	25.0	25.0	C23
pancrease	21	28.6	4.8	25	40.0	0.0	C25
Nose,sinuses etc	2	100.0	0.0	5	80.0	0.0	C30-C31
Larynx	26	84.6	0.0	3	33.3	0.0	C32
Trachea, bronchus and lung	422	48.8	4.5	219	44.7	5.0	C33-C34
Other thoracic organs	4	50.0	0.0	4	50.0	25.0	C37-C38
Bone	4	25.0	0.0	2	100.0	0.0	C40-C41
Melanoma of skin	6	100.0	0.0	3	100.0	0.0	C43
Other skin	71	94.4	0.0	67	97.0	0.0	C44
Mesothelioma	1	100.0	0.0	0	0.0	0.0	C45
Kaposi sarcoma	0	0.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	4	75.0	0.0	5	60.0	0.0	C47,C49
Breast	5	80.0	0.0	362	95.0	1.4	C50
Vulva				6	100.0	0.0	C51
Vagina				4	100.0	0.0	C52
Cervix uteri				160	85.6	1.3	C53
Corpus uteri				52	96.2	0.0	C54
Uterus unspecified				5	80.0	20.0	C55
Ovary				51	64.7	3.9	C56
Other female genital organs				3	100.0	0.0	C57
Placenta				0	0.0	0.0	C58
Penis	7	100.0	0.0				C60
Prostate	92	83.7	0.0				C61
Testis	6	100.0	0.0				C62
Other male genital organs	1	100.0	0.0				C63
Kidney	25	72.0	8.0	12	66.7	0.0	C64
Renal pelvis	0	0.0	0.0	0	0.0	0.0	C65
Ureter	0	0.0	0.0	3	66.7	0.0	C66
Bladder	61	90.2	1.6	12	100.0	0.0	C67
Other urinary organs	1	0.0	0.0	0	0.0	0.0	C68
Eye	2	100.0	0.0	0	0.0	0.0	C69
Brain, nervous system	14	14.3	28.6	31	35.5	9.7	C70-C72
Thyroid	9	88.9	0.0	45	95.6	0.0	C73
Adrenal gland	2	50.0	0.0	0	0.0	0.0	C74
Other endocrine	0	0.0	0.0	0	0.0	0.0	C75
Hodgkin disease	6	100.0	0.0	1	100.0	0.0	C81
Non-Hodgkin lymphoma	80	100.0	0.0	62	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	11	100.0	0.0	10	100.0	0.0	C90
Leukemia	52	100.0	0.0	35	100.0	0.0	C91-C95
Myelodysplastic	31	100.0	0.0	22	100.0	0.0	D45-D47
Other and unspecified	47	59.6	14.9	48	45.8	18.8	O&U
<b>All sites</b>	<b>1,715</b>	<b>64.8</b>	<b>4.4</b>	<b>1,616</b>	<b>76.6</b>	<b>3.8</b>	<b>ALL</b>
<b>All sites without liver</b>	<b>1,382</b>	<b>75.3</b>	<b>2.8</b>	<b>1,494</b>	<b>80.7</b>	<b>2.8</b>	<b>ALL</b>

## 4.4 Khon Kaen Cancer Registry

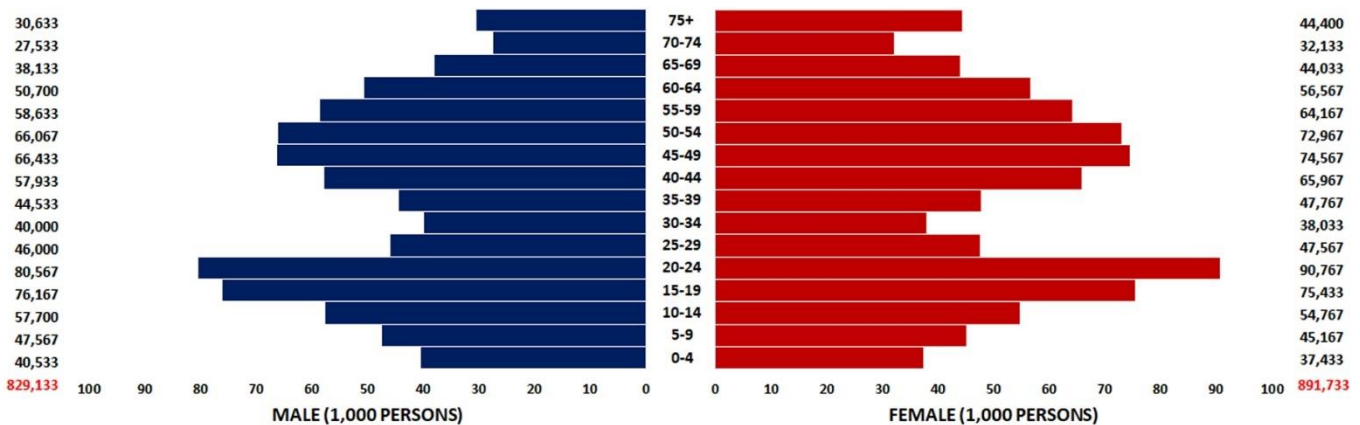
### Registration area

Khon Kaen province is located in the northeastern region of Thailand, at latitude 16:30 N and longitude 102:47 E, 163 meters above the sea level. It covers an area of 10,886 square kilometers with a population of 1.7 million. It has a common boundary with Loei and Udon Thani provinces to the north, Kalasin and Maha Sarakham to the east, Nakhon Ratchasima and Buri Ram to the south, and Phetchabun and Chaiyaphum to the west. The estimated population in 2017 was 1,720,867 with 829,133 males and 891,733 females

Khon Kaen province is divided to 26 sanitary districts. The climate is generally hot and dry. The mean temperature is 28 Celsius and the average annual rainfall is 1,188 millimeters. The majority of people are engaged in rice farming. However, new industrial plants have also been established in this area, causing problems of environmental pollution.



Population pyramid Khon Kaen  
estimated population in 2017 (2016 – 2018)



### **Cancer care facilities**

The two major hospitals with radiotherapy facilities and all sub-specialties for cancer treatment are Srinagarind Hospital (a university hospital) and Khon Kaen Hospital (a provincial hospital). Most remaining hospitals belong to the Ministry of Public Health, including one army hospital. There are three large private hospitals. Attempts to improve the referral system have gained some support, but many patients still refer themselves according to their preferences.

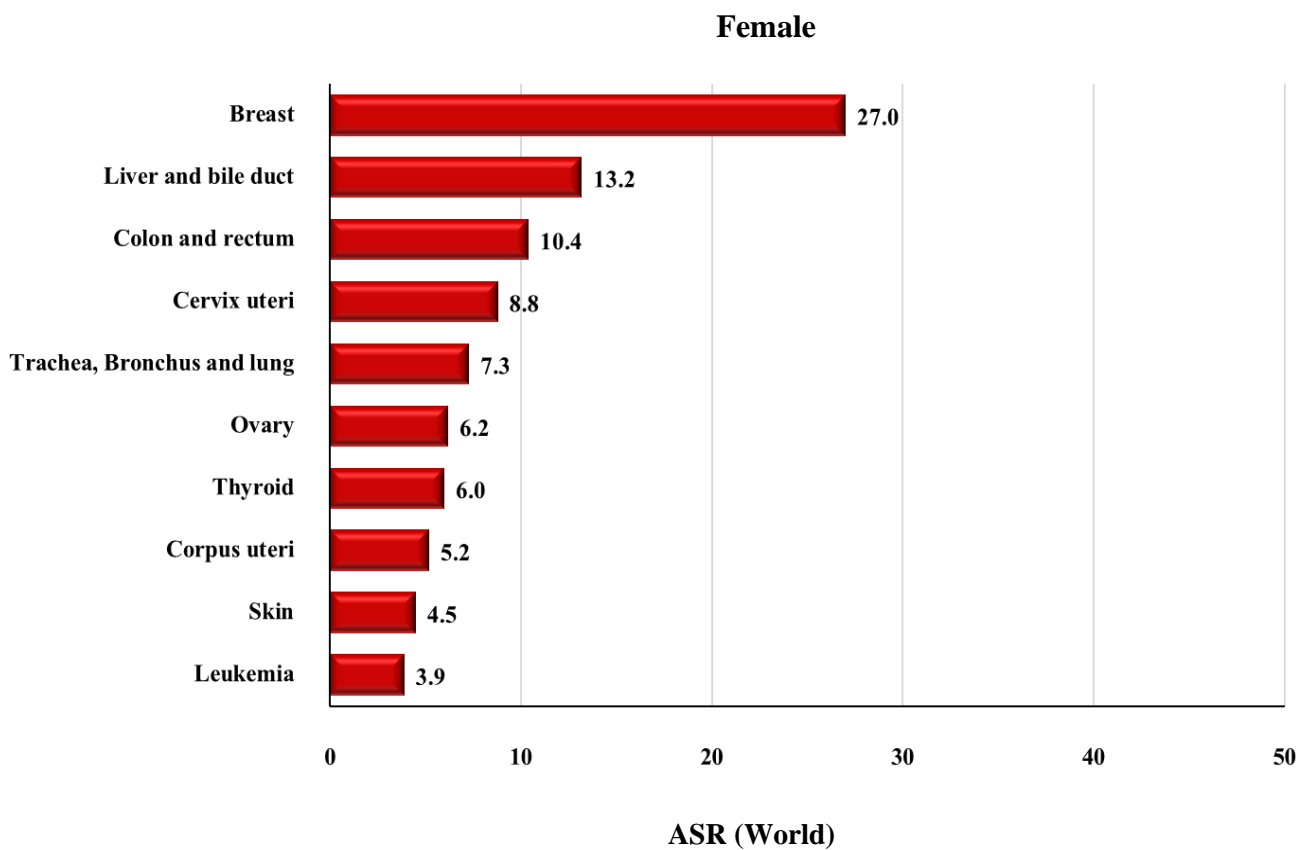
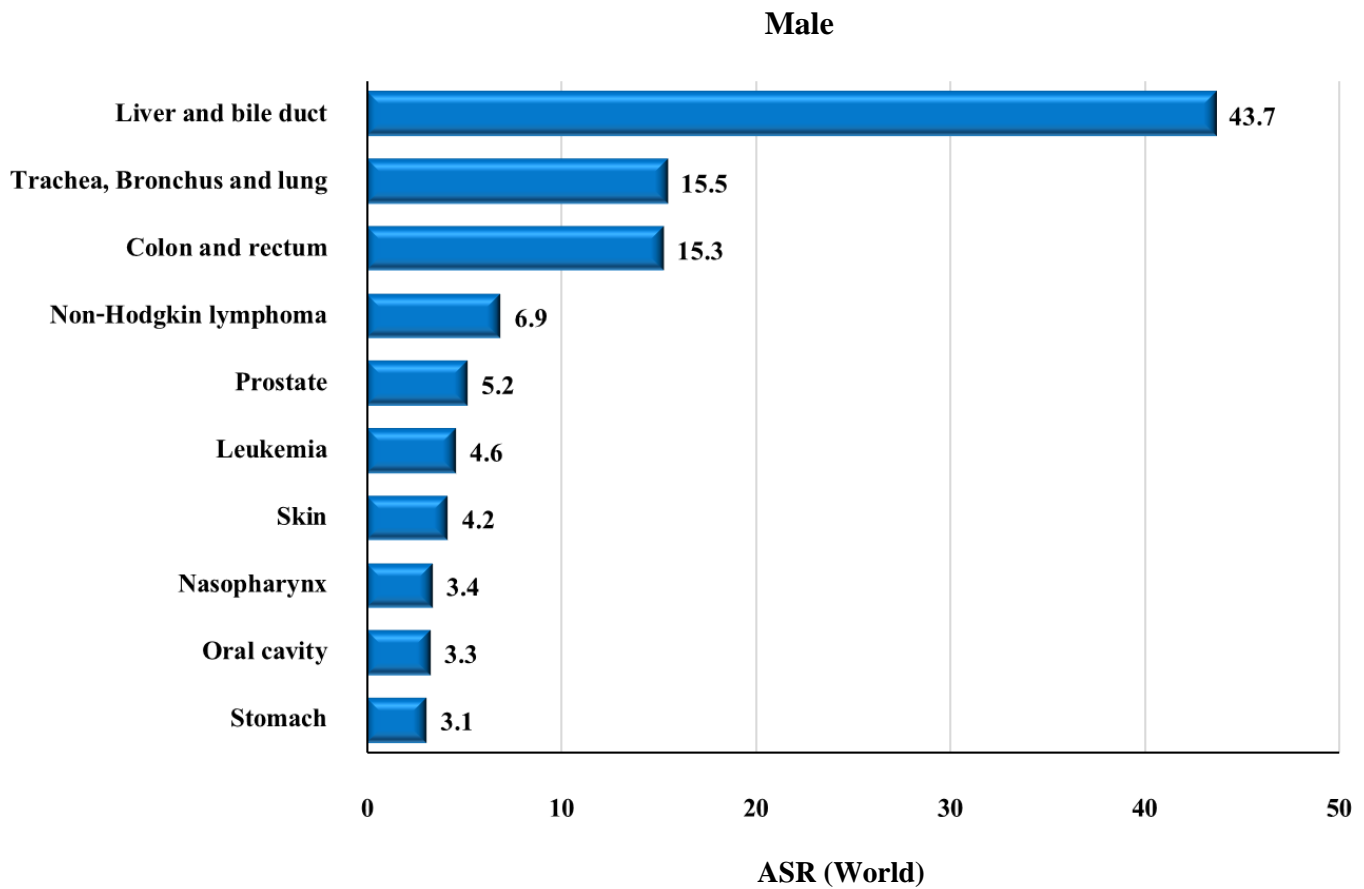
### **Registry procedures**

The data on cancer patients are collected by both active and passive methods from a university hospital (Srinagarind hospital), 1 regional hospital (Khon Kaen provincial hospital) 2 private hospitals and 24 community hospitals. The registrars visit all registered sites by regular schedule. The medical charts of patients diagnosed as having cancer are reviewed and registered by registry personnel. Any questionable cases are traced to the original source(s) of information for clarification. Multiple primary cases are checked by physicians using their original records and with any other physicians concerned. Death certificates with a mention of cancer are collected from the population statistics of the office of the Ministry of Interior. The registrars revise these sources to notify and recheck with health personnel in the relevant area. The vital status of registered cases has been regularly updated by checking with the population statistics of the office of the Ministry of Interior using the personal identification number. To prevent duplication, all data are reviewed and checked with existing registry files before entry. All the data are verified, checked for duplication, coded and entered into the CanReg5 software.

### **Summary of results**

New cases registered in 2017; 1,686 were males and 1,609 were females, making 3,295 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males is 135.2 per 100,000, with liver and bile duct cancer ranking first (ASR = 43.7) followed by trachea, bronchus and lung (ASR = 15.5) and colon and rectum (ASR = 15.3). The ASR for all cancer sites in females was 117.5 per 100,000, the three leading cancer sites in females being breast (ASR = 27.0), liver and bile duct (ASR = 13.2) and colon and rectum (ASR = 10.4).

**Figure 4.4.1** Leading cancer in Khon Kaen (mean annual ASR 2016-2018)



**Table 4.4.1** Khon Kaen (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.7	3.5	0.0	4.4	0.4	0.3	C00	0.0	0.0
Tongue	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	4.6	4.5	7.1	4.5	3.9	3.5	3.6	4.4	2.5	1.7	C01-02	0.1	0.2
Mouth	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.7	2.0	2.5	4.0	2.6	3.5	1.2	2.2	1.3	0.9	C03-06	0.1	0.1
Salivary glands	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.5	2.8	0.7	2.6	2.4	2.2	0.6	0.4	C07-08	0.0	0.1
Tonsil	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	1.5	1.5	0.6	0.7	1.7	0.0	0.0	0.5	0.3	C09	0.0	0.0
Other oropharynx	4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.6	0.5	1.0	2.8	0.0	0.0	1.1	0.0	0.4	0.3	C10	0.0	0.0
Nasopharynx	39	0.0	0.0	0.6	0.0	0.4	2.9	1.7	2.2	6.3	6.0	9.6	10.8	12.5	8.7	9.7	9.8	4.7	3.4	C11	0.3	0.4
Hypopharynx	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.5	1.0	1.1	3.3	5.2	0.0	2.2	0.8	0.6	C12-13	0.0	0.1
Pharynx unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	1.1	0.7	0.0	0.0	0.0	0.2	0.2	C14	0.0	0.0
Oesophagus	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.6	2.5	4.0	6.3	9.9	14.0	7.3	7.6	2.9	1.8	C15	0.1	0.2
Stomach	40	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.5	4.0	4.5	7.1	9.7	9.2	18.4	16.9	21.8	4.8	3.1	C16	0.2	0.4
Small intestine	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.0	0.6	2.6	0.9	1.2	3.3	0.5	0.3	C17	0.0	0.0
Colon	110	0.0	0.0	0.0	0.4	0.8	0.7	5.0	5.2	5.2	7.5	13.6	25.6	36.8	55.1	52.1	60.9	13.3	8.6	C18	0.5	1.0
Rectum	83	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.7	3.5	7.5	7.6	15.3	25.0	47.2	42.4	56.6	10.1	6.4	C19-20	0.3	0.8
Anus	4	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.0	0.0	1.0	1.5	1.1	0.0	0.9	0.0	1.1	0.4	0.3	C21	0.0	0.0
Liver and bile duct	569	0.8	0.0	0.0	0.0	0.0	2.2	7.5	23.2	27.6	60.7	98.4	180.2	192.6	197.6	247.0	280.7	68.6	43.7	C22,C24	3.0	5.2
Gallbladder	8	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.5	1.1	3.3	2.6	4.8	9.8	1.0	0.6	C23	0.0	0.1
Pancreas	20	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.2	1.2	2.0	1.5	5.7	7.9	7.9	7.3	9.8	2.4	1.6	C25	0.1	0.2
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.0	0.5	0.6	1.3	2.6	2.4	0.0	0.5	0.3	C30-31	0.0	0.0
Larynx	17	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.7	3.5	3.5	1.7	4.6	6.1	10.9	7.6	2.1	1.3	C32	0.1	0.2
Trachea, Bronchus and lung	204	0.0	0.0	0.0	0.0	0.4	0.7	2.5	6.0	7.5	15.1	23.2	35.8	71.7	95.3	116.2	143.6	24.6	15.5	C33-34	0.8	1.9
Other thoracic organs	3	0.0	0.0	0.6	0.4	0.0	0.7	0.0	0.0	0.6	0.5	0.0	1.1	0.7	0.0	1.2	0.0	0.4	0.3	C37-38	0.0	0.0
Bone	5	0.0	0.7	1.2	1.3	0.4	0.7	0.8	1.5	0.0	0.0	0.0	1.1	1.3	0.0	0.0	1.1	0.6	0.6	C40-C41	0.0	0.0
Melanoma of skin	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.7	0.0	3.5	2.4	3.3	0.6	0.4	C43	0.0	0.0
Other skin	49	0.0	0.0	0.6	0.0	0.4	0.0	1.7	3.7	1.7	4.0	5.5	7.4	11.8	19.2	23.0	46.8	5.9	3.8	C44	0.2	0.4
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C46	0.0	0.0
Connective tissue	8	0.0	0.0	0.6	0.0	0.4	0.7	1.7	1.5	0.0	1.5	2.0	1.7	1.3	1.7	1.2	2.2	1.0	0.8	C47,C49	0.1	0.1
Breast	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	1.0	2.3	0.7	0.9	1.2	3.3	0.6	0.4	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	14	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.7	1.7	1.5	2.0	3.4	3.3	4.4	7.3	7.6	1.7	1.1	C60	0.1	0.1
Prostate	72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	4.5	9.1	18.4	42.8	43.6	82.7	8.6	5.2	C61	0.2	0.6
Testis	10	0.0	0.7	0.0	2.2	2.1	1.4	6.7	3.0	0.6	0.5	0.5	0.0	0.7	0.0	1.2	1.1	1.2	1.3	C62	0.1	0.1
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	17	0.8	0.0	0.6	0.0	0.0	0.0	0.8	2.2	1.2	2.0	1.5	3.4	6.6	10.5	4.8	4.4	2.1	1.5	C64	0.1	0.2
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.2	0.0	0.1	0.1	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.9	0.0	0.0	0.2	0.1	C66	0.0	0.0
Bladder	38	0.0	0.0	0.0	0.4	0.0	0.0	0.8	0.7	1.7	1.5	4.0	6.8	9.2	18.4	31.5	25.0	4.5	2.9	C67	0.1	0.4
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.1	0.1	C69	0.0	0.0
Brain, nervous system	18	2.5	0.0	3.5	0.0	0.8	0.7	1.7	4.5	0.6	2.5	1.5	1.7	3.9	5.2	7.3	4.4	2.2	2.0	C70-72	0.1	0.2
Thyroid	14	0.0	0.0	0.6	0.4	0.0	0.0	2.5	1.5	0.6	4.0	4.0	3.4	4.6	1.7	2.4	2.2	1.7	1.3	C73	0.1	0.1
Adrenal gland	2	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.6	0.0	0.4	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C75	0.0	0.0
Hodgkin disease	4	0.0	0.0	0.0	0.9	0.8	1.4	0.0	0.0	0.0	0.0	1.0	1.1	0.7	0.0	1.2	0.0	0.5	0.4	C81	0.0	0.0
Non-Hodgkin lymphoma	80	0.0	2.8	1.7	1.3	0.4	5.8	1.7	8.2	6.9	7.0	12.1	13.6	18.4	32.3	38.7	40.3	9.6	6.9	C82-85,C96	0.4	0.8
Multiple myeloma	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.0	4.0	4.0	5.3	4.4	10.9	6.5	2.1	1.3	C90	0.1	0.2
Lymphoid leukemia	12	5.8	2.1	2.9	1.8	0.8	0.0	0.0	1.5	1.2	0.0	0.5	1.1	0.7	1.7	2.4	2.2	1.4	1.8	C91	0.1	0.1
Myeloid leukemia	28	0.0	0.0	2.3	0.9	0.8	1.4	1.7	1.5	3.5	2.0	5.0	4.5	6.6	8.7	10.9	14.1	3.4	2.4	C92-94	0.2	0.2
Leukemia unspecified	2	1.6	0.7	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.2	0.4	C95	0.0	0.0
Myelodysplastic disease	32	0.8	0.0	0.6	0.0	0.0	0.0	1.7	2.2	1.2	2.5	2.5	5.7	11.2	10.5	23.0	20.7	3.9	2.6	D45-D47	0.1	0.3
Other and unspecified	61	0.8	0.0	0.0	0.4	0.4	1.4	1.7	3.0	3.5	6.0	6.1	17.6	13.8	25.3	35.1	33.7	7.3	4.8	O&U	0.3	0.6
<b>All sites</b>	<b>1,686</b>	<b>17.3</b>	<b>7.0</b>	<b>16.2</b>	<b>10.5</b>	<b>9.5</b>	<b>23.9</b>	<b>50.0</b>	<b>92.1</b>	<b>97.2</b>	<b>163.1</b>	<b>245.2</b>	<b>407.0</b>	<b>508.9</b>	<b>670.5</b>	<b>777.2</b>	<b>931.4</b>	<b>203.3</b>	<b>135.2</b>	<b>ALL</b>	<b>8.2</b>	<b>15.5</b>

**Table 4.4.2** Khon Kaen (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.6	2.3	7.3	10.5	1.0	0.5	C00	0.0	0.1
Tongue	10	0.0	0.0	0.0	0.0	0.0	0.7	0.9	0.0	1.0	0.9	1.8	0.5	3.5	2.3	2.1	3.8	1.0	0.7	C01-02	0.0	0.1
Mouth	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5	0.4	0.9	1.6	1.2	3.0	7.3	15.0	1.5	0.8	C03-06	0.0	0.1
Salivary glands	5	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.5	2.2	0.9	1.6	0.6	0.0	0.0	0.8	0.5	0.4	C07-08	0.0	0.0
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.0	0.5	0.0	0.0	0.0	0.0	0.1	0.1	C09	0.0	0.0
Other oropharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C10	0.0	0.0
Nasopharynx	11	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	1.0	0.9	3.2	2.6	3.5	3.8	2.1	1.5	1.2	0.8	C11	0.1	0.1
Hypopharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.0	0.0	0.0	1.0	0.8	0.1	0.1	C12-13	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14	0.0	0.0
Oesophagus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.5	0.6	0.0	1.0	3.0	0.3	0.2	C15	0.0	0.0
Stomach	37	0.0	0.0	0.0	0.0	0.0	0.7	2.6	7.7	1.0	7.6	5.9	7.8	9.4	9.1	12.4	6.8	4.1	2.8	C16	0.2	0.3
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.5	0.0	2.3	0.0	0.0	0.3	0.2	C17	0.0	0.0
Colon	81	0.0	0.0	0.0	0.4	0.0	0.7	0.9	2.1	3.5	4.9	12.3	16.6	24.7	27.3	32.2	39.0	9.1	5.3	C18	0.3	0.6
Rectum	72	0.0	0.0	0.0	0.0	0.0	1.4	0.0	4.2	3.0	7.6	11.0	12.5	21.8	28.8	28.0	26.3	8.1	4.9	C19-20	0.3	0.6
Anus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.5	0.6	0.8	0.0	2.3	0.3	0.2	C21	0.0	0.0
Liver and bile duct	206	1.8	0.0	0.6	0.0	0.4	1.4	1.8	4.2	4.0	12.1	16.9	42.1	49.5	78.0	113.1	117.1	23.1	13.2	C22,C24	0.7	1.6
Gallbladder	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	2.3	5.2	4.7	3.0	9.3	13.5	2.2	1.2	C23	0.1	0.1
Pancreas	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.5	1.3	1.4	4.7	2.9	6.8	8.3	8.3	1.9	1.1	C25	0.1	0.1
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	1.4	0.9	0.0	0.5	0.4	0.5	0.5	0.6	2.3	1.0	0.8	0.5	0.4	C30-31	0.0	0.0
Larynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C32	0.0	0.0
Trachea, Bronchus and lung	110	0.0	0.0	0.0	0.4	0.0	1.4	1.8	2.8	5.1	9.8	17.4	21.3	32.4	40.1	38.4	49.5	12.4	7.3	C33-34	0.5	0.9
Other thoracic organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8	0.1	0.1	C37-38	0.0	0.0
Bone	4	0.0	0.0	1.2	0.4	0.7	0.7	0.0	0.0	0.0	1.3	0.5	0.0	0.0	0.8	0.0	0.0	0.4	0.4	C40-C41	0.0	0.0
Melanoma of skin	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.0	1.3	1.4	1.0	0.0	0.8	4.1	3.0	0.7	0.5	C43	0.0	0.1
Other skin	64	0.0	0.0	0.0	0.4	0.0	0.0	0.9	0.7	1.5	3.6	5.5	9.9	16.5	22.7	28.0	47.3	7.2	4.0	C44	0.2	0.4
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	9	0.0	0.0	0.0	0.9	0.7	0.0	0.9	1.4	0.5	0.9	0.9	1.6	1.2	1.5	4.1	3.0	1.0	0.7	C47,C49	0.0	0.1
Breast	348	0.0	0.0	0.0	0.0	0.7	9.1	25.4	47.5	51.0	74.7	69.4	85.2	81.9	67.4	56.0	48.8	39.0	27.0	C50	2.2	2.8
Vulva	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5	0.4	0.9	1.0	1.2	2.3	0.0	3.0	0.6	0.4	C51	0.0	0.0
Vagina	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.0	0.6	0.8	1.0	0.0	0.3	0.2	C52	0.0	0.0
Cervix uteri	109	0.0	0.0	0.0	0.0	0.7	5.6	10.5	17.4	16.7	24.6	29.7	13.5	17.7	18.2	22.8	18.0	12.2	8.8	C53	0.7	0.9
Corpus uteri	75	0.0	0.0	0.0	0.4	0.0	0.7	2.6	0.0	4.0	7.2	18.3	27.5	21.8	25.0	23.9	6.8	8.4	5.2	C54	0.4	0.7
Uterus unspecified	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.5	0.5	1.2	1.5	0.0	1.5	0.3	0.2	C55	0.0	0.0
Ovary	80	0.0	0.0	1.2	1.8	2.6	3.5	4.4	9.8	8.6	13.0	16.4	19.7	16.5	15.9	13.5	15.0	8.9	6.2	C56	0.5	0.6
Other female genital organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.6	0.8	0.0	0.0	0.2	0.1	C57	0.0	0.0
Placenta	1	0.0	0.0	0.6	0.0	0.0	0.7	0.9	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.1	0.2	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	10	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	1.4	1.6	2.4	2.3	4.1	6.8	1.1	0.6	C64	0.0	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.5	0.1	0.1	C66	0.0	0.0
Bladder	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	1.6	2.9	2.3	4.1	5.3	0.9	0.5	C67	0.0	0.1
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	1	0.9	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.1	0.2	C69	0.0	0.0
Brain, nervous system	12	0.9	1.5	0.6	0.9	0.4	0.0	4.4	1.4	1.5	1.3	0.9	2.1	2.9	2.3	2.1	0.8	1.4	1.3	C70-72	0.1	0.1
Thyroid	67	0.0	1.5	1.8	0.9	6.2	9.8	7.9	9.8	7.6	13.9	10.1	9.4	11.2	9.1	13.5	7.5	7.5	6.0	C73	0.5	0.6
Adrenal gland	2	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	1.0	0.0	0.3	0.5	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.1	0.1	C75	0.0	0.0
Hodgkin disease	3	0.0	0.0	0.0	0.9	0.0	0.0	0.9	0.0	1.5	0.0	0.0	0.5	0.6	0.8	0.0	0.0	0.3	0.3	C81	0.0	0.0
Non-Hodgkin lymphoma	51	0.0	1.5	0.6	0.4	1.1	0.7	1.8	2.8	3.0	4.0	4.6	12.5	11.8	17.4	19.7	21.0	5.7	3.6	C82-85,C96	0.2	0.4
Multiple myeloma	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.0	2.7	0.9	3.6	4.1	5.3	7.3	6.0	1.8	1.0	C90	0.1	0.1
Lymphoid leukemia	12	6.2	3.0	1.2	0.4	0.7	2.6	1.4	0.5	0.9	1.4	0.5	0.0	1.5	1.0	3.0	1.3	1.8	1.8	C91	0.1	0.1
Myeloid leukemia	24	0.9	0.7	1.2	0.4	1.1	0.7	2.6	2.1	3.0	4.0	3.7	4.2	2.9	3.8	4.1	9.8	2.7	2.0	C92-94	0.1	0.2
Leukemia unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.5	0.0	0.0	0.0	0.0	0.1	0.1	C95	0.0	0.0
Myelodysplastic disease	39	0.9	0.0	0.0	0.4	0.7	0.0	0.0	1.5	2.2	2.3	4.2	8.2	19.7	21.8	23.3	4.3	2.5	2.5	D45-D47	0.1	0.3
Other and unspecified	43	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.7	2.5	4.5	5.5	8.3	11.8	16.7	19.7	17.3	4.8	2.9	O&U	0.2	0.4
<b>All sites</b>	<b>1,609</b>	<b>15.1</b>	<b>9.6</b>	<b>9.1</b>	<b>8.8</b>	<b>15.4</b>	<b>42.7</b>	<b>77.1</b>	<b>121.4</b>	<b>129.9</b>	<b>216.4</b>	<b>253.1</b>	<b>331.4</b>	<b>375.4</b>	<b>449.7</b>	<b>517.6</b>	<b>548.0</b>	<b>180.3</b>	<b>117.5</b>	<b>ALL</b>	<b>8.0</b>	<b>12.9</b>

**Table 4.4.3** Mean annual incidence, Khon Kaen, 2016-2018

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. 0-64 (percent)	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. 0-64 (percent)	Rate. 0-74	
Lip	4	0.2	0.4	0.3	0.0	0.0	10	0.6	1.0	0.5	0.0	0.1	C00
Tongue	20	1.2	2.5	1.7	0.1	0.2	10	0.6	1.0	0.7	0.0	0.1	C01-02
Mouth	11	0.6	1.3	0.9	0.1	0.1	14	0.8	1.5	0.8	0.0	0.1	C03-06
Salivary glands	5	0.3	0.6	0.4	0.0	0.1	5	0.3	0.5	0.4	0.0	0.0	C07-08
Tonsil	4	0.2	0.5	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C09
Other oropharynx	4	0.2	0.4	0.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C10
Nasopharynx	39	2.3	4.7	3.4	0.3	0.4	11	0.7	1.2	0.8	0.1	0.1	C11
Hypopharynx	7	0.4	0.8	0.6	0.0	0.1	1	0.1	0.1	0.1	0.0	0.0	C12-13
Pharynx unspecified	2	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	24	1.4	2.9	1.8	0.1	0.2	3	0.2	0.3	0.2	0.0	0.0	C15
Stomach	40	2.4	4.8	3.1	0.2	0.4	37	2.3	4.1	2.8	0.2	0.3	C16
Small intestine	4	0.3	0.5	0.3	0.0	0.0	2	0.1	0.3	0.2	0.0	0.0	C17
Colon	110	6.5	13.3	8.6	0.5	1.0	81	5.1	9.1	5.3	0.3	0.6	C18
Rectum	83	4.9	10.1	6.4	0.3	0.8	72	4.5	8.1	4.9	0.3	0.6	C19-20
Anus	4	0.2	0.4	0.3	0.0	0.0	3	0.2	0.3	0.2	0.0	0.0	C21
Liver and bile duct	569	33.7	68.6	43.7	3.0	5.2	206	12.8	23.1	13.2	0.7	1.6	C22,C24
Gallbladder	8	0.5	1.0	0.6	0.0	0.1	19	1.2	2.2	1.2	0.1	0.1	C23
Pancreas	20	1.2	2.4	1.6	0.1	0.2	17	1.1	1.9	1.1	0.1	0.1	C25
Nose, sinuses etc.	4	0.2	0.5	0.3	0.0	0.0	4	0.3	0.5	0.4	0.0	0.0	C30-31
Larynx	17	1.0	2.1	1.3	0.1	0.2	0	0.0	0.0	0.0	0.0	0.0	C32
Trachea, Bronchus and lung	204	12.1	24.6	15.5	0.8	1.9	110	6.9	12.4	7.3	0.5	0.9	C33-34
Other thoracic organs	3	0.2	0.4	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C37-38
Bone	5	0.3	0.6	0.6	0.0	0.0	4	0.2	0.4	0.4	0.0	0.0	C40-C41
Melanoma of skin	5	0.3	0.6	0.4	0.0	0.0	7	0.4	0.7	0.5	0.0	0.1	C43
Other skin	49	2.9	5.9	3.8	0.2	0.4	64	4.0	7.2	4.0	0.2	0.4	C44
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C45
Kaposi's sarcoma	1	0.0	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	8	0.5	1.0	0.8	0.1	0.1	9	0.6	1.0	0.7	0.0	0.1	C47,C49
Breast	5	0.3	0.6	0.4	0.0	0.0	348	21.6	39.0	27.0	2.2	2.8	C50
Vulva							5	0.3	0.6	0.4	0.0	0.0	C51
Vagina							2	0.1	0.3	0.2	0.0	0.0	C52
Cervix uteri							109	6.8	12.2	8.8	0.7	0.9	C53
Corpus uteri							75	4.6	8.4	5.2	0.4	0.7	C54
Uterus unspecified							3	0.2	0.3	0.2	0.0	0.0	C55
Ovary							80	5.0	8.9	6.2	0.5	0.6	C56
Other female genital organs							2	0.1	0.2	0.1	0.0	0.0	C57
Placenta							1	0.1	0.1	0.2	0.0	0.0	C58
Penis	14	0.8	1.7	1.1	0.1	0.1							C60
Prostate	72	4.3	8.6	5.2	0.2	0.6							C61
Testis	10	0.6	1.2	1.3	0.1	0.1							C62
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0							C63
Kidney	17	1.0	2.1	1.5	0.1	0.2	10	0.6	1.1	0.6	0.0	0.1	C64
Renal pelvis	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C65
Ureter	1	0.1	0.2	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C66
Bladder	38	2.2	4.5	2.9	0.1	0.4	8	0.5	0.9	0.5	0.0	0.1	C67
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C68
Eye	1	0.0	0.1	0.1	0.0	0.0	1	0.1	0.1	0.2	0.0	0.0	C69
Brain, nervous system	18	1.1	2.2	2.0	0.1	0.2	12	0.8	1.4	1.3	0.1	0.1	C70-72
Thyroid	14	0.9	1.7	1.3	0.1	0.1	67	4.2	7.5	6.0	0.5	0.6	C73
Adrenal gland	2	0.1	0.2	0.4	0.0	0.0	2	0.1	0.3	0.5	0.0	0.0	C74
Other endocrine	1	0.1	0.1	0.1	0.0	0.0	1	0.0	0.1	0.1	0.0	0.0	C75
Hodgkin disease	4	0.2	0.5	0.4	0.0	0.0	3	0.2	0.3	0.3	0.0	0.0	C81
Non-Hodgkin lymphoma	80	4.7	9.6	6.9	0.4	0.8	51	3.2	5.7	3.6	0.2	0.4	C82-85,C96
Multiple myeloma	17	1.0	2.1	1.3	0.1	0.2	16	1.0	1.8	1.0	0.1	0.1	C90
Lymphoid leukemia	12	0.7	1.4	1.8	0.1	0.1	12	0.7	1.3	1.8	0.1	0.1	C91
Myeloid leukemia	28	1.7	3.4	2.4	0.2	0.2	24	1.5	2.7	2.0	0.1	0.2	C92-94
Leukemia unspecified	2	0.1	0.2	0.4	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C95
Myelodysplastic disease	32	1.9	3.9	2.6	0.1	0.3	39	2.4	4.3	2.5	0.1	0.3	D45-D47
Other and unspecified	61	3.6	7.3	4.8	0.3	0.6	43	2.7	4.8	2.9	0.2	0.4	O&U
<b>All sites</b>	<b>1,686</b>	<b>100.0</b>	<b>203.3</b>	<b>135.2</b>	<b>8.2</b>	<b>15.5</b>	<b>1,609</b>	<b>100.0</b>	<b>180.3</b>	<b>117.5</b>	<b>8.0</b>	<b>12.9</b>	<b>ALL</b>

**Table 4.4.4** Percentage of morphologically verified and death certificate only cases, Khon Kaen

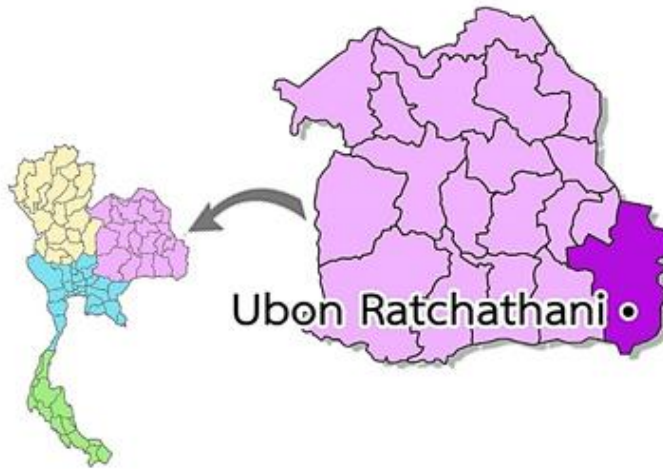
Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	120	94.2	0.0	111	98.2	0.0	C00-C08
Oropharynx	29	72.4	3.4	3	100.0	0.0	C09-C10,C14
Nasopharynx	118	87.3	1.7	33	90.9	0.0	C11
Hypopharynx	21	95.2	0.0	4	100.0	0.0	C12-C13
Esophagus	71	85.9	0.0	9	66.7	0.0	C15
Stomach	119	86.6	0.8	111	85.6	0.9	C16
Small intestine	13	92.3	0.0	7	100.0	0.0	C17
Colon and rectum	592	87.7	0.2	468	86.1	0.4	C18-C21
Liver and bile duct	1,706	10.6	2.1	619	12.9	1.1	C22,C24
Gallbladder	25	56.0	0.0	58	39.7	0.0	C23
pancrease	59	28.8	1.7	52	32.7	1.9	C25
Nose,sinuses etc	12	91.7	0.0	13	84.6	7.7	C30-C31
Larynx	51	98.0	0.0	0	0.0	0.0	C32
Trachea, bronchus and lung	611	57.9	2.0	331	63.4	1.2	C33-C34
Other thoracic organs	9	88.9	0.0	4	75.0	0.0	C37-C38
Bone	16	81.3	0.0	11	81.8	0.0	C40-C41
Melanoma of skin	16	100.0	0.0	20	100.0	0.0	C43
Other skin	146	97.9	0.0	193	96.9	0.0	C44
Mesothelioma	0	0.0	0.0	1	100.0	0.0	C45
Kaposi sarcoma	2	100.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	24	91.7	0.0	27	88.9	0.0	C47,C49
Breast	15	80.0	0.0	1,043	90.1	0.2	C50
Vulva				16	100.0	0.0	C51
Vagina				7	100.0	0.0	C52
Cervix uteri				326	85.9	1.5	C53
Corpus uteri				224	97.8	0.0	C54
Uterus unspecified				9	88.9	11.1	C55
Ovary				239	82.8	0.4	C56
Other female genital organs				5	100.0	0.0	C57
Placenta				4	25.0	0.0	C58
Penis	42	95.2	0.0				C60
Prostate	215	85.6	0.5				C61
Testis	31	90.3	0.0				C62
Other male genital organs	1	100.0	0.0				C63
Kidney	51	86.3	3.9	29	75.9	0.0	C64
Renal pelvis	3	100.0	0.0	0	0.0	0.0	C65
Ureter	4	75.0	0.0	3	100.0	0.0	C66
Bladder	113	89.4	0.0	25	64.0	4.0	C67
Other urinary organs	1	0.0	0.0	0	0.0	0.0	C68
Eye	2	100.0	0.0	3	100.0	0.0	C69
Brain, nervous system	54	55.6	1.9	37	51.4	5.4	C70-C72
Thyroid	43	93.0	0.0	201	92.5	0.0	C73
Adrenal gland	5	100.0	0.0	7	100.0	0.0	C74
Other endocrine	3	100.0	0.0	2	0.0	0.0	C75
Hodgkin disease	12	100.0	0.0	9	100.0	0.0	C81
Non-Hodgkin lymphoma	240	100.0	0.0	153	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	52	100.0	0.0	47	100.0	0.0	C90
Leukemia	125	100.0	0.0	111	100.0	0.0	C91-C95
Myelodysplastic	96	100.0	0.0	116	100.0	0.0	D45-D47
Other and unspecified	182	39.6	8.8	129	43.4	7.8	O&U
<b>All sites</b>	<b>5,050</b>	<b>57.0</b>	<b>1.4</b>	<b>4,820</b>	<b>76.0</b>	<b>0.8</b>	<b>All</b>
<b>All sites without liver</b>	<b>3,344</b>	<b>80.6</b>	<b>1.1</b>	<b>4,201</b>	<b>85.3</b>	<b>0.7</b>	<b>All</b>

## 4.5 Ubon Ratchathani Cancer Registry

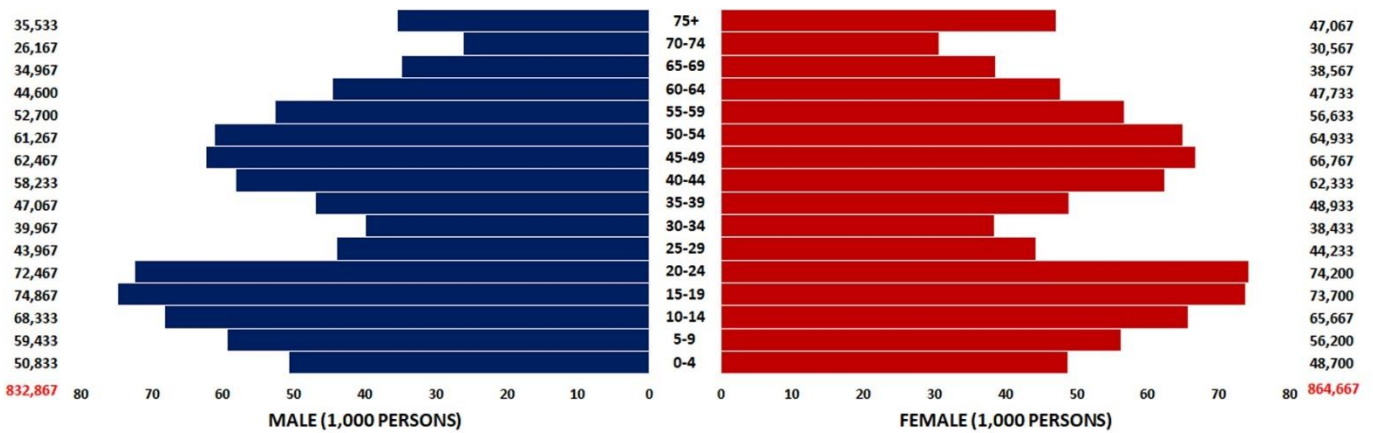
### Registration area

Ubon Ratchathani is one of the northeastern provinces of Thailand, and the country's easternmost. It covers an area of 15,745 square kilometers. It's about 600 kilometers away from Bangkok. Neighboring Provinces are (from west clockwise) Si Sa Ket, Yasothon and Amnat Charoen. To the north and east it borders Laos, to the south is Cambodia. The province is subdivided into 25 districts, subdivided into 219 sub-districts and 2,469 villages.

The estimated population in 2017 was 1,697,534 with 832,867 males and 864,667 females. Most are engaged in activities related to agriculture. They usually dwell in groups of houses, speaking their own dialects.



Population pyramid Ubon Ratchathani  
estimated population in 2017 (2016 – 2018)



### **Cancer care facilities**

The cancer care facilities in community hospitals (district hospitals) are limited to screening, provisional diagnosis and some palliative treatment. Most of the cancer patients and suspected cancer patients are referred to Sunpasitthiprasong hospital (regional hospital) or Ubon Ratchathani cancer hospitals. The Ubon Ratchathani cancer committee was established to facilitate the referral system between regional hospitals, the cancer center and community hospitals. Surgery, chemotherapy, radiation and palliative treatment are provided. There are also a military hospital that can provide surgery and some chemotherapy.

### **Registry procedures**

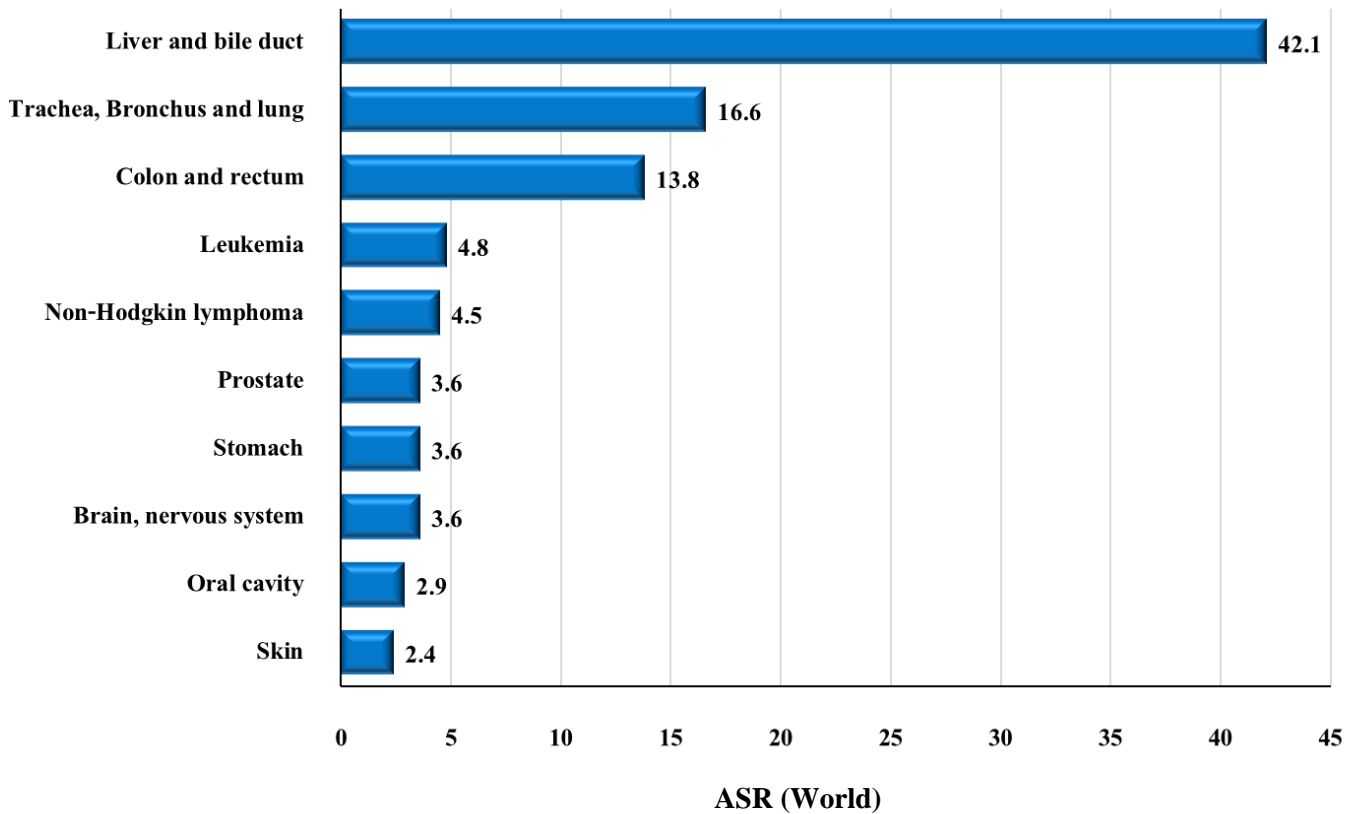
The population-based cancer registry of Ubon Ratchathani was set up at Ubon Ratchathani cancer hospital. The sources of data are from all community hospitals, Sunpasitthiprasong hospital, Ubon Ratchathani cancer hospital, the military hospital.

### **Summary of results**

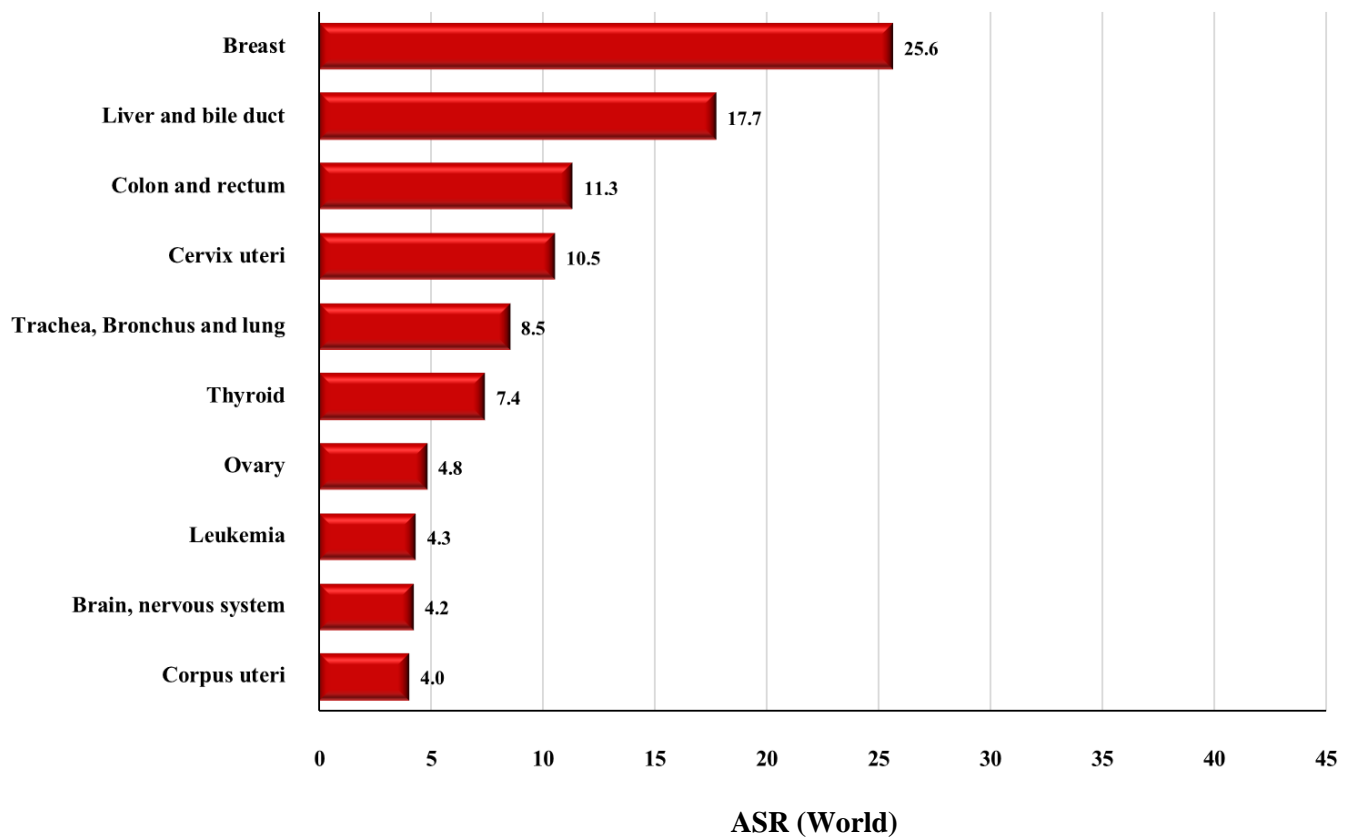
New cases registered in 2017; 1,506 were males and 1,578 were females, making 3,084 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 125.2 per 100,000, with liver and bile duct cancer ranking first (ASR = 42.1) followed by trachea, bronchus and lung (ASR = 16.6) and colon and rectum (ASR = 13.8). The ASR of all cancer sites in females was 127.5 per 100,000, the three leading cancer sites in females being breast (ASR = 25.6), liver and bile duct (ASR = 17.7) and colon and rectum (ASR = 11.3).

**Figure 4.5.1** Leading cancer in Ubon Ratchathani (mean annual ASR 2016-2018)

### Male



### Female



**Table 4.5.1** Ubon Ratchathani (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	C00	0.0	0.0
Tongue	15	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	2.9	4.3	2.2	4.4	3.7	2.9	7.6	4.7	1.8	1.3	C01-02	0.1	0.1
Mouth	14	0.0	0.0	0.0	0.0	0.5	0.0	0.8	0.7	1.1	1.6	2.7	3.2	2.2	4.8	6.4	11.3	1.7	1.1	C03-06	0.1	0.1
Salivary glands	6	0.0	0.0	0.5	0.0	0.0	0.8	0.0	0.0	0.0	1.6	1.6	1.3	1.5	2.9	2.5	0.9	0.7	0.5	C07-08	0.0	0.1
Tonsil	7	0.7	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.8	3.2	0.7	1.0	1.3	0.9	0.8	0.6	C09	0.1	0.1
Other oropharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.6	0.7	1.0	1.3	0.9	0.3	0.2	C10	0.0	0.0
Nasopharynx	26	0.0	0.6	0.0	1.8	0.0	1.5	0.8	2.8	2.3	2.7	6.0	5.7	8.2	8.6	11.5	6.6	3.1	2.3	C11	0.2	0.3
Hypopharynx	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.6	1.1	0.6	0.7	2.9	1.3	1.9	0.6	0.5	C12-13	0.0	0.0
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.3	0.7	0.0	0.0	0.0	0.2	0.1	C14	0.0	0.0
Oesophagus	21	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.4	1.7	3.7	5.4	6.3	9.0	8.6	5.1	2.8	2.5	1.8	C15	0.1	0.2
Stomach	46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	5.2	3.2	7.1	11.4	19.4	12.4	26.8	26.3	5.5	3.6	C16	0.2	0.4
Small intestine	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.3	2.2	0.0	1.3	2.8	0.4	0.3	C17	0.0	0.0
Colon	89	0.0	0.0	0.0	0.0	1.4	1.5	1.7	4.2	5.2	8.0	13.1	24.7	30.6	47.7	34.4	46.9	10.7	7.3	C18	0.5	0.9
Rectum	78	0.0	0.0	0.0	0.4	0.5	1.5	0.0	2.1	6.3	8.0	14.1	20.9	32.9	30.5	30.6	38.5	9.3	6.3	C19-20	0.4	0.7
Anus	2	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.6	0.7	1.0	0.0	1.9	0.2	0.2	C21	0.0	0.0
Liver and bile duct	518	0.7	0.0	0.0	0.4	0.5	2.3	5.8	18.4	40.1	64.0	91.9	130.9	189.8	225.9	252.2	243.0	62.2	42.1	C22,C24	2.7	5.1
Gallbladder	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.6	0.5	2.5	2.2	5.7	7.6	11.3	1.6	1.0	C23	0.0	0.1
Pancreas	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.3	3.7	3.8	2.5	3.0	10.5	6.4	9.4	2.2	1.5	C25	0.1	0.2
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.1	1.6	1.3	0.0	0.0	1.3	1.9	0.4	0.3	C30-31	0.0	0.0
Larynx	14	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	2.9	1.1	2.2	3.2	3.7	5.7	12.7	2.8	1.7	1.2	C32	0.1	0.2
Trachea, Bronchus and lung	213	0.0	0.0	0.0	0.0	0.0	2.3	2.5	5.7	11.4	14.4	31.0	50.6	69.5	87.7	105.7	161.4	25.5	16.6	C33-34	0.9	1.9
Other thoracic organs	6	0.0	0.0	0.0	0.4	0.5	0.0	2.5	1.4	0.0	0.0	1.6	1.3	0.0	2.9	0.0	1.9	0.7	0.6	C37-38	0.0	0.1
Bone	12	0.0	0.6	0.5	1.3	0.9	0.8	0.8	0.7	0.6	1.1	1.1	0.6	2.2	5.7	0.0	11.3	1.5	1.1	C40-C41	0.1	0.1
Melanoma of skin	7	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.7	0.0	0.5	0.5	1.9	3.0	2.9	2.5	3.8	0.8	0.5	C43	0.0	0.1
Other skin	24	0.0	0.0	0.5	0.4	0.0	0.0	2.5	0.0	1.7	1.1	3.8	5.1	7.5	5.7	8.9	23.5	2.9	1.9	C44	0.1	0.2
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	C46	0.0	0.0
Connective tissue	12	0.7	1.1	0.5	0.0	0.0	0.8	1.7	2.8	1.7	1.1	4.4	1.3	2.2	2.9	0.0	3.8	1.4	1.3	C47,C49	0.1	0.1
Breast	4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.6	0.5	2.7	1.3	0.7	0.0	0.0	0.9	0.5	0.4	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	1.6	2.7	3.2	3.7	1.9	2.5	5.6	1.4	1.0	C60	0.1	0.1
Prostate	52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.6	5.7	8.2	22.9	48.4	64.7	6.2	3.6	C61	0.1	0.4
Testis	5	0.0	0.0	0.0	0.9	0.9	0.8	2.5	0.7	0.6	0.5	0.0	0.0	0.7	1.0	1.3	0.0	0.6	0.6	C62	0.0	0.0
Other male genital organs	1	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.7	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.1	0.1	C63	0.0	0.0
Kidney	15	0.7	0.6	0.0	0.0	0.5	0.8	0.0	1.4	1.7	0.5	1.6	1.9	12.0	3.8	6.4	4.7	1.8	1.4	C64	0.1	0.2
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.0	1.9	0.2	0.1	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.9	0.1	0.1	C66	0.0	0.0
Bladder	23	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	2.3	1.6	1.6	2.5	6.0	11.4	17.8	19.7	2.8	1.8	C67	0.1	0.2
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.0	0.0	0.0	0.1	0.1	C68	0.0	0.0
Eye	1	1.3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.2	0.2	0.2	C69	0.0	0.0
Brain, nervous system	36	1.3	1.7	1.5	1.3	0.9	3.0	2.5	3.5	5.2	6.9	4.4	6.3	6.7	11.4	17.8	7.5	4.3	3.6	C70-72	0.2	0.4
Thyroid	16	0.0	0.0	0.0	0.0	1.4	2.3	0.8	0.7	0.6	1.6	4.9	5.1	1.5	3.8	6.4	7.5	1.9	1.4	C73	0.1	0.1
Adrenal gland	1	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C74	0.0	0.0
Other endocrine	2	0.7	0.0	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.0	0.0	0.0	0.2	0.3	C75	0.0	0.0
Hodgkin disease	4	0.0	0.6	0.5	0.0	0.0	0.0	0.0	0.0	1.1	0.5	0.5	1.3	0.0	1.9	2.5	0.0	0.5	0.4	C81	0.0	0.0
Non-Hodgkin lymphoma	53	0.0	0.6	1.0	0.0	1.4	1.5	5.8	3.5	3.4	2.7	6.5	11.4	17.9	21.9	24.2	30.0	6.4	4.5	C82-85,C96	0.3	0.5
Multiple myeloma	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.1	1.6	1.1	1.9	2.2	4.8	3.8	4.7	1.1	0.7	C90	0.0	0.1
Lymphoid leukemia	9	2.0	2.8	0.5	0.9	1.4	0.8	0.0	2.1	0.0	0.5	0.5	1.3	1.5	0.0	1.3	1.9	1.1	1.2	C91	0.1	0.1
Myeloid leukemia	14	0.7	0.6	1.5	0.4	1.4	2.3	1.7	0.7	1.1	2.1	1.6	3.8	2.2	2.9	3.8	3.8	1.7	1.5	C92-94	0.1	0.1
Leukemia unspecified	23	0.7	0.6	0.5	0.9	1.8	1.5	0.8	2.8	0.6	3.2	3.3	5.7	3.0	7.6	10.2	9.4	2.7	2.1	C95	0.1	0.2
Myelodysplastic disease	1	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.9	0.1	0.1	D45-D47	0.0	0.0
Other and unspecified	63	2.6	0.6	0.4	0.5	0.5	0.8	2.5	4.2	7.4	9.1	7.1	15.8	18.7	20.0	31.8	30.0	7.5	5.5	O&U	0.3	0.6
<b>All sites</b>	<b>1,506</b>	<b>12.5</b>	<b>10.1</b>	<b>9.3</b>	<b>10.2</b>	<b>14.7</b>	<b>27.3</b>	<b>42.5</b>	<b>68.0</b>	<b>120.2</b>	<b>161.7</b>	<b>241.0</b>	<b>357.4</b>	<b>482.8</b>	<b>596.8</b>	<b>708.3</b>	<b>817.1</b>	<b>180.7</b>	<b>125.2</b>	<b>ALL</b>	<b>7.8</b>	<b>14.3</b>

**Table 4.5.2** Ubon Ratchathani (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	13	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.5	1.0	0.6	4.2	5.2	5.5	12.7	1.5	0.9	C00	0.0	0.1
Tongue	10	0.0	0.0	0.0	0.0	0.0	0.0	0.9	3.4	3.2	1.0	1.0	0.0	2.8	0.9	3.3	3.5	1.1	0.8	C01-02	0.1	0.1
Mouth	22	0.7	0.0	0.0	0.0	0.4	0.0	0.9	0.7	0.5	0.5	1.0	2.9	7.7	10.4	8.7	16.3	2.6	1.6	C03-06	0.1	0.2
Salivary glands	6	0.0	0.6	0.0	0.0	0.0	0.8	0.0	1.4	0.5	2.5	1.5	0.6	0.0	0.0	1.1	2.8	0.7	0.6	C07-08	0.0	0.0
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	1.4	0.2	0.1	C09	0.0	0.0
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.6	0.0	0.0	0.0	0.0	0.1	0.1	C10	0.0	0.0
Nasopharynx	11	0.0	0.0	0.0	0.0	0.9	0.0	0.9	0.7	1.6	1.5	2.1	2.9	3.5	3.5	3.3	1.4	1.3	0.9	C11	0.1	0.1
Hypopharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	C12-13	0.0	0.0
Pharynx unspecified	1	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.0	1.1	0.0	0.2	0.1	C14	0.0	0.0
Oesophagus	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.5	0.0	1.4	2.6	0.0	0.7	0.4	0.3	C15	0.0	0.0
Stomach	34	0.0	0.6	0.0	0.0	0.0	1.5	3.5	2.7	4.8	5.5	4.6	7.1	9.1	9.5	7.6	14.2	4.0	2.8	C16	0.2	0.3
Small intestine	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	1.2	0.7	1.7	3.3	2.1	0.5	0.3	C17	0.0	0.0
Colon	86	0.0	0.0	0.0	0.0	0.0	0.8	2.6	2.7	5.3	9.0	15.9	23.5	25.8	29.4	36.0	33.3	9.9	6.3	C18	0.4	0.8
Rectum	64	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.8	4.3	4.5	11.8	14.1	13.3	35.4	27.3	21.2	7.4	4.8	C19-20	0.3	0.6
Anus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	2.6	1.1	1.4	0.4	0.2	C21	0.0	0.0
Liver and bile duct	257	0.7	0.0	0.0	0.0	0.4	1.5	2.6	6.1	11.8	22.0	31.8	52.4	67.0	102.0	135.2	140.9	29.7	17.7	C22,C24	1.0	2.2
Gallbladder	18	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.5	0.5	1.5	2.4	6.3	8.6	9.8	10.6	2.0	1.2	C23	0.1	0.2
Pancreas	16	0.7	0.0	0.0	0.0	0.0	0.0	0.9	0.7	0.0	1.5	3.1	2.4	4.2	4.3	2.2	14.2	1.9	1.1	C25	0.1	0.1
Nose, sinuses etc.	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.0	0.0	0.0	2.6	1.1	2.1	0.4	0.2	C30-31	0.0	0.0
Larynx	3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.7	2.6	1.1	0.7	0.3	0.3	C32	0.0	0.0
Trachea, Bronchus and lung	119	0.0	0.0	0.0	0.0	0.0	3.0	1.7	6.8	5.9	13.0	19.0	27.1	29.3	44.1	37.1	66.6	13.8	8.5	C33-34	0.5	0.9
Other thoracic organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	1.1	0.0	0.1	0.1	C37-38	0.0	0.0
Bone	10	0.0	0.0	0.5	0.5	0.0	0.0	0.9	0.7	0.5	1.5	2.6	0.6	3.5	3.5	2.2	3.5	1.2	0.8	C40-C41	0.1	0.1
Melanoma of skin	6	0.0	0.0	0.0	0.0	0.4	0.0	0.9	1.4	0.5	0.5	1.5	1.2	0.7	2.6	1.1	0.7	0.7	0.5	C43	0.0	0.1
Other skin	35	0.0	0.0	1.0	0.0	0.0	1.5	0.9	2.0	0.5	2.0	3.1	5.3	7.7	6.1	15.3	31.2	4.0	2.3	C44	0.1	0.2
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	14	0.0	0.6	0.5	0.9	0.9	2.3	0.0	4.1	2.1	4.5	2.1	0.6	1.4	4.3	0.0	0.7	1.6	1.4	C47,C49	0.1	0.1
Breast	292	0.0	0.0	0.0	0.0	1.3	14.3	23.4	48.4	55.6	76.4	67.8	74.7	63.5	57.9	38.2	34.0	33.8	25.6	C50	2.1	2.6
Vulva	6	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	1.1	0.0	1.0	0.6	2.1	0.0	2.2	4.2	0.7	0.4	C51	0.0	0.0
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0	0.1	0.1	C52	0.0	0.0
Cervix uteri	120	0.0	0.0	0.0	0.0	0.4	7.5	13.0	17.7	24.6	28.0	28.2	26.5	20.3	21.6	27.3	19.1	13.9	10.5	C53	0.8	1.1
Corpus uteri	50	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.0	4.3	5.0	11.8	20.6	29.3	14.7	7.6	3.5	5.8	4.0	C54	0.4	0.5
Uterus unspecified	16	0.0	0.0	0.0	0.0	0.4	1.5	0.0	1.4	3.7	9.5	4.1	1.2	0.0	1.7	1.1	2.8	1.9	1.4	C55	0.1	0.1
Ovary	51	0.0	0.0	1.0	3.6	4.0	8.3	3.5	2.7	7.5	12.0	12.3	9.4	8.4	8.6	6.5	6.4	5.9	4.8	C56	0.4	0.4
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.7	0.1	0.0	0.0	C57	0.0	0.0
Placenta	1	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	7	2.1	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.1	0.5	1.5	1.2	0.0	2.6	2.2	2.1	0.8	0.7	C64	0.0	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C65	0.0	0.0
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	C66	0.0	0.0
Bladder	7	0.0	0.0	0.0	0.0	0.0	1.5	0.9	0.0	0.0	0.5	0.5	0.0	2.1	3.5	1.1	5.7	0.8	0.6	C67	0.0	0.1
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	C68	0.0	0.0
Eye	1	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.1	0.1	C69	0.0	0.0
Brain, nervous system	45	2.1	2.4	2.5	0.9	1.3	2.3	5.2	4.8	6.4	9.5	10.3	8.8	4.2	6.1	8.7	9.9	5.2	4.2	C70-72	6.1	0.4
Thyroid	77	0.0	0.0	1.0	2.3	4.0	9.0	13.9	15.7	12.3	17.5	13.3	12.4	10.5	13.8	12.0	12.7	8.9	7.4	C73	0.6	0.7
Adrenal gland	2	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.2	0.4	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.1	0.1	C75	0.0	0.0
Hodgkin disease	3	0.0	0.0	0.5	0.5	0.9	0.8	0.9	1.4	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	C81	0.0	0.0
Non-Hodgkin lymphoma	44	0.0	0.0	0.5	0.0	0.9	0.8	4.3	2.7	5.9	6.0	8.7	5.3	15.4	9.5	9.8	18.4	5.0	3.4	C82-85,C96	0.3	0.3
Multiple myeloma	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.5	1.0	4.7	1.4	0.9	3.3	2.1	0.9	0.6	C90	0.0	0.1
Lymphoid leukemia	10	5.5	2.4	0.5	0.0	0.4	0.8	0.0	1.4	0.0	1.0	0.5	1.2	0.0	1.7	2.2	2.1	1.1	1.4	C91	0.1	0.1
Myeloid leukemia	12	1.4	0.6	1.5	0.5	0.4	2.3	0.9	0.0	1.6	0.5	2.1	2.9	2.8	2.6	2.2	2.1	1.4	1.3	C92-94	0.1	0.1
Leukemia unspecified	19	1.4	0.6	0.0	0.5	0.4	0.0	0.9	2.7	1.6	2.5	2.1	2.9	2.8	5.2	8.7	8.5	2.2	1.6	C95	0.1	0.2
Myelodysplastic disease	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.2	1.4	0.2	0.1	D45-D47	0.0	0.0
Other and unspecified	57	0.0	0.0	0.0	0.0	0.9	3.0	4.3	4.1	3.7	11.5	4.1	11.2	11.2	24.2	15.3	27.6	6.6	4.4	O&U	0.3	0.5
All sites	1,578	18.5	7.7	10.2	10.0	19.3	65.6	94.5	145.8	176.5	256.6	278.7	330.2	363.8	458.1	456.9	548.2	182.2	127.5	ALL	8.9	13.5

**Table 4.5.3** Mean annual incidence, Ubon Ratchathani, 2016-2018

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	
			(per 100,000)		(percent)				(per 100,000)		(percent)		
Lip	0	0.0	0.0	0.0	0.0	0.0	13	0.8	1.5	0.9	0.0	0.1	C00
Tongue	15	1.0	1.8	1.3	0.1	0.1	10	0.6	1.1	0.8	0.1	0.1	C01-02
Mouth	14	1.0	1.7	1.1	0.1	0.1	22	1.4	2.6	1.6	0.1	0.2	C03-06
Salivary glands	6	0.4	0.7	0.5	0.0	0.1	6	0.4	0.7	0.6	0.0	0.0	C07-08
Tonsil	7	0.5	0.8	0.6	0.1	0.1	1	0.1	0.2	0.1	0.0	0.0	C09
Other oropharynx	2	0.2	0.3	0.2	0.0	0.0	1	0.0	0.1	0.1	0.0	0.0	C10
Nasopharynx	26	1.7	3.1	2.3	0.2	0.3	11	0.7	1.3	0.9	0.1	0.1	C11
Hypopharynx	5	0.4	0.6	0.5	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C12-13
Pharynx unspecified	1	0.1	0.2	0.1	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C14
Oesophagus	21	1.4	2.5	1.8	0.1	0.2	4	0.2	0.4	0.3	0.0	0.0	C15
Stomach	46	3.0	5.5	3.6	0.2	0.4	34	2.2	4.0	2.8	0.2	0.3	C16
Small intestine	4	0.2	0.4	0.3	0.0	0.0	5	0.3	0.5	0.3	0.0	0.0	C17
Colon	89	5.9	10.7	7.3	0.5	0.9	86	5.5	9.9	6.3	0.4	0.8	C18
Rectum	78	5.2	9.3	6.3	0.4	0.7	64	4.1	7.4	4.8	0.3	0.6	C19-20
Anus	2	0.1	0.2	0.2	0.0	0.0	3	0.2	0.4	0.2	0.0	0.0	C21
Liver and bile duct	518	34.4	62.2	42.1	2.7	5.1	257	16.3	29.7	17.7	1.0	2.2	C22,C24
Gallbladder	13	0.9	1.6	1.0	0.0	0.1	18	1.1	2.0	1.2	0.1	0.2	C23
Pancreas	18	1.2	2.2	1.5	0.1	0.2	16	1.0	1.9	1.1	0.1	0.1	C25
Nose, sinuses etc.	4	0.2	0.4	0.3	0.0	0.0	3	0.2	0.4	0.2	0.0	0.0	C30-31
Larynx	14	0.9	1.7	1.2	0.1	0.2	3	0.2	0.3	0.3	0.0	0.0	C32
Trachea, Bronchus and lung	213	14.1	25.5	16.6	0.9	1.9	119	7.5	13.8	8.5	0.5	0.9	C33-34
Other thoracic organs	6	0.4	0.7	0.6	0.0	0.1	1	0.1	0.1	0.1	0.0	0.0	C37-38
Bone	12	0.8	1.5	1.1	0.1	0.1	10	0.6	1.2	0.8	0.1	0.1	C40-C41
Melanoma of skin	7	0.4	0.8	0.5	0.0	0.1	6	0.4	0.7	0.5	0.0	0.1	C43
Other skin	24	1.6	2.9	1.9	0.1	0.2	35	2.2	4.0	2.3	0.1	0.2	C44
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.1	0.0	0.0	C45
Kaposi's sarcoma	0	0.0	0.0	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	12	0.8	1.4	1.3	0.1	0.1	14	0.9	1.6	1.4	0.1	0.1	C47,C49
Breast	4	0.3	0.5	0.4	0.0	0.0	292	18.5	33.8	25.6	2.1	2.6	C50
Vulva							6	0.4	0.7	0.4	0.0	0.0	C51
Vagina							1	0.0	0.1	0.1	0.0	0.0	C52
Cervix uteri							120	7.6	13.9	10.5	0.8	1.1	C53
Corpus uteri							50	3.2	5.8	4.0	0.4	0.5	C54
Uterus unspecified							16	1.0	1.9	1.4	0.1	0.1	C55
Ovary							51	3.2	5.9	4.8	0.4	0.4	C56
Other female genital organs							1	0.0	0.1	0.0	0.0	0.0	C57
Placenta							1	0.1	0.1	0.1	0.0	0.0	C58
Penis	12	0.8	1.4	1.0	0.1	0.1							C60
Prostate	52	3.5	6.2	3.6	0.1	0.4							C61
Testis	5	0.3	0.6	0.6	0.0	0.0							C62
Other male genital organs	1	0.1	0.1	0.1	0.0	0.0							C63
Kidney	15	1.0	1.8	1.4	0.1	0.2	7	0.4	0.8	0.7	0.0	0.1	C64
Renal pelvis	1	0.1	0.2	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C65
Ureter	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C66
Bladder	23	1.5	2.8	1.8	0.1	0.2	7	0.4	0.8	0.6	0.0	0.1	C67
Other urinary organs	1	0.0	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C68
Eye	1	0.1	0.2	0.2	0.0	0.0	1	0.0	0.1	0.1	0.0	0.0	C69
Brain, nervous system	36	2.4	4.3	3.6	0.2	0.4	45	2.9	5.2	4.2	0.3	0.4	C70-72
Thyroid	16	1.1	1.9	1.4	0.1	0.1	77	4.9	8.9	7.4	0.6	0.7	C73
Adrenal gland	1	0.0	0.1	0.1	0.0	0.0	2	0.1	0.2	0.4	0.0	0.0	C74
Other endocrine	2	0.1	0.2	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C75
Hodgkin disease	4	0.3	0.5	0.4	0.0	0.0	3	0.2	0.3	0.4	0.0	0.0	C81
Non-Hodgkin lymphoma	53	3.5	6.4	4.5	0.3	0.5	44	2.8	5.0	3.4	0.3	0.3	C82-85,C96
Multiple myeloma	9	0.6	1.1	0.7	0.0	0.1	8	0.5	0.9	0.6	0.0	0.1	C90
Lymphoid leukemia	9	0.6	1.1	1.2	0.1	0.1	10	0.6	1.1	1.4	0.1	0.1	C91
Myeloid leukemia	14	1.0	1.7	1.5	0.1	0.1	12	0.8	1.4	1.3	0.1	0.1	C92-94
Leukemia unspecified	23	1.5	2.7	2.1	0.1	0.2	19	1.2	2.2	1.6	0.1	0.2	C95
Myelodysplastic disease	1	0.1	0.1	0.1	0.0	0.0	2	0.1	0.2	0.1	0.0	0.0	D45-D47
Other and unspecified	63	4.2	7.5	5.5	0.3	0.6	57	3.6	6.6	4.4	0.3	0.5	O&U
<b>All sites</b>	<b>1,506</b>	<b>100.0</b>	<b>180.7</b>	<b>125.2</b>	<b>7.8</b>	<b>14.3</b>	<b>1,578</b>	<b>100.0</b>	<b>182.2</b>	<b>127.5</b>	<b>8.9</b>	<b>13.5</b>	<b>ALL</b>

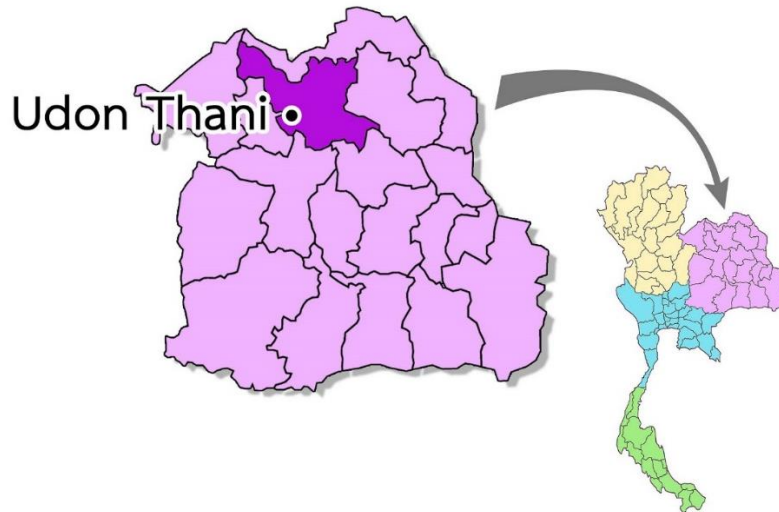
**Table 4.5.4** Percentage of morphologically verified and death certificate only cases,  
Ubun Ratchathani

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	107	98.1	0.9	155	94.8	1.9	C00-C08
Oropharynx	32	93.8	0.0	10	90.0	0.0	C09-C10,C14
Nasopharynx	77	94.8	1.3	33	97.0	0.0	C11
Hypopharynx	16	93.8	6.3	1	100.0	0.0	C12-C13
Esophagus	62	83.9	12.9	11	100.0	0.0	C15
Stomach	137	86.1	8.8	103	86.4	10.7	C16
Small intestine	11	81.8	9.1	14	100.0	0.0	C17
Colon and rectum	507	95.1	1.2	460	93.7	1.5	C18-C21
Liver and bile duct	1,553	38.2	2.5	770	37.0	2.6	C22,C24
Gallbladder	39	51.3	23.1	53	60.4	7.5	C23
pancrease	54	57.4	20.4	49	55.1	14.3	C25
Nose,sinuses etc	11	100.0	0.0	10	80.0	10.0	C30-C31
Larynx	42	88.1	9.5	9	66.7	11.1	C32
Trachea, bronchus and lung	638	81.5	9.2	357	84.6	10.4	C33-C34
Other thoracic organs	17	76.5	5.9	3	100.0	0.0	C37-C38
Bone	37	48.6	24.3	30	40.0	16.7	C40-C41
Melanoma of skin	20	100.0	0.0	17	100.0	0.0	C43
Other skin	73	91.8	2.7	104	87.5	2.9	C44
Mesothelioma	1	100.0	0.0	1	100.0	0.0	C45
Kaposi sarcoma	1	100.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	36	100.0	0.0	41	92.7	7.3	C47,C49
Breast	12	100.0	0.0	877	93.8	2.2	C50
Vulva				17	82.4	0.0	C51
Vagina				2	100.0	0.0	C52
Cervix uteri				360	85.8	2.8	C53
Corpus uteri				151	98.0	0.7	C54
Uterus unspecified				48	81.3	8.3	C55
Ovary				153	75.2	6.5	C56
Other female genital organs				2	50.0	50.0	C57
Placenta				3	66.7	0.0	C58
Penis	35	91.4	5.7				C60
Prostate	156	85.3	8.3				C61
Testis	14	100.0	0.0				C62
Other male genital organs	3	66.7	0.0				C63
Kidney	46	87.0	6.5	20	85.0	15.0	C64
Renal pelvis	4	100.0	0.0	0	0.0	0.0	C65
Ureter	3	66.7	0.0	1	100.0	0.0	C66
Bladder	70	91.4	2.9	21	85.7	9.5	C67
Other urinary organs	2	50.0	50.0	1	0.0	100.0	C68
Eye	4	75.0	0.0	2	0.0	50.0	C69
Brain, nervous system	108	48.1	19.4	135	46.7	11.9	C70-C72
Thyroid	48	89.6	0.0	232	96.1	0.4	C73
Adrenal gland	2	0.0	50.0	5	60.0	0.0	C74
Other endocrine	6	66.7	16.7	3	66.7	0.0	C75
Hodgkin disease	12	100.0	0.0	9	100.0	0.0	C81
Non-Hodgkin lymphoma	159	99.4	0.0	131	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	27	100.0	0.0	24	100.0	0.0	C90
Leukemia	138	100.0	0.0	123	100.0	0.0	C91-C95
Myelodysplastic	3	100.0	0.0	5	100.0	0.0	D45-D47
Other and unspecified	189	66.7	19.6	171	60.2	22.8	O&U
<b>All sites</b>	<b>4,512</b>	<b>69.2</b>	<b>5.4</b>	<b>4,727</b>	<b>78.9</b>	<b>4.4</b>	<b>All</b>
<b>All sites without liver</b>	<b>2,959</b>	<b>85.5</b>	<b>7.0</b>	<b>3,957</b>	<b>87.1</b>	<b>4.8</b>	<b>All</b>

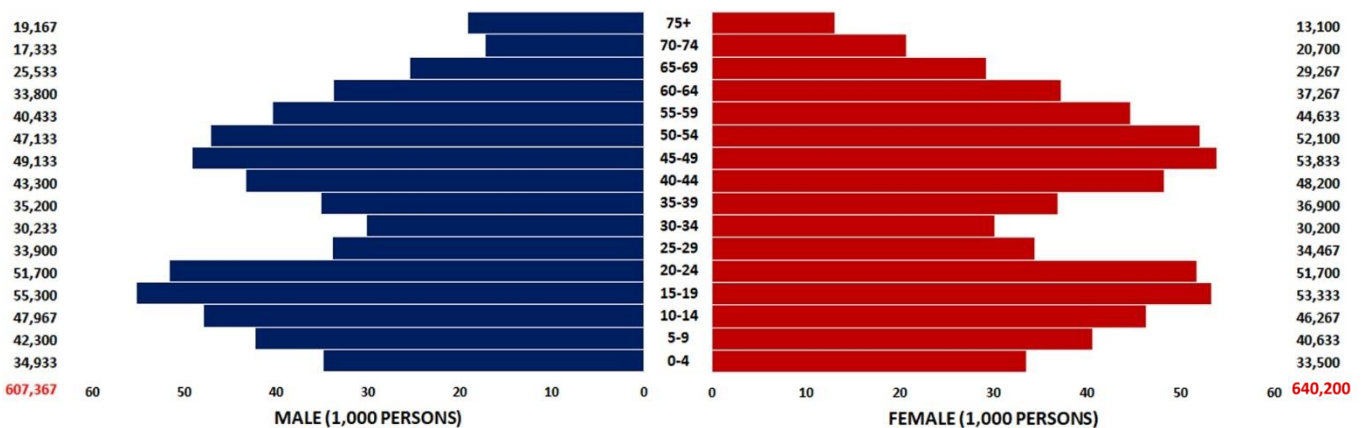
## 4.6 Udon Thani Cancer Registry

### Registration area

Udon Thani cancer registry covers the population of Udon Thani province in the northeastern region of Thailand, covering an area of about 11,730 square kilometers. It is located 564 kilometers to the northeast of Bangkok and for administrative purposes is divided into 20 districts. The estimated population in 2017 was 1,247,567 with 607,367 males and 640,200 females. About 95% of the population are Buddhists. The remainder are mainly Christians and Moslems.



Population pyramid Udon Thani  
estimated population in 2017 (2016 – 2018)



### **Cancer care facilities**

Community hospitals are provided in all 20 districts of Udon Thani. One cancer center (Udon Thani regional cancer center) is situated in Mueang district which is the center of the province. The Udon Thani provincial hospital and Prajaksilapakom Military Hospital are the other two large hospitals which have facilities for cancer surgery and chemotherapy. The Udon Thani regional cancer center is the only place that provides radiotherapy services in the province. Patients suspected of having cancer in the health care system and community hospitals are referred to the Udon Thani provincial hospital, Udon Thani regional cancer center or Srinagarind hospital, Khon Kaen.

### **Registry procedures**

The population-based cancer registry of Udon Thani is actively collected for cancer cases from two large hospitals (Udon Thani provincial hospital and Prajaksilapakom Military Hospital), one cancer center (Udon Thani cancer center) and passively collected from community hospitals, private hospital in Udon Thani, Srinagarind hospital in Khon Kaen and the National Cancer Institute in Bangkok.

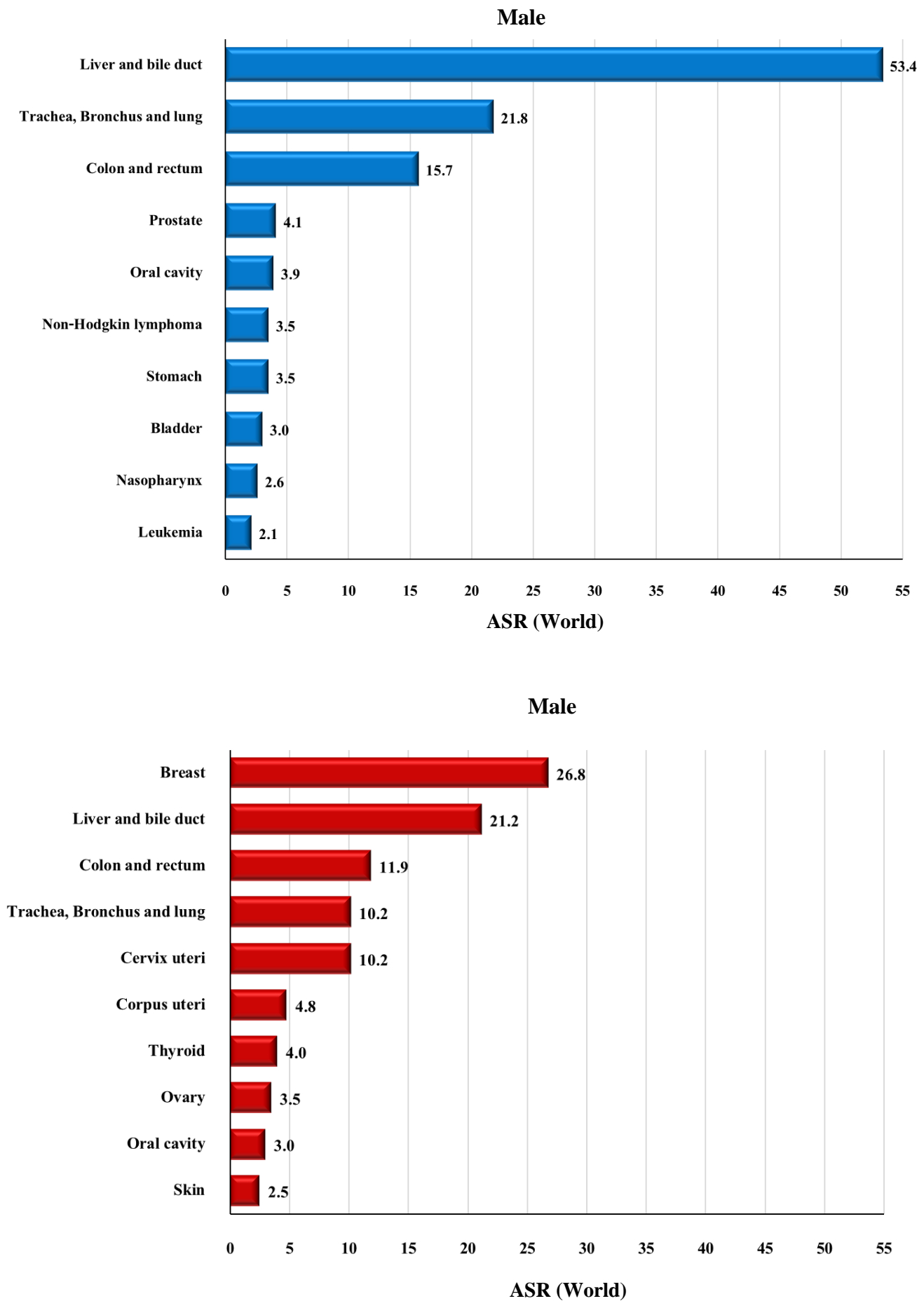
The sources of information on cancer cases are mainly hospital and pathology laboratory records. Each completed case notification form is checked for duplication with computer software for Thai names before entering into the database programmed, CanReg5.

Death certificates are taken from the Udon Thani Population Analytical Center, all being reviewed to match with the cases in the data base, and efforts are made to trace further information before registering the case as a DCO case.

### **Summary of results**

New cases registered in 2017; 1,167 were males and 1,109 were females, making 2,275 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 137.0 per 100,000, with liver and bile duct cancer ranking first (ASR = 53.4) followed by trachea, bronchus and lung (ASR = 21.8) and colon and rectum (ASR = 15.7). The ASR of all cancer sites in females was 117.8 per 100,000, the three leading cancer sites being breast (ASR = 26.8), liver and bile duct (ASR = 21.2) and colon and rectum (ASR = 11.9).

**Figure 4.6.1** Leading cancer in Udon Thani (mean annual ASR 2016-2018)



**Table 4.6.1** Udon Thani (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	1.9	1.7	0.3	0.2	C00	0.0	0.0
Tongue	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	3.8	4.7	4.2	7.4	4.9	3.9	5.8	1.7	2.3	1.7	C01-02	0.1	0.2
Mouth	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	6.8	3.5	3.3	2.0	5.2	7.7	10.4	2.0	1.4	C03-06	0.1	0.1
Salivary glands	5	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.8	0.7	0.7	2.5	3.9	2.6	1.9	3.5	0.9	0.6	C07-08	0.0	0.1
Tonsil	5	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.9	2.3	2.0	0.7	2.5	1.0	2.6	0.0	1.7	0.9	0.7	C09	0.1	0.1
Other oropharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.7	0.0	2.0	0.0	0.0	0.0	0.3	0.2	C10	0.0	0.0
Nasopharynx	22	0.0	0.0	0.0	0.0	0.0	1.0	0.0	3.8	3.1	7.5	5.7	11.5	6.9	6.5	11.5	8.7	3.6	2.6	C11	0.2	0.3
Hypopharynx	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.3	0.0	0.7	1.6	1.0	1.3	5.8	1.7	0.8	0.6	C12-13	0.0	0.1
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.3	0.0	0.0	0.0	0.1	0.1	C14	0.0	0.0
Oesophagus	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.5	2.0	4.2	6.6	3.9	5.2	5.8	0.0	1.7	1.2	C15	0.1	0.2
Stomach	29	1.0	0.0	0.0	0.0	0.0	1.0	2.2	0.9	4.6	6.8	9.2	13.2	6.9	14.4	19.2	17.4	4.8	3.5	C16	0.2	0.4
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.7	0.8	1.0	0.0	1.9	0.0	0.3	0.2	C17	0.0	0.0
Colon	84	0.0	0.0	0.0	0.0	0.0	1.0	3.3	3.8	14.6	8.8	21.9	26.4	32.5	53.5	69.2	67.8	13.8	9.7	C18	0.6	1.2
Rectum	49	0.0	0.0	0.0	0.0	0.6	2.0	3.3	4.7	3.1	8.1	7.8	16.5	27.6	28.7	42.3	29.6	8.1	5.8	C19-20	0.4	0.7
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.6	0.0	3.5	0.3	0.2	C21	0.0	0.0
Liver and bile duct	466	0.0	0.0	0.0	0.6	1.9	4.9	7.7	27.5	48.5	65.8	99.7	177.2	237.7	276.8	326.9	370.4	76.7	53.4	C22,C24	3.4	6.4
Gallbladder	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.7	2.8	4.1	8.9	6.5	13.5	24.3	2.5	1.7	C23	0.1	0.2
Pancreas	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.2	3.3	3.9	5.2	3.8	1.7	1.2	0.8	C25	0.1	0.1
Nose, sinuses etc.	5	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.9	2.3	2.0	0.0	3.3	0.0	2.6	1.9	0.0	0.9	0.7	C30-31	0.1	0.1
Larynx	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.7	1.4	3.3	3.9	10.4	11.5	7.0	1.8	1.2	C32	0.1	0.2
Trachea, Bronchus and lung	191	0.0	0.0	0.0	0.0	1.9	0.0	5.5	10.4	13.1	17.0	36.8	67.6	80.9	100.5	205.8	196.5	31.5	21.8	C33-34	1.2	2.7
Other thoracic organs	3	0.0	0.0	0.7	1.2	0.0	1.0	1.1	0.0	0.0	0.7	0.0	1.6	1.0	0.0	0.0	1.7	0.5	0.5	C37-38	0.0	0.0
Bone	7	1.0	0.8	1.4	0.0	0.6	0.0	2.2	0.0	1.5	1.4	0.7	0.8	2.0	1.3	1.9	5.2	1.1	1.0	C40-C41	0.1	0.1
Melanoma of skin	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	2.0	1.3	0.0	0.0	0.2	0.2	C43	0.0	0.0
Other skin	13	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.8	0.7	2.8	4.1	5.9	7.8	9.6	19.1	2.2	1.5	C44	0.1	0.2
Kaposi's sarcoma	1	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C46	0.0	0.0
Connective tissue	5	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.9	0.0	0.7	3.5	0.8	2.0	0.0	0.0	3.5	0.8	0.6	C47,C49	0.0	0.0
Breast	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.0	1.3	1.9	1.7	0.3	0.2	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.3	2.0	1.4	0.8	3.0	0.0	3.8	10.4	1.2	0.8	C60	0.1	0.1
Prostate	36	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.5	0.7	1.4	4.1	11.8	30.0	63.5	52.2	6.0	4.1	C61	0.1	0.6
Testis	4	0.0	0.0	0.0	0.6	0.0	2.9	2.2	0.0	0.8	0.7	1.4	0.0	0.0	1.3	0.0	1.7	0.7	0.7	C62	0.0	0.0
Kidney	8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	2.8	4.1	3.0	2.6	11.5	5.2	1.4	1.0	C64	0.1	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.0	2.6	0.0	0.0	0.2	0.2	C66	0.0	0.0
Bladder	27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	4.7	5.0	7.4	9.9	13.1	15.4	50.4	4.5	3.0	C67	0.1	0.3
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.1	0.0	C68	0.0	0.0
Eye	3	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.0	0.0	0.0	1.7	0.4	0.7	C69	0.0	0.0
Brain, nervous system	15	0.0	0.8	0.7	1.2	0.0	0.0	3.3	5.7	1.5	2.7	2.8	7.4	3.0	7.8	3.8	3.5	2.5	2.0	C70-72	0.1	0.2
Thyroid	7	0.0	0.0	0.0	0.0	1.3	1.0	1.1	0.0	0.8	2.0	1.4	1.6	3.9	1.3	3.8	1.7	1.1	0.9	C73	0.1	0.1
Adrenal gland	0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C74	0.0	0.0
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C75	0.0	0.0
Hodgkin disease	2	0.0	0.0	0.7	0.0	0.6	0.0	0.0	1.9	0.0	1.4	0.0	0.8	0.0	0.0	0.0	0.0	0.4	0.3	C81	0.0	0.0
Non-Hodgkin lymphoma	27	1.0	0.8	2.1	0.0	0.0	2.9	1.1	2.8	2.3	1.4	9.9	7.4	10.8	11.7	36.5	5.2	4.5	3.5	C82-85,C96	0.2	0.5
Multiple myeloma	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	0.0	2.1	0.8	2.0	2.6	1.9	0.0	0.6	0.4	C90	0.0	0.1
Lymphoid leukemia	3	3.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.8	0.0	0.0	0.0	0.0	0.5	0.7	C91	0.0	0.0
Myeloid leukemia	6	0.0	0.0	0.0	1.2	0.6	0.0	2.2	1.9	0.8	2.7	0.7	2.5	0.0	1.3	1.9	1.7	1.0	0.9	C92-94	0.1	0.1
Leukemia unspecified	4	0.0	0.0	0.0	0.0	1.3	0.0	1.1	0.9	0.0	0.7	0.0	3.3	1.0	1.3	1.9	0.0	0.7	0.5	C95	0.0	0.1
Other and unspecified	38	1.0	0.8	1.4	1.2	0.0	1.0	3.3	4.7	3.8	8.8	6.4	9.1	13.8	19.6	36.5	20.9	6.2	4.7	O&U	0.3	0.6
All sites	1,167	14.3	4.7	6.9	6.0	10.3	22.6	44.1	81.4	123.2	169.6	253.9	411.4	508.9	637.1	932.7	933.9	192.1	137.0	ALL	8.3	16.1

**Table 4.6.2** Udon Thani (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74	
Lip	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.6	0.0	1.8	2.3	4.8	18.4	1.3	0.7	C00	0.0	0.1	
Tongue	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.7	2.5	0.6	3.0	1.8	5.7	3.2	6.1	1.3	0.8	C01-02	0.0	0.1
Mouth	11	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.9	0.0	0.6	0.6	1.5	0.9	4.6	8.1	20.8	1.7	1.0	C03-06	0.0	0.1	
Salivary glands	4	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.9	1.4	0.6	1.3	0.0	0.0	0.0	1.6	2.5	0.6	0.5	C07-08	0.0	0.0	
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.2	0.2	0.1	C09	0.0	0.0	
Other oropharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C10	0.0	0.0	
Nasopharynx	6	0.0	0.0	0.0	0.6	0.0	1.9	0.0	0.9	2.8	1.9	1.3	1.5	1.8	1.1	0.0	0.0	0.9	0.8	C11	0.1	0.1	
Hypopharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.2	0.1	0.1	C12-13	0.0	0.0	
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.1	0.0	C14	0.0	0.0	
Oesophagus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.6	1.5	0.0	1.1	0.0	1.2	0.3	0.2	C15	0.0	0.0	
Stomach	17	0.0	0.0	0.0	0.0	0.0	1.0	1.1	2.7	1.4	5.0	4.5	3.7	6.3	5.7	11.3	6.1	2.7	1.8	C16	0.1	0.2	
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.6	0.7	0.9	3.4	0.0	1.2	0.5	0.3	C17	0.0	0.0	
Colon	75	0.0	0.0	0.7	0.0	0.6	1.0	1.1	3.6	9.0	10.5	15.4	17.9	31.3	45.6	43.5	45.3	11.7	7.5	C18	0.5	0.9	
Rectum	40	0.0	0.0	0.0	0.0	0.0	2.9	2.2	2.7	4.1	7.4	8.3	17.2	19.7	10.3	22.5	15.9	6.2	4.2	C19-20	0.3	0.5	
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	0.6	1.5	0.0	1.1	0.0	0.0	0.3	0.2	C21	0.0	0.0	
Liver and bile duct	224	0.0	0.0	0.0	0.0	0.0	1.0	0.0	5.4	6.9	16.7	30.7	51.5	90.3	145.8	185.2	205.9	35.0	21.2	C22,C24	1.0	2.7	
Gallbladder	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	4.5	5.4	11.4	11.3	13.5	2.2	1.3	C23	0.1	0.2	
Pancreas	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.5	1.9	2.2	3.6	4.6	6.4	4.9	1.4	0.9	C25	0.1	0.1	
Nose, sinuses etc.	1	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.6	0.0	0.0	0.9	0.0	0.0	1.2	0.2	0.2	C30-31	0.0	0.0	
Larynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.6	0.7	0.0	0.0	3.2	1.2	0.3	0.2	C32	0.0	0.0	
Trachea, Bronchus and lung	101	1.0	0.0	0.0	0.0	0.6	1.0	3.3	4.5	7.6	16.7	25.0	29.9	42.9	52.4	54.8	58.8	15.8	10.2	C33-34	0.7	1.2	
Other thoracic organs	5	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.7	1.9	0.0	2.2	2.7	0.0	0.0	3.7	0.7	0.5	C37-38	0.0	0.0	
Bone	3	0.0	0.0	0.7	0.6	0.6	0.0	0.0	0.9	0.0	0.0	0.6	0.7	0.9	2.3	0.0	0.0	0.5	0.4	C40-C41	0.0	0.0	
Melanoma of skin	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	3.0	2.7	2.3	0.0	0.0	0.5	0.3	C43	0.0	0.0	
Other skin	23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	1.4	0.6	1.9	6.7	8.9	17.1	12.9	22.1	3.6	2.2	C44	0.1	0.3	
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0	
Connective tissue	6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	2.8	1.2	2.6	1.5	1.8	3.4	0.0	0.0	0.9	0.7	0.7	C47,C49	0.1	0.1	
Breast	240	0.0	0.0	0.0	0.0	0.6	4.8	29.8	45.2	51.9	86.1	80.6	85.9	69.8	64.9	41.9	25.7	37.5	26.8	C50	2.3	2.8	
Vulva	2	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.6	0.0	3.0	0.0	1.1	0.0	0.0	0.4	0.3	C51	0.0	0.0	
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	1.2	0.1	0.1	C52	0.0	0.0	
Cervix uteri	88	0.0	0.0	0.0	0.6	0.6	5.8	15.5	20.8	22.1	24.8	26.9	25.4	15.2	31.9	27.4	9.8	13.7	10.2	C53	0.8	1.1	
Corpus uteri	47	0.0	0.0	0.0	0.0	0.6	0.0	1.1	0.0	7.6	5.6	14.1	23.9	29.5	19.4	12.9	8.6	7.3	4.8	C54	0.4	0.6	
Uterus unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.2	1.3	0.0	0.0	0.0	0.0	0.0	0.3	0.2	C55	0.0	0.0	
Ovary	31	1.0	0.0	0.7	0.0	0.6	1.9	2.2	1.8	4.8	13.0	9.6	11.9	8.9	11.4	4.8	3.7	4.9	3.5	C56	0.3	0.4	
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.1	0.0	C57	0.0	0.0	
Placenta	0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C58	0.0	0.0	
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0	
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0	
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0	
Kidney	5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.6	1.3	2.2	1.8	1.1	1.6	1.2	0.8	0.7	C64	0.0	0.1	
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.1	0.0	C65	0.0	0.0	
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.6	0.0	0.1	0.1	C66	0.0	0.0	
Bladder	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	1.2	1.9	0.7	0.9	2.3	4.8	2.5	0.8	0.5	C67	0.0	0.1	
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C68	0.0	0.0	
Eye	2	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	1.6	0.0	0.3	0.5	C69	0.0	0.0	
Brain, nervous system	10	1.0	1.6	0.7	0.6	0.0	3.9	1.1	0.9	0.0	1.9	3.2	3.7	2.7	1.1	0.0	1.2	1.5	1.4	C70-72	0.1	0.1	
Thyroid	31	0.0	0.0	0.0	2.5	4.5	6.8	4.4	8.1	5.5	8.0	9.0	6.0	5.4	4.6	4.8	7.4	4.8	4.0	C73	0.3	0.3	
Adrenal gland	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.1	0.0	C74	0.0	0.0	
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.1	0.0	C75	0.0	0.0	
Hodgkin disease	2	0.0	0.0	0.0	1.2	0.0	1.9	0.0	0.0	0.0	0.6	0.7	0.0	0.0	0.0	0.0	0.0	0.3	0.3	C81	0.0	0.0	
Non-Hodgkin lymphoma	21	0.0	0.0	0.0	0.0	2.6	1.0	3.3	0.9	2.1	5.6	4.5	6.7	6.3	9.1	6.4	8.6	3.3	2.3	C82-85,C96	0.2	0.2	
Multiple myeloma	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	0.6	0.6	0.7	0.9	3.4	0.0	0.0	0.5	0.3	C90	0.0	0.0	
Lymphoid leukemia	4	3.0	0.0	0.7	0.0	0.6	0.0	1.1	0.0	0.7	0.6	0.6	1.5	0.0	1.1	0.0	0.0	0.6	0.7	C91	0.0	0.0	
Myeloid leukemia	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	1.2	0.6	0.0	0.9	3.4	1.6	0.0	0.5	0.4	C92-94	0.0	0.0	
Leukemia unspecified	4	2.0	0.0	0.7	0.0	0.6	0.0	0.0	1.8	0.0	1.2	1.3	0.0	0.0	1.1	0.0	0.0	0.6	0.6	C95	0.0	0.0	
Other and unspecified	34	1.0	0.0	0.0	0.0	0.6	1.0	2.2	0.9	1.4	1.9	3.8	11.9	14.3	21.6	22.5	24.5	5.3	3.5	O&U	0.2	0.4	
All sites	1,109	13.9	1.6	4.3	6.9	14.2	37.7	75.1	112.0	140.4	227.2	261.0	338.3	384.6	498.9	502.4	525.7	173.2	117.8	ALL	8.1	13.1	

**Table 4.6.3** Mean annual incidence, Udon Thani, 2016-2018

Site	Male						Female						ICD-10	
	No.Cases Year	Freq. (%)	Crude	ASR	Cum.	Rate.	No.Cases Year	Freq. (%)	Crude	ASR	Cum.	Rate.		
			rate	world	0-64	0-74			rate	world	0-64	0-74		
			(per 100,000)				(per 100,000)				(percent)			
Lip	2	0.1	0.3	0.2	0.0	0.0	8	0.8	1.3	0.7	0.0	0.1	C00	
Tongue	14	1.2	2.3	1.7	0.1	0.2	8	0.8	1.3	0.8	0.0	0.1	C01-02	
Mouth	12	1.0	2.0	1.4	0.1	0.1	11	1.0	1.7	1.0	0.0	0.1	C03-06	
Salivary glands	5	0.5	0.9	0.6	0.0	0.1	4	0.3	0.6	0.5	0.0	0.0	C07-08	
Tonsil	5	0.5	0.9	0.7	0.1	0.1	1	0.1	0.2	0.1	0.0	0.0	C09	
Other oropharynx	2	0.1	0.3	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C10	
Nasopharynx	22	1.9	3.6	2.6	0.2	0.3	6	0.5	0.9	0.8	0.1	0.1	C11	
Hypopharynx	5	0.4	0.8	0.6	0.0	0.1	1	0.1	0.1	0.1	0.0	0.0	C12-13	
Pharynx unspecified	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C14	
Oesophagus	10	0.9	1.7	1.2	0.1	0.2	2	0.2	0.3	0.2	0.0	0.0	C15	
Stomach	29	2.5	4.8	3.5	0.2	0.4	17	1.5	2.7	1.8	0.1	0.2	C16	
Small intestine	2	0.2	0.3	0.2	0.0	0.0	3	0.3	0.5	0.3	0.0	0.0	C17	
Colon	84	7.2	13.8	9.7	0.6	1.2	75	6.8	11.7	7.5	0.5	0.9	C18	
Rectum	49	4.2	8.1	5.8	0.4	0.7	40	3.6	6.2	4.2	0.3	0.5	C19-20	
Anus	2	0.1	0.3	0.2	0.0	0.0	2	0.2	0.3	0.2	0.0	0.0	C21	
Liver and bile duct	466	39.9	76.7	53.4	3.4	6.4	224	20.2	35.0	21.2	1.0	2.7	C22,C24	
Gallbladder	15	1.3	2.5	1.7	0.1	0.2	14	1.3	2.2	1.3	0.1	0.2	C23	
Pancreas	7	0.6	1.2	0.8	0.1	0.1	9	0.8	1.4	0.9	0.1	0.1	C25	
Nose, sinuses etc.	5	0.5	0.9	0.7	0.1	0.1	1	0.1	0.2	0.2	0.0	0.0	C30-31	
Larynx	11	0.9	1.8	1.2	0.1	0.2	2	0.2	0.3	0.2	0.0	0.0	C32	
Trachea, Bronchus and lung	191	16.4	31.5	21.8	1.2	2.7	101	9.1	15.8	10.2	0.7	1.2	C33-34	
Other thoracic organs	3	0.3	0.5	0.5	0.0	0.0	5	0.4	0.7	0.5	0.0	0.0	C37-38	
Bone	7	0.6	1.1	1.0	0.1	0.1	3	0.3	0.5	0.4	0.0	0.0	C40-C41	
Melanoma of skin	1	0.1	0.2	0.2	0.0	0.0	3	0.3	0.5	0.3	0.0	0.0	C43	
Other skin	13	1.1	2.2	1.5	0.1	0.2	23	2.1	3.6	2.2	0.1	0.3	C44	
Kaposi's sarcoma	1	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46	
Connective tissue	5	0.4	0.8	0.6	0.0	0.0	6	0.5	0.9	0.7	0.1	0.1	C47,C49	
Breast	2	0.1	0.3	0.2	0.0	0.0	240	21.6	37.5	26.8	2.3	2.8	C50	
Vulva							2	0.2	0.4	0.3	0.0	0.0	C51	
Vagina							1	0.1	0.1	0.1	0.0	0.0	C52	
Cervix uteri							88	7.9	13.7	10.2	0.8	1.1	C53	
Corpus uteri							47	4.2	7.3	4.8	0.4	0.6	C54	
Uterus unspecified							2	0.2	0.3	0.2	0.0	0.0	C55	
Ovary							31	2.8	4.9	3.5	0.3	0.4	C56	
Other female genital organs							0	0.0	0.1	0.0	0.0	0.0	C57	
Placenta							0	0.0	0.1	0.1	0.0	0.0	C58	
Penis	7	0.6	1.2	0.8	0.1	0.1							C60	
Prostate	36	3.1	6.0	4.1	0.1	0.6							C61	
Testis	4	0.3	0.7	0.7	0.0	0.0							C62	
Kidney	8	0.7	1.4	1.0	0.1	0.1	5	0.5	0.8	0.7	0.0	0.1	C64	
Renal pelvis	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C65	
Ureter	1	0.1	0.2	0.2	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C66	
Bladder	27	2.3	4.5	3.0	0.1	0.3	5	0.5	0.8	0.5	0.0	0.1	C67	
Other urinary organs	0	0.0	0.1	0.0	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C68	
Eye	3	0.2	0.4	0.7	0.0	0.0	2	0.2	0.3	0.5	0.0	0.0	C69	
Brain, nervous system	15	1.3	2.5	2.0	0.1	0.2	10	0.9	1.5	1.4	0.1	0.1	C70-72	
Thyroid	7	0.6	1.1	0.9	0.1	0.1	31	2.8	4.8	4.0	0.3	0.3	C73	
Adrenal gland	0	0.0	0.1	0.1	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C74	
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C75	
Hodgkin disease	2	0.2	0.4	0.3	0.0	0.0	2	0.2	0.3	0.3	0.0	0.0	C81	
Non-Hodgkin lymphoma	27	2.3	4.5	3.5	0.2	0.5	21	1.9	3.3	2.3	0.2	0.2	C82-85,C96	
Multiple myeloma	4	0.3	0.6	0.4	0.0	0.1	3	0.3	0.5	0.3	0.0	0.0	C90	
Lymphoid leukemia	3	0.3	0.5	0.7	0.0	0.0	4	0.4	0.6	0.7	0.0	0.0	C91	
Myeloid leukemia	6	0.5	1.0	0.9	0.1	0.1	3	0.3	0.5	0.4	0.0	0.0	C92-94	
Leukemia unspecified	4	0.3	0.7	0.5	0.0	0.1	4	0.3	0.6	0.6	0.0	0.0	C95	
Other and unspecified	38	3.2	6.2	4.7	0.3	0.6	34	3.1	5.3	3.5	0.2	0.4	O&U	
<b>All sites</b>	<b>1,167</b>	<b>100.0</b>	<b>192.1</b>	<b>137.0</b>	<b>8.3</b>	<b>16.1</b>	<b>1,109</b>	<b>100.0</b>	<b>173.2</b>	<b>117.8</b>	<b>8.1</b>	<b>13.1</b>	<b>ALL</b>	

**Table 4.6.4** Percentage of morphologically verified and death certificate only cases, Udon Thani

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	99	98.0	0.0	94	93.6	0.0	C00-C08
Oropharynx	23	100.0	0.0	5	60.0	0.0	C09-C10,C14
Nasopharynx	65	93.8	0.0	18	100.0	0.0	C11
Hypopharynx	14	100.0	0.0	2	100.0	0.0	C12-C13
Esophagus	31	93.5	0.0	6	83.3	0.0	C15
Stomach	88	89.8	0.0	51	86.3	0.0	C16
Small intestine	6	100.0	0.0	9	88.9	0.0	C17
Colon and rectum	404	82.4	10.9	351	82.3	13.4	C18-C21
Liver and bile duct	1,397	36.9	14.9	673	13.2	28.8	C22,C24
Gallbladder	46	28.3	63.0	42	35.7	33.3	C23
pancrease	22	40.9	0.0	27	29.6	0.0	C25
Nose,sinuses etc	16	93.8	0.0	4	100.0	0.0	C30-C31
Larynx	32	87.5	0.0	6	66.7	0.0	C32
Trachea, bronchus and lung	574	59.4	19.5	304	64.5	16.8	C33-C34
Other thoracic organs	10	100.0	0.0	14	92.9	0.0	C37-C38
Bone	20	75.0	0.0	9	77.8	0.0	C40-C41
Melanoma of skin	4	100.0	0.0	10	100.0	0.0	C43
Other skin	40	97.5	0.0	69	94.2	0.0	C44
Mesothelioma	0	0.0	0.0	0	0.0	0.0	C45
Kaposi sarcoma	3	100.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	14	92.9	0.0	18	94.4	0.0	C47,C49
Breast	5	100.0	0.0	720	99.3	0.0	C50
Vulva				7	100.0	0.0	C51
Vagina				2	100.0	0.0	C52
Cervix uteri				263	98.5	0.0	C53
Corpus uteri				141	97.9	0.0	C54
Uterus unspecified				5	40.0	0.0	C55
Ovary				94	70.2	0.0	C56
Other female genital organs				1	100.0	0.0	C57
Placenta				1	100.0	0.0	C58
Penis	21	100.0	0.0				C60
Prostate	109	75.2	0.0				C61
Testis	12	100.0	0.0				C62
Other male genital organs	0						C63
Kidney	25	84.0	0.0	15	60.0	0.0	C64
Renal pelvis	1	0.0	0.0	1	100.0	0.0	C65
Ureter	4	75.0	0.0	2	100.0	0.0	C66
Bladder	82	90.2	0.0	16	93.8	0.0	C67
Other urinary organs	1	0.0	0.0	2	100.0	0.0	C68
Eye	8	87.5	0.0	6	100.0	0.0	C69
Brain, nervous system	45	57.8	0.0	29	62.1	0.0	C70-C72
Thyroid	20	95.0	0.0	93	98.9	0.0	C73
Adrenal gland	1	100.0	0.0	1	100.0	0.0	C74
Other endocrine	0	0.0	0.0	1	0.0	0.0	C75
Hodgkin disease	7	100.0	0.0	6	100.0	0.0	C81
Non-Hodgkin lymphoma	82	100.0	0.0	63	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	11	100.0	0.0	9	100.0	0.0	C90
Leukemia	40	100.0	0.0	33	100.0	0.0	C91-C95
Myelodysplastic	0	0.0	0.0	0	0.0	0.0	D45-D47
Other and unspecified	113	36.3	3.5	102	42.2	0.0	O&U
<b>All sites</b>	<b>3,495</b>	<b>60.1</b>	<b>11.4</b>	<b>3,325</b>	<b>71.5</b>	<b>9.2</b>	<b>All</b>
<b>All sites without liver</b>	<b>2,098</b>	<b>75.5</b>	<b>9.0</b>	<b>2,652</b>	<b>86.2</b>	<b>4.2</b>	<b>All</b>

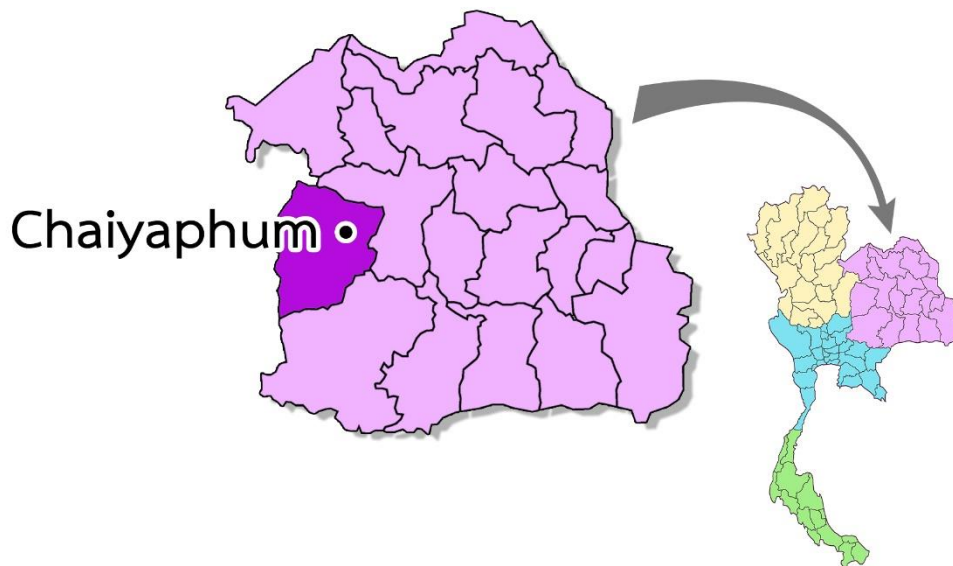
## 4.7 Chaiyaphum Cancer Registry

### Registration area

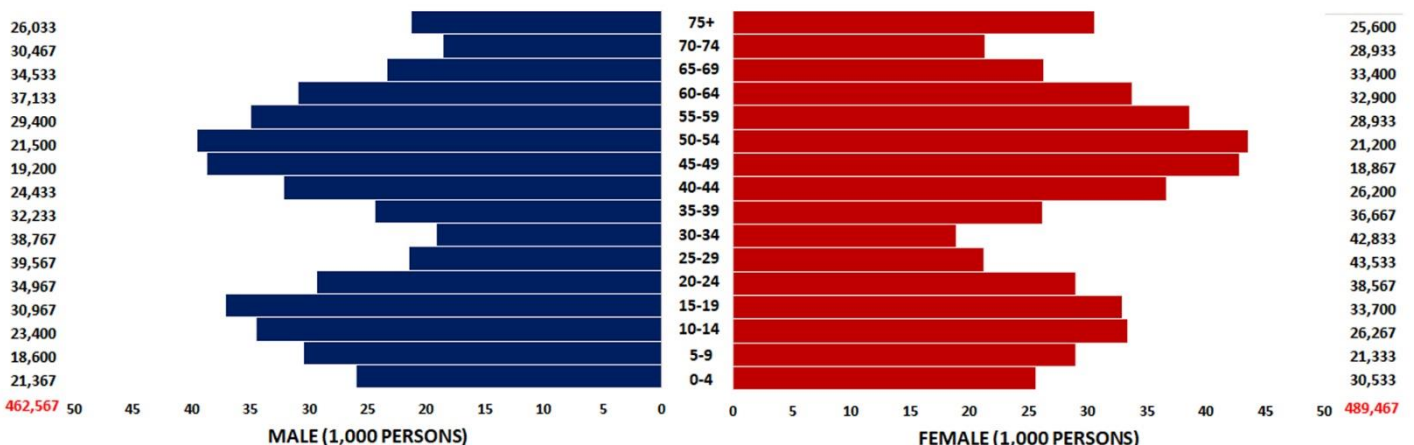
Chaiyaphum is one of Thailand's seventy-six provinces (changwat) lies in central northeastern Thailand also called Isan. Neighboring provinces are (from north clockwise) Khon Kaen, Nakhon Ratchasima, Lop buri and Phetchabun.

The province is bisected by the Phetchabun mountain range, with the highest elevation in the province at 1,222 m. The east of the province is part of the Khorat Plateau. The estimated population in 2017 was 952,034 with 462,567 males and 489,467 females.

Four national parks are in the province. Tat Ton National Park is in the northwest, featuring some scenic waterfalls and dry dipterocarp forests. The biggest attraction of the Sai Thong National Park in the west is the Sai Thong waterfall, but also some fields of the Siam tulip. Similar fields can be found in the Pa Hin Ngam National Park in the southwest, scheduled to be gazette in the future. This park's name ('beautiful rock forest') derives from the strangely-shaped rock formations found there. Phu Laenkha National Park covers 200 km<sup>2</sup> of forested hills northwest of Chaiyaphum city. The total forest area is 3,982 km<sup>2</sup> (1,537 sq mi) or 31.4 percent of provincial area.



Population pyramid Chaiyaphum  
estimated population in 2017 (2016 – 2018)



## Cancer care facilities

The total number of hospitals in Chaiyaphum province was 19 Hospital composed of 1 provincial hospital, 16 community hospital, 2 private hospital. Cancer diagnostic services including radiological (X-ray, ultrasound, CT Scan Mammography and MRI), pathological investigations and cancer surgery services are available Chaiyaphum provincial hospital. Cancer diagnostic and cancer chemotherapy are provided in Chaiyaphum provincial. Most of the cancer patients were diagnosed and treated in the province. Only few patients referred to Lop Buri Cancer Hospital, Khon Kaen belong to the Ministry of Health.

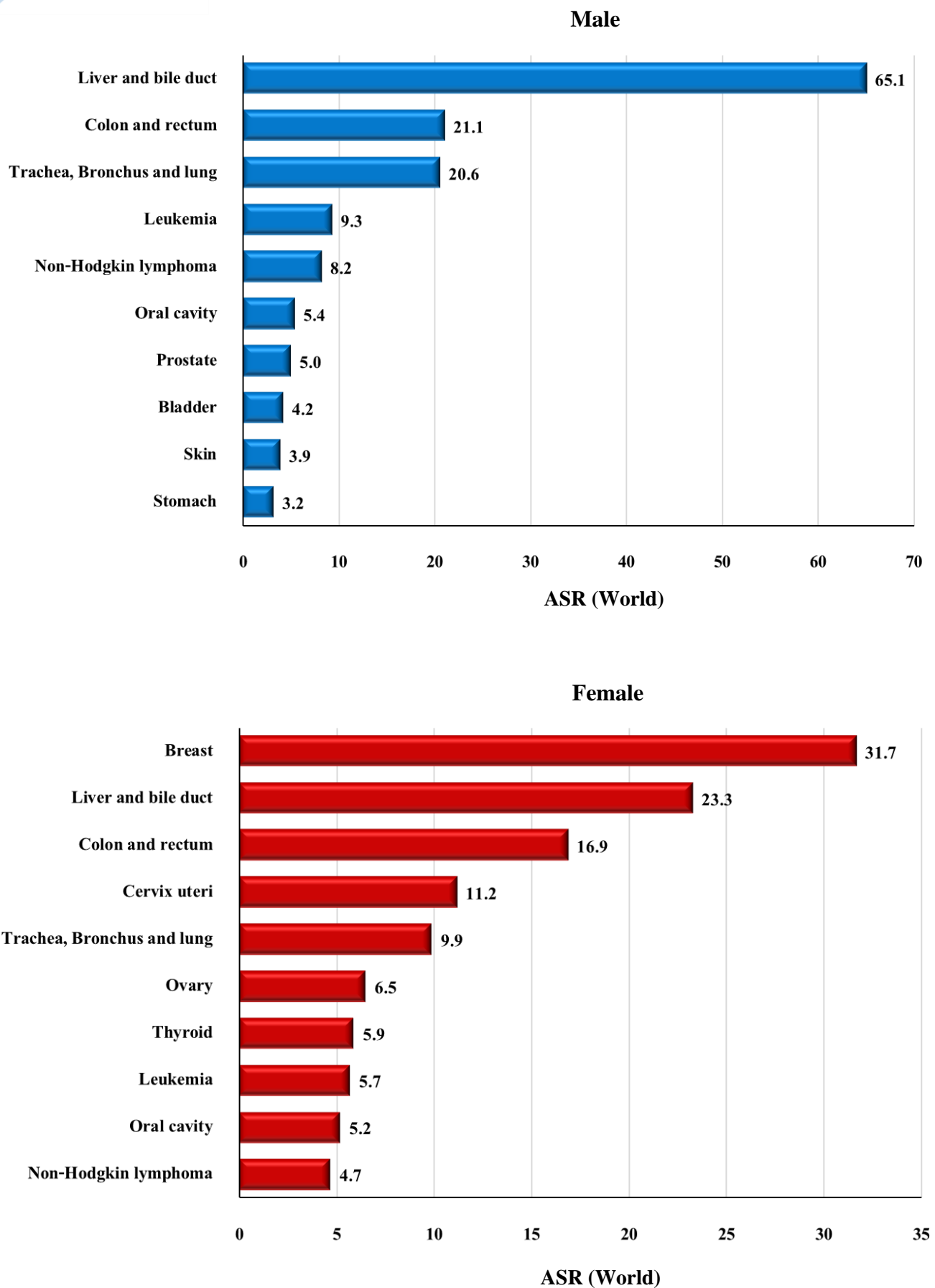
## Registry procedures

Population-based cancer registration of Chaiyaphum province was established by Cancer Registry Unit of Lop Buri Cancer Hospital in 2012. All data on cancer patients were collected by passive methods with notification by the staff of Chaiyaphum provincial hospital, 2 private hospitals, and 16 community hospitals which under supervision of Chaiyaphum Provincial Public Health Service. New cancer cases were collected from out and in patient departments, medical record, radiotherapy unit, surgery unit, cytology unit, hematology unit, pathological unit and autopsy service. The data information collected includes demographic details for each cancer patient that consists of registry number, name, residential address, date of birth, age, sex, date of diagnosis, site of cancer, histology of cancer, staging, extension of disease, method of diagnosis, treatment, date of last contact and vital status of cancer patients. Information of deaths from all causes of death collected from Bureau of Health policy and Strategy, Ministry of Public Health. The follow-up of all registered cases was carried out by passive methods with linking database of National Health Security office.

The completed data from were checked manually, and entered into the database file in a personal computer at Cancer Registry Unit of Chaiyaphum Hospital, using TCB (Thai Cancer Based) software for data entry and analysis. Cases of carcinoma in situ were registered but not included in the analysis.

## Summary of results

New cases registered in 2017; 1,397 were males and 1,242 Were females, making 2,639 for both sexes. The age – standardized incidence rate (ASR) of all cancer sites in males was 183.1 Per 100,000 with liver and bile duct cancer ranking first (ASR = 65.1) followed by colon and rectum (ASR = 21.1) and trachea, bronchus and lung (ASR =20.6) The ASR of all cancer sites in females was 149.9 per 100,000 the three leading cancer sites being breast (ASR = 31.7), liver and bile duct (ASR = 23.3) and colon and rectum (ASR = 16.9)

**Figure 4.7.1** Leading cancer in Chaiyaphum (mean annual ASR 2016-2018)

**Table 4.7.1** Chaiyaphum (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.9	3.2	1.4	1.8	4.7	0.8	0.4	C00	0.0	0.0
Tongue	17	0.0	0.0	0.0	0.0	0.0	0.0	5.2	1.4	3.1	6.9	5.1	5.7	6.5	8.5	7.2	9.4	3.5	2.3	C01-02	0.2	0.2
Mouth	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	4.1	5.2	5.1	6.7	5.4	11.4	7.2	9.4	3.5	2.1	C03-06	0.1	0.2
Salivary glands	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.8	3.8	0.0	4.3	5.4	4.7	1.1	0.6	C07-08	0.0	0.1
Tonsil	7	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.4	2.1	3.4	2.5	3.8	2.2	1.4	3.6	0.0	1.4	1.0	C09	0.1	0.1
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.1	0.1	0.1	C10	0.0	0.0
Nasopharynx	16	0.0	0.0	0.0	0.0	2.3	1.6	0.0	2.7	3.1	6.0	2.5	7.6	8.6	11.4	5.4	4.7	3.5	2.3	C11	0.2	0.3
Hypopharynx	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	4.1	1.7	0.8	4.8	1.1	1.4	3.6	1.6	1.4	0.9	C12-13	0.1	0.1
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.1	0.0	C14	0.0	0.0
Oesophagus	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	6.2	6.0	8.4	6.7	8.6	14.2	7.2	14.0	4.5	2.7	C15	0.2	0.3
Stomach	26	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.4	2.1	4.3	5.9	10.5	12.9	15.7	16.1	29.6	5.6	3.2	C16	0.2	0.4
Small intestine	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.6	0.0	1.0	1.1	2.8	1.8	3.1	0.9	0.5	C17	0.0	0.1
Colon	93	0.0	0.0	0.0	0.0	1.1	9.3	12.2	9.5	18.6	19.8	17.7	29.6	42.0	64.1	57.3	74.9	20.0	12.8	C18	0.8	1.4
Rectum	65	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.4	6.2	10.3	18.5	21.0	34.4	45.6	50.2	62.4	14.1	8.0	C19-20	0.5	0.9
Anus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.0	1.1	0.0	3.6	4.7	0.6	0.3	C21	0.0	0.0
Liver and bile duct	522	0.0	0.0	0.0	0.0	1.1	4.7	12.2	38.2	64.1	86.0	118.8	230.7	270.2	356.1	362.0	435.3	112.8	65.1	C22,C24	4.1	7.7
Gallbladder	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.0	0.9	0.8	1.0	7.5	18.5	10.8	21.8	3.2	1.8	C23	0.1	0.2
Pancreas	14	0.0	0.0	0.0	0.0	1.1	1.6	1.7	0.0	1.0	2.6	5.1	5.7	5.4	10.0	9.0	9.4	3.0	1.9	C25	0.1	0.2
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.0	2.2	4.3	3.6	4.7	0.9	0.5	C30-31	0.0	0.1
Larynx	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.6	6.7	5.7	5.4	7.1	9.0	12.5	3.0	1.6	1.6	C32	0.1	0.2
Trachea, Bronchus and lung	172	0.0	0.0	0.0	0.0	1.1	3.1	3.5	8.2	13.4	17.2	26.1	46.7	89.3	126.8	147.0	213.7	37.1	20.6	C33-34	1.0	2.4
Other thoracic organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.9	0.0	1.4	0.0	0.0	0.3	0.2	C37-38	0.0	0.0
Bone	10	0.0	2.2	1.0	2.7	2.3	1.6	0.0	0.0	3.1	0.0	0.8	1.0	4.3	7.1	7.2	4.7	2.2	1.7	C40-C41	0.1	0.2
Melanoma of skin	3	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.9	0.8	0.0	1.1	0.0	5.4	3.1	0.7	0.5	C43	0.0	0.1
Other skin	29	0.0	0.0	0.0	0.9	0.0	0.0	1.7	1.4	1.0	2.6	6.7	6.7	9.7	15.7	21.5	49.9	6.2	3.4	C44	0.2	0.3
Mesothelioma	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C46	0.0	0.0
Connective tissue	5	0.0	0.0	0.0	0.9	0.0	0.0	0.0	1.4	1.0	1.7	0.8	0.0	2.2	2.8	3.6	3.1	1.0	0.7	C47,C49	0.0	0.1
Breast	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.3	2.8	5.4	4.7	0.9	0.5	C50	0.0	0.1
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	3.4	1.7	2.9	3.2	5.7	12.5	4.7	2.0	1.2	C60	0.1	0.2
Prostate	45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	1.7	7.6	21.5	31.3	48.4	84.2	9.7	5.0	0.6	C61	0.2	0.6
Testis	4	0.0	0.0	0.0	0.0	2.3	4.7	0.0	2.7	0.0	0.9	0.8	0.0	1.1	0.0	0.0	3.1	0.9	0.9	C62	0.1	0.1
Kidney	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.1	0.9	3.4	4.8	4.3	7.1	5.4	9.4	2.2	1.3	C64	0.1	0.1
Renal pelvis	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.1	1.4	1.8	1.6	0.4	0.2	0.2	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	2.2	0.0	0.0	0.0	0.2	0.1	0.1	C66	0.0	0.0
Bladder	35	0.0	0.0	0.0	0.0	1.1	1.6	3.5	0.0	0.0	1.7	10.1	9.5	11.8	25.6	19.7	57.7	7.6	4.2	C67	0.2	0.4
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.1	0.0	0.0	C68	0.0	0.0
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.2	0.1	C69	0.0	0.0
Brain, nervous system	18	1.3	2.2	3.9	0.9	0.0	3.1	1.7	6.8	3.1	2.6	3.4	5.7	7.5	10.0	5.4	6.2	3.8	3.1	C70-72	0.2	0.3
Thyroid	10	0.0	0.0	0.0	0.0	1.1	3.1	5.2	2.7	0.0	3.4	5.7	2.2	5.7	0.0	3.1	2.2	1.7	1.7	C73	0.1	0.2
Adrenal gland	1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.1	0.2	0.2	C74	0.0	0.0
Other endocrine	2	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.4	0.5	0.5	C75	0.0	0.0
Hodgkin disease	4	0.0	1.1	0.0	0.0	0.0	1.6	1.7	2.7	0.0	0.8	2.9	1.1	1.4	0.0	0.0	0.8	0.7	0.7	C81	0.1	0.1
Non-Hodgkin lymphoma	57	1.3	2.2	1.9	0.0	1.1	1.6	8.7	6.8	14.5	10.3	18.5	27.6	28.0	24.2	25.1	32.8	12.4	8.2	C82-85,C96	0.6	0.9
Multiple myeloma	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.7	3.4	1.9	4.3	10.0	5.4	6.2	1.9	1.1	1.1	C90	0.1	0.1
Lymphoid leukemia	9	6.4	2.2	3.9	0.9	0.0	0.0	0.0	2.7	1.0	0.9	3.4	1.0	0.0	5.7	0.0	4.7	2.0	2.2	C91	0.1	0.1
Myeloid leukemia	16	2.6	1.1	3.9	0.9	2.3	6.2	5.2	2.7	2.1	4.3	2.5	1.9	1.1	2.8	5.4	15.6	3.4	3.1	C92-94	0.2	0.2
Leukemia unspecified	19	6.4	8.8	1.9	0.9	2.3	4.7	1.7	1.4	2.1	2.6	1.7	1.9	8.6	5.7	10.8	10.9	4.1	4.0	C95	0.2	0.3
Myelodysplastic disease	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.8	3.1	0.3	0.1	D45-D47	0.0	0.0
Other and unspecified	67	0.0	0.0	0.0	0.0	0.0	3.1	5.2	9.5	10.3	10.3	14.3	25.7	39.8	55.6	34.1	43.7	14.5	8.9	O&U	0.6	1.0
<b>All sites</b>	<b>1,397</b>	<b>19.2</b>	<b>19.7</b>	<b>16.4</b>	<b>8.1</b>	<b>19.3</b>	<b>58.9</b>	<b>76.4</b>	<b>117.3</b>	<b>175.8</b>	<b>227.9</b>	<b>307.5</b>	<b>504.3</b>	<b>670.6</b>	<b>930.2</b>	<b>933.7</b>	<b>1,277.7</b>	<b>301.9</b>	<b>183.1</b>	<b>ALL</b>	<b>11.1</b>	<b>20.4</b>

**Table 4.7.2** Chaiyaphum (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No. Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	3.0	7.6	14.1	17.5	2.4	1.0	C00	0.0	0.1
Tongue	13	0.0	0.0	0.0	0.0	1.2	0.0	3.5	0.0	1.8	3.1	3.1	5.2	0.0	5.1	4.7	13.1	2.6	1.5	C01-02	0.1	0.1
Mouth	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.6	1.5	2.6	10.9	7.6	10.9	29.5	4.0	1.8	C03-06	0.1	0.2
Salivary glands	5	0.0	0.0	0.0	0.0	1.2	1.6	0.0	2.5	0.0	2.3	2.3	1.7	3.0	1.3	0.0	0.0	1.1	0.9	C07-08	0.1	0.1
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.9	0.0	0.0	1.6	1.1	0.3	0.1	C09	0.0	0.0
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.6	0.0	0.1	0.1	C10	0.0	0.0
Nasopharynx	7	0.0	0.0	0.0	0.0	0.0	1.6	0.0	2.5	0.9	0.0	5.4	3.5	0.0	2.5	3.1	1.1	1.4	0.9	C11	0.1	0.1
Hypopharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	2.3	0.8	0.9	0.0	0.0	0.0	0.0	0.4	0.3	C12-13	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.1	0.0	C14	0.0	0.0
Oesophagus	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.8	1.5	0.0	1.0	1.3	3.1	2.2	0.7	0.4	C15	0.0	0.0
Stomach	21	0.0	0.0	0.0	0.0	0.0	1.6	1.8	1.3	4.5	0.8	3.1	11.2	10.9	6.3	14.1	13.1	4.3	2.4	C16	0.2	0.3
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.8	0.0	1.0	0.0	4.7	2.2	0.6	0.3	C17	0.0	0.0
Colon	98	0.0	0.0	0.0	0.0	3.5	3.1	8.8	8.9	12.7	16.3	20.7	38.0	47.5	43.1	48.4	64.4	20.1	11.3	C18	0.8	1.3
Rectum	48	0.0	0.0	0.0	0.0	1.6	5.3	1.3	3.6	10.1	10.7	19.9	22.7	25.4	32.8	22.9	9.8	5.5	5.5	C19-20	0.4	0.7
Anus	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.0	0.0	0.0	0.0	0.2	0.1	C21	0.0	0.0
Liver and bile duct	219	0.0	0.0	0.0	0.0	2.3	6.3	10.6	12.7	15.5	15.6	38.3	55.3	95.0	151.0	164.1	180.1	44.8	23.3	C22,C24	1.3	2.8
Gallbladder	15	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	1.8	0.8	1.5	3.5	5.9	10.2	14.1	12.0	3.0	1.5	C23	0.1	0.2
Pancreas	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	3.8	2.6	8.9	6.3	3.1	8.7	2.4	1.2	C25	0.1	0.1
Nose, sinuses etc.	3	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.3	0.0	0.8	0.8	1.7	0.0	2.5	0.0	2.2	0.7	0.5	C30-31	0.0	0.0
Larynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.7	0.0	1.3	0.0	0.0	0.3	0.2	C32	0.0	0.0
Trachea, Bronchus and lung	89	0.0	0.0	0.0	0.0	1.2	3.1	3.5	3.8	15.5	19.5	13.8	22.5	31.7	53.3	65.6	63.3	18.3	9.9	C33-34	0.6	1.2
Other thoracic organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	0.8	0.0	1.0	0.0	0.0	1.1	0.3	0.2	C37-38	0.0	0.0
Bone	7	0.0	0.0	0.0	1.0	1.2	1.6	0.0	0.0	2.7	0.8	2.3	2.6	1.0	3.8	4.7	1.1	1.4	1.0	C40-C41	0.1	0.1
Melanoma of skin	3	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.3	1.8	0.8	0.8	0.0	0.0	1.3	0.0	2.2	0.6	0.5	C43	0.0	0.0
Other skin	35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	1.6	3.8	6.9	16.8	21.6	18.8	42.6	7.1	3.4	C44	0.2	0.4
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	7	0.0	0.0	0.0	0.0	1.2	1.6	1.8	2.5	0.9	2.3	0.8	1.7	2.0	5.1	3.1	1.1	1.4	1.1	C47,C49	0.1	0.1
Breast	236	0.0	0.0	0.0	0.0	3.5	12.6	47.7	47.1	73.6	93.4	92.6	93.3	63.3	67.3	48.4	40.4	47.0	31.7	C50	2.6	3.2
Vulva	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	1.3	3.1	2.2	0.5	0.3	C51	0.0	0.0
Vagina	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.3	1.6	2.2	0.3	0.1	C52	0.0	0.0
Cervix uteri	97	0.0	0.0	0.0	0.0	0.0	6.3	14.1	25.4	15.5	23.3	30.6	25.9	31.7	34.3	23.4	31.7	17.2	11.2	C53	0.9	1.2
Corpus uteri	28	0.0	0.0	0.0	0.0	0.0	1.6	3.5	1.3	2.7	7.0	10.7	13.0	17.8	19.0	3.1	4.4	5.7	3.5	C54	0.3	0.4
Uterus unspecified	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	3.5	1.0	5.1	0.0	1.1	0.8	0.4	C55	0.0	0.1
Ovary	48	0.0	0.0	0.0	0.0	3.5	6.3	10.6	6.4	10.0	11.7	14.5	16.4	13.8	27.9	12.5	19.7	9.8	6.5	C56	0.5	0.7
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.0	0.0	0.0	1.1	0.2	0.1	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Kidney	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	0.0	3.5	4.0	2.5	3.1	2.2	1.1	0.6	C64	0.0	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.3	0.0	1.1	0.2	0.1	C66	0.0	0.0
Bladder	8	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.9	1.6	0.8	2.6	3.0	6.3	1.6	7.6	1.6	0.9	C67	0.1	0.1
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.1	0.0	C68	0.0	0.0
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.3	0.0	1.1	0.2	0.1	C69	0.0	0.0
Brain, nervous system	14	0.0	1.2	2.0	0.0	0.0	0.0	3.5	2.5	3.6	4.7	3.8	3.5	4.0	6.3	1.6	6.6	2.9	2.0	C70-72	0.1	0.2
Thyroid	37	0.0	0.0	0.0	0.0	3.5	15.7	12.4	8.9	5.5	8.6	11.5	13.0	4.9	12.7	12.5	16.4	7.6	5.9	C73	0.4	0.5
Adrenal gland	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.1	0.1	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	1.6	0.0	0.1	0.1	C75	0.0	0.0
Hodgkin disease	2	0.0	0.0	0.0	1.0	0.0	3.1	0.0	0.0	0.0	0.8	0.8	0.9	1.0	0.0	0.0	0.0	0.5	0.5	C81	0.0	0.0
Non-Hodgkin lymphoma	34	0.0	1.2	0.0	1.0	5.8	6.3	7.1	2.5	0.9	4.7	7.7	14.7	9.9	17.8	23.4	14.2	7.0	4.7	C82-85,C96	0.3	0.5
Multiple myeloma	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	3.1	3.8	1.7	4.9	5.1	3.1	4.4	1.8	1.0	C90	0.1	0.1
Lymphoid leukemia	4	2.6	0.0	0.0	1.0	0.0	1.6	0.0	0.0	0.9	0.8	0.8	1.7	0.0	0.0	0.0	2.2	0.7	0.8	C91	0.0	0.0
Myeloid leukemia	12	2.6	0.0	0.0	2.0	1.2	1.6	0.0	1.3	1.8	3.1	2.3	5.2	5.9	2.5	4.7	3.3	2.5	1.9	C92-94	0.1	0.2
Leukemia unspecified	17	5.2	2.3	3.0	0.0	1.2	6.3	1.8	1.3	0.0	2.3	0.0	1.7	3.0	8.9	15.3	3.4	3.0	3.0	C95	0.1	0.2
Myelodysplastic disease	2	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	3.3	0.3	0.2	D45-D47	0.0	0.0
Other and unspecified	44	0.0	0.0	0.0	0.0	0.0	3.1	1.8	1.3	1.8	8.6	7.7	10.4	12.9	31.7	35.9	36.0	9.1	4.8	O&U	0.2	0.6
<b>All sites</b>	<b>1,242</b>	<b>10.4</b>	<b>4.6</b>	<b>5.0</b>	<b>6.1</b>	<b>31.1</b>	<b>88.1</b>	<b>143.1</b>	<b>143.8</b>	<b>185.5</b>	<b>264.6</b>	<b>304.0</b>	<b>395.9</b>	<b>452.0</b>	<b>610.4</b>	<b>600.0</b>	<b>698.7</b>	<b>249.3</b>	<b>149.9</b>	<b>ALL</b>	<b>10.2</b>	<b>16.2</b>

**Table 4.7.3** Mean annual incidence, Chaiyaphum, 2016-2018

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	
			(per 100,000)		(percent)				(per 100,000)		(percent)		
Lip	4	0.3	0.8	0.4	0.0	0.0	12	0.9	2.4	1.0	0.0	0.1	C00
Tongue	17	1.2	3.5	2.3	0.2	0.2	13	1.0	2.6	1.5	0.1	0.1	C01-02
Mouth	16	1.1	3.5	2.1	0.1	0.2	20	1.6	4.0	1.8	0.1	0.2	C03-06
Salivary glands	5	0.4	1.1	0.6	0.0	0.1	5	0.4	1.1	0.9	0.1	0.1	C07-08
Tonsil	7	0.5	1.4	1.0	0.1	0.1	1	0.1	0.3	0.1	0.0	0.0	C09
Other oropharynx	1	0.0	0.1	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C10
Nasopharynx	16	1.1	3.5	2.3	0.2	0.3	7	0.5	1.4	0.9	0.1	0.1	C11
Hypopharynx	6	0.5	1.4	0.9	0.1	0.1	2	0.2	0.4	0.3	0.0	0.0	C12-13
Pharynx unspecified	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C14
Oesophagus	21	1.5	4.5	2.7	0.2	0.3	4	0.3	0.7	0.4	0.0	0.0	C15
Stomach	26	1.9	5.6	3.2	0.2	0.4	21	1.7	4.3	2.4	0.2	0.3	C16
Small intestine	4	0.3	0.9	0.5	0.0	0.1	3	0.2	0.6	0.3	0.0	0.0	C17
Colon	93	6.6	20.0	12.8	0.8	1.4	98	7.9	20.1	11.3	0.8	1.3	C18
Rectum	65	4.7	14.1	8.0	0.5	0.9	48	3.9	9.8	5.5	0.4	0.7	C19-20
Anus	3	0.2	0.6	0.3	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C21
Liver and bile duct	522	37.4	112.8	65.1	4.1	7.7	219	17.7	44.8	23.3	1.3	2.8	C22,C24
Gallbladder	15	1.1	3.2	1.8	0.1	0.2	15	1.2	3.0	1.5	0.1	0.2	C23
Pancreas	14	1.0	3.0	1.9	0.1	0.2	12	0.9	2.4	1.2	0.1	0.1	C25
Nose, sinuses etc.	4	0.3	0.9	0.5	0.0	0.1	3	0.3	0.7	0.5	0.0	0.0	C30-31
Larynx	14	1.0	3.0	1.6	0.1	0.2	1	0.1	0.3	0.2	0.0	0.0	C32
Trachea, Bronchus and lung	172	12.3	37.1	20.6	1.0	2.4	89	7.2	18.3	9.9	0.6	1.2	C33-34
Other thoracic organs	1	0.1	0.3	0.2	0.0	0.0	2	0.1	0.3	0.2	0.0	0.0	C37-38
Bone	10	0.7	2.2	1.7	0.1	0.2	7	0.6	1.4	1.0	0.1	0.1	C40-C41
Melanoma of skin	3	0.2	0.7	0.5	0.0	0.1	3	0.2	0.6	0.5	0.0	0.0	C43
Other skin	29	2.1	6.2	3.4	0.2	0.3	35	2.8	7.1	3.4	0.2	0.4	C44
Mesothelioma	1	0.0	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C45
Kaposi's sarcoma	0	0.0	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	5	0.3	1.0	0.7	0.0	0.1	7	0.6	1.4	1.1	0.1	0.1	C47,C49
Breast	4	0.3	0.9	0.5	0.0	0.1	236	19.0	47.0	31.7	2.6	3.2	C50
Vulva							5	0.4	0.5	0.3	0.0	0.0	C51
Vagina							2	0.1	0.3	0.1	0.0	0.0	C52
Cervix uteri							97	7.8	17.2	11.2	0.9	1.2	C53
Corpus uteri							28	2.3	5.7	3.5	0.3	0.4	C54
Uterus unspecified							4	0.3	0.8	0.4	0.0	0.1	C55
Ovary							48	3.9	9.8	6.5	0.5	0.7	C56
Other female genital organs							1	0.1	0.2	0.1	0.0	0.0	C57
Placenta							0	0.0	0.1	0.1	0.0	0.0	C58
Penis	9	0.7	2.0	1.2	0.1	0.2							C60
Prostate	45	3.2	9.7	5.0	0.2	0.6							C61
Testis	4	0.3	0.9	0.9	0.1	0.1							C62
Kidney	10	0.7	2.2	1.3	0.1	0.1	5	0.4	1.1	0.6	0.0	0.1	C64
Renal pelvis	2	0.1	0.4	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C65
Ureter	1	0.1	0.2	0.1	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C66
Bladder	35	2.5	7.6	4.2	0.2	0.4	8	0.6	1.6	0.9	0.1	0.1	C67
Other urinary organs	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C68
Eye	1	0.1	0.2	0.1	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C69
Brain, nervous system	18	1.3	3.8	3.1	0.2	0.3	14	1.1	2.9	2.0	0.1	0.2	C70-72
Thyroid	10	0.7	2.2	1.7	0.1	0.2	37	3.0	7.6	5.9	0.4	0.5	C73
Adrenal gland	1	0.0	0.1	0.2	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C74
Other endocrine	2	0.1	0.4	0.5	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C75
Hodgkin disease	4	0.3	0.8	0.7	0.1	0.1	2	0.2	0.5	0.5	0.0	0.0	C81
Non-Hodgkin lymphoma	57	4.1	12.4	8.2	0.6	0.9	34	2.8	7.0	4.7	0.3	0.5	C82-85,C96
Multiple myeloma	9	0.6	1.9	1.1	0.1	0.1	9	0.7	1.8	1.0	0.1	0.1	C90
Lymphoid leukemia	9	0.7	2.0	2.2	0.1	0.1	4	0.3	0.7	0.8	0.0	0.0	C91
Myeloid leukemia	16	1.1	3.4	3.1	0.2	0.2	12	1.0	2.5	1.9	0.1	0.2	C92-94
Leukemia unspecified	19	1.4	4.1	4.0	0.2	0.3	17	1.3	3.4	3.0	0.1	0.2	C95
Myelodysplastic disease	1	0.1	0.3	0.1	0.0	0.0	2	0.1	0.3	0.2	0.0	0.0	D45-D47
Other and unspecified	67	4.8	14.5	8.9	0.6	1.0	44	3.6	9.1	4.8	0.2	0.6	O&U
<b>All sites</b>	<b>1,397</b>	<b>100.0</b>	<b>301.9</b>	<b>183.1</b>	<b>11.1</b>	<b>20.4</b>	<b>1,242</b>	<b>100.0</b>	<b>249.3</b>	<b>149.9</b>	<b>10.2</b>	<b>16.2</b>	<b>ALL</b>

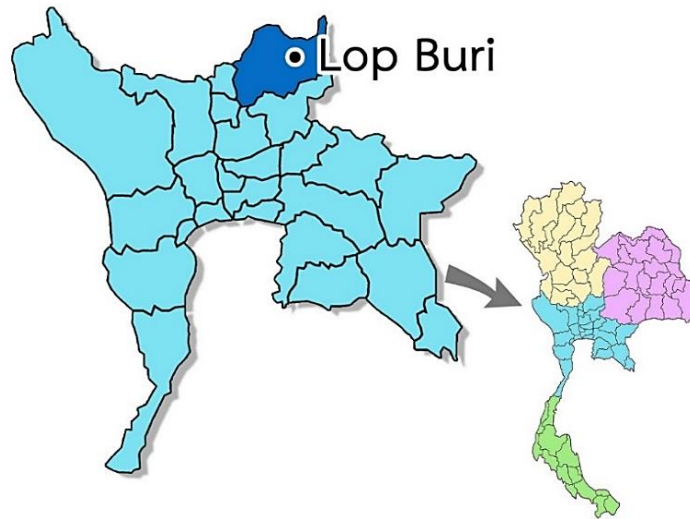
**Table 4.7.4** Percentage of morphologically verified and death certificate only cases, Chaiyaphum

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	124	96.8	3.2	148	95.3	4.7	C00-C08
Oropharynx	23	95.7	4.3	7	85.7	14.3	C09-C10,C14
Nasopharynx	48	100.0	0.0	20	100.0	0.0	C11
Hypopharynx	19	100.0	0.0	6	100.0	0.0	C12-C13
Esophagus	62	93.5	6.5	11	100.0	0.0	C15
Stomach	78	96.2	3.8	63	95.2	4.8	C16
Small intestine	12	100.0	0.0	9	100.0	0.0	C17
Colon and rectum	482	96.7	2.3	442	95.5	3.8	C18-C21
Liver and bile duct	1,566	11.2	3.8	658	10.8	5.3	C22,C24
Gallbladder	45	40.0	53.3	44	56.8	38.6	C23
pancrease	42	73.8	4.8	35	65.7	2.9	C25
Nose,sinuses etc	12	100.0	0.0	10	100.0	0.0	C30-C31
Larynx	41	95.1	4.9	4	100.0	0.0	C32
Trachea, bronchus and lung	515	93.8	5.6	268	94.8	4.1	C33-C34
Other thoracic organs	4	100.0	0.0	5	60.0	20.0	C37-C38
Bone	30	23.3	43.3	21	14.3	38.1	C40-C41
Melanoma of skin	10	100.0	0.0	9	100.0	0.0	C43
Other skin	86	94.2	5.8	104	100.0	0.0	C44
Mesothelioma	2	100.0	0.0	0	0.0	0.0	C45
Kaposi sarcoma	1	100.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	14	78.6	0.0	21	66.7	0.0	C47,C49
Breast	13	100.0	0.0	699	97.3	2.3	C50
Vulva				11	100.0	0.0	C51
Vagina				5	80.0	20.0	C52
Cervix uteri				272	94.5	4.4	C53
Corpus uteri				84	100.0	0.0	C54
Uterus unspecified				12	66.7	25.0	C55
Ovary				144	88.2	6.3	C56
Other female genital organs				3	33.3	66.7	C57
Placenta				1	0.0	0.0	C58
Penis	28	100.0	0.0				C60
Prostate	135	91.9	5.2				C61
Testis	12	66.7	0.0				C62
Other male genital organs	0	0.0	0.0				C63
Kidney	31	87.1	9.7	16	87.5	0.0	C64
Renal pelvis	5	60.0	0.0	0	0.0	0.0	C65
Ureter	3	100.0	0.0	3	100.0	0.0	C66
Bladder	105	98.1	0.0	24	95.8	4.2	C67
Other urinary organs	1	100.0	0.0	1	0.0	0.0	C68
Eye	3	66.7	0.0	3	66.7	0.0	C69
Brain, nervous system	53	35.8	56.6	42	26.2	66.7	C70-C72
Thyroid	30	93.3	0.0	112	99.1	0.9	C73
Adrenal gland	2	50.0	0.0	2	50.0	0.0	C74
Other endocrine	5	40.0	20.0	2	0.0	0.0	C75
Hodgkin disease	11	100.0	0.0	7	100.0	0.0	C81
Non-Hodgkin lymphoma	172	100.0	0.0	103	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	27	100.0	0.0	27	100.0	0.0	C90
Leukemia	132	100.0	0.0	97	100.0	0.0	C91-C95
Myelodysplastic	4	100.0	0.0	5	100.0	0.0	D45-D47
Other and unspecified	201	53.2	36.8	133	53.4	36.1	O&U
<b>All sites</b>	<b>4,189</b>	<b>59.9</b>	<b>6.5</b>	<b>3,693</b>	<b>77.0</b>	<b>6.0</b>	<b>All</b>
<b>All sites without liver</b>	<b>2,623</b>	<b>89.0</b>	<b>8.1</b>	<b>3,035</b>	<b>91.3</b>	<b>6.2</b>	<b>All</b>

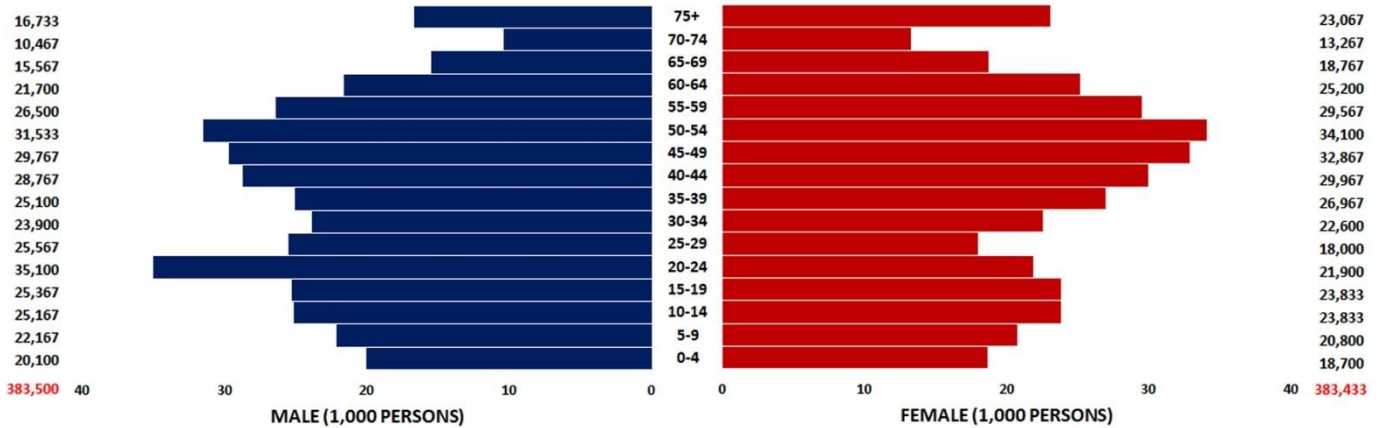
## 4.8 Lop Buri Cancer Registry

### Registration area

Lop Buri is located on the east side of the Chao Phraya River valley, between the Lop Buri river and Pa Sak rivers at latitude 14:48 N and 100:37 E. The land area is 6,200 square kilometers and the Lop Buri registry covers of 11 districts. The estimated population in 2017 was 766,933 with 383,500 males and 383,433 females. Thirty percent of the area is a low plain and the remaining seventy percent is intermixed between plain and hills.



Population pyramid Lop Buri  
estimated population in 2017 (2016 – 2018)



## Cancer care facilities

In Lopburi province health care service is provided in 16 community hospitals. 1 Lopburi provincial hospital (King Narai Hospital), 10 community hospitals, 2 private hospitals, 2 military hospital (Ananthamahidol (Army) Hospital And Air Force hospital) and 1 cancer hospital (Lopburi Cancer Hospital). For cancer care, these hospitals have cancer diagnostic services (including CT scan, clinical consultation and radiological, pathological investigations). Oncologic surgery services, chemotherapy and targeted therapy are available in Lopburi cancer hospital and King Narai hospital. Radiation therapy was available only in Lopburi cancer hospital. There were one simulators machine, one CT simulator, two dual energy LINAC with multi leaf collimator. One cobalt-60 teletherapy machines, two treatment planning system for 3D conformal radiation therapy and IMRT and one High Dose Rate machine for brachytherapy are provided in Lopburi Cancer hospital. All hospitals in the province provide palliative care. However, some patients are referred to National Cancer Institute, Bangkok.

## Registry procedures

The registry unit is located within Lopburi Cancer Hospital. The Lopburi registry was established in 2002 by Dr.Chaiyaporn kanka. Director of Lopburi Cancer Hospital. with the backup data of cancer cases in Lopburi since 1997 which collected

All data on cancer patients were collected by both active and passive methods with notification by the staff of all hospital in Lopburi. Including notified some information from Cancer Registry Unit of National Cancer Institute, New cancer cases were collected from out and in patient departments, medical record, radiotherapy unit, surgery unit, cytology unit, hematology unit and pathological unit. The follow-up of all registered cases were carried out by passive methods with linking database of National Health Security office.

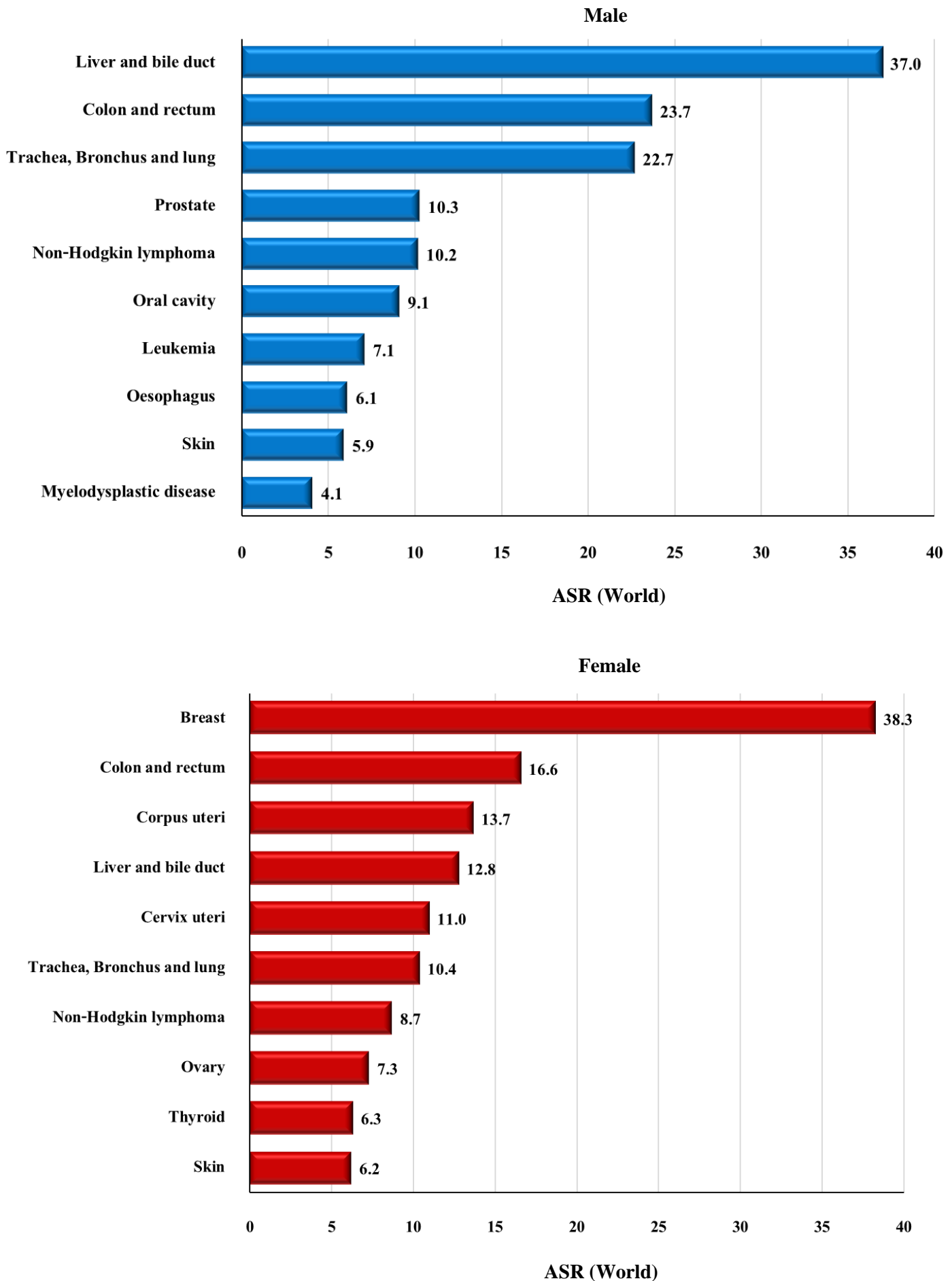
The primary site and histology were coded according to ICD-O third edition Second primary cancer was also registered; a new registration number was registration number war given for each new primary cancer. All cancer death certificates are matched with the incidence case records of the registry. Individual certified as having died of cancer are registered as Death certificate only (DCO) cases if on other information about the individual can be traced from the other sources.

The completed data from were checked manually, and entered into the database file in a personal computer at Cancer Registry Unit of Lopburi Cancer Hospital, using Cancer5 software for data entry and analysis. Cases of carcinoma in situ were registered but not included in the analysis.

## Summary of results

New cases registered in 2017; 1,034 were males and 1,030 were females, making 2,064 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 180.7 per 100,000 with liver and bile duct cancer ranking first (ASR = 37.0) followed by colon and rectum (ASR = 23.7) and trachea, bronchus and lung (ASR = 22.7). The ASR of all cancer sites in females was 168.3 per 100,000, the three leading cancer sites being breast (ASR = 38.3) followed by colon and rectum (ASR = 16.6) and corpus uteri (ASR = 13.7)

**Figure 4.8.1** Leading cancer in Lop Buri (mean annual ASR 2016-2018)



**Table 4.8.1** Lop Buri (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	2	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.5	4.3	3.2	0.0	0.6	0.5	C00	0.0	0.1
Tongue	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	11.2	12.7	12.6	13.8	12.8	3.2	12.0	4.8	3.1	C01-02	0.3	0.3
Mouth	25	0.0	0.0	0.0	0.0	0.9	0.0	1.4	5.3	2.3	14.6	13.7	15.1	16.9	10.7	19.1	15.9	6.6	4.5	C03-06	0.4	0.5
Salivary glands	5	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.3	1.2	2.2	1.1	2.5	3.1	4.3	3.2	6.0	1.4	1.0	C07-08	0.1	0.1
Tonsil	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.3	3.4	5.3	3.8	6.1	4.3	3.2	4.0	2.0	1.4	C09	0.1	0.1
Other oropharynx	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.2	6.3	4.6	4.3	6.4	2.0	1.7	1.1	1.1	C10	0.1	0.1
Nasopharynx	11	0.0	0.0	0.0	0.0	0.9	1.3	1.4	0.0	2.3	3.4	7.4	6.3	7.7	4.3	6.4	6.0	2.8	1.9	C11	0.2	0.2
Hypopharynx	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.3	4.5	14.8	13.8	4.6	17.1	12.7	10.0	4.7	3.1	C12-13	0.2	0.4
Pharynx unspecified	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	2.5	4.6	0.0	0.0	4.0	0.8	0.5	0.5	C14	0.0	0.0
Oesophagus	36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	12.3	21.1	22.6	23.0	27.8	44.6	21.9	9.3	6.1	C15	0.4	0.8
Stomach	19	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.3	5.8	3.4	7.4	8.8	12.3	6.4	35.0	19.9	4.9	3.3	C16	0.2	0.4
Small intestine	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	2.1	0.0	4.6	4.3	3.2	4.0	1.0	0.6	C17	0.0	0.1
Colon	78	0.0	0.0	0.0	0.0	1.9	6.5	5.6	2.7	4.6	9.0	26.4	37.7	53.8	79.2	111.5	95.6	20.4	13.5	C18	0.7	1.7
Rectum	58	0.0	0.0	0.0	0.0	0.0	0.0	1.4	4.0	5.8	11.2	16.9	27.7	36.9	70.7	82.8	69.7	15.2	9.9	C19-20	0.5	1.3
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	0.0	3.1	0.0	0.0	3.2	2.0	0.5	0.3	C21	0.0	0.0
Liver and bile duct	214	0.0	0.0	0.0	0.0	0.9	2.6	7.0	17.3	40.6	44.8	77.2	132.1	195.1	175.6	210.2	185.3	55.8	37.0	C22,C24	2.6	4.5
Gallbladder	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.2	1.1	0.0	2.5	4.6	6.4	12.7	8.0	1.7	1.1	C23	0.1	0.1
Pancreas	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.2	4.2	7.5	12.3	21.4	12.7	23.9	4.2	2.7	C25	0.1	0.3
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	3.4	2.1	2.5	1.5	0.0	0.0	8.0	1.1	0.7	C30-31	0.1	0.1
Larynx	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	6.7	8.5	13.8	10.8	15.0	25.5	15.9	5.0	3.2	C32	0.2	0.4
Trachea, Bronchus and lung	139	0.0	0.0	0.0	0.0	0.9	5.2	2.8	5.3	5.8	29.1	40.2	57.9	82.9	130.6	152.9	249.0	36.0	22.7	C33-34	1.2	2.6
Other thoracic organs	4	0.0	0.0	0.0	1.3	0.0	1.3	0.0	1.3	0.0	0.0	2.1	1.3	0.0	2.1	6.4	8.0	1.1	0.8	C37-38	0.0	0.1
Bone	10	0.0	3.0	0.0	2.6	0.9	2.6	1.4	0.0	2.3	3.4	0.0	5.0	6.1	6.4	3.2	10.0	2.6	2.1	C40-C41	0.1	0.2
Melanoma of skin	6	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	2.1	3.8	3.1	6.4	3.2	12.0	1.7	1.0	C43	0.1	0.1
Other skin	30	0.0	0.0	0.0	1.3	0.0	0.0	2.8	1.3	2.3	6.7	5.3	15.1	10.8	17.1	51.0	57.8	7.7	4.9	C44	0.2	0.6
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	1	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C46	0.0	0.0
Connective tissue	10	0.0	0.0	1.3	0.0	0.9	0.0	2.8	0.0	0.0	6.7	6.3	3.8	3.1	4.3	3.2	10.0	2.5	1.7	C47,C49	0.1	0.2
Breast	4	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	1.2	1.1	1.1	1.3	4.6	0.0	0.0	6.0	1.0	0.7	C50	0.1	0.1
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	4	0.0	0.0	0.0	0.0	3.8	1.3	0.0	0.0	0.0	1.1	1.1	0.0	1.5	4.3	3.2	2.0	1.0	0.8	C60	0.0	0.1
Prostate	68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	8.5	20.1	39.9	55.7	92.4	195.2	17.7	10.3	C61	0.3	1.1
Testis	4	0.0	0.0	0.0	0.0	2.8	1.3	4.2	1.3	1.2	0.0	0.0	0.0	0.0	2.1	0.0	2.0	1.0	0.8	C62	0.1	0.1
Other male genital organs	1	0.0	0.0	0.0	0.0	0.9	0.0	1.4	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.3	0.2	C63	0.0	0.0
Kidney	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.1	3.2	7.5	9.2	8.6	6.4	12.0	2.5	1.6	C64	0.1	0.2
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.1	0.0	C65	0.0	0.0
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C66	0.0	0.0
Bladder	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.2	4.2	6.3	12.3	27.8	35.0	61.8	6.5	3.9	C67	0.1	0.4
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.5	2.1	0.0	0.0	0.3	0.2	C69	0.0	0.0
Brain, nervous system	15	0.0	0.0	0.0	0.0	1.9	0.0	4.2	4.0	1.2	3.4	5.3	13.8	12.3	4.3	3.2	13.9	4.0	2.7	C70-72	0.2	0.3
Thyroid	9	0.0	0.0	0.0	0.0	1.9	0.0	5.6	1.3	3.5	2.2	4.2	0.0	4.6	10.7	9.6	2.0	2.4	1.9	C73	0.1	0.2
Adrenal gland	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.2	0.2	C75	0.0	0.0
Hodgkin disease	3	1.7	0.0	0.0	1.3	0.9	0.0	0.0	1.3	1.2	0.0	1.1	0.0	3.1	2.1	0.0	0.0	0.8	0.8	C81	0.1	0.1
Non-Hodgkin lymphoma	55	1.7	3.0	4.0	2.6	4.7	7.8	2.8	9.3	5.8	11.2	21.1	20.1	29.2	38.5	38.2	71.7	14.3	10.2	C82-85,C96	0.6	1.0
Multiple myeloma	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	3.2	5.0	4.6	4.3	0.0	6.0	1.4	0.9	C90	0.1	0.1
Lymphoid leukemia	4	3.3	0.0	0.0	2.6	0.9	0.0	0.0	0.0	0.0	0.0	2.1	1.3	3.1	2.1	0.0	4.0	1.1	1.1	C91	0.1	0.1
Myeloid leukemia	11	5.0	0.0	0.0	0.0	0.0	0.0	2.8	1.3	2.3	1.1	7.4	1.3	4.6	8.6	12.7	8.0	2.8	2.3	C92-94	0.1	0.2
Leukemia unspecified	12	11.6	7.5	1.3	1.3	0.9	0.0	1.4	1.3	0.0	1.1	1.1	2.5	6.1	2.1	9.6	15.9	3.2	3.7	C95	0.2	0.2
Myelodysplastic disease	18	5.0	3.0	1.3	3.9	1.9	0.0	2.8	4.0	2.3	3.4	3.2	7.5	3.1	17.1	28.7	10.0	4.7	4.1	D45-D47	0.2	0.4
Other and unspecified	31	0.0	0.0	0.0	0.0	2.8	1.3	0.0	4.0	3.5	7.8	7.4	22.6	6.1	30.0	31.8	43.8	8.0	5.2	O&U	0.3	0.6
<b>All sites</b>	<b>1,034</b>	<b>28.2</b>	<b>16.5</b>	<b>7.9</b>	<b>18.4</b>	<b>33.2</b>	<b>33.9</b>	<b>60.0</b>	<b>77.0</b>	<b>117.0</b>	<b>222.8</b>	<b>358.4</b>	<b>514.5</b>	<b>674.3</b>	<b>856.5</b>	<b>1,089.2</b>	<b>1,316.7</b>	<b>269.4</b>	<b>180.7</b>	<b>ALL</b>	<b>10.8</b>	<b>20.5</b>

**Table 4.8.2** Lop Buri (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	4	0.0	0.0	0.0	0.0	1.5	0.0	1.5	1.2	0.0	0.0	0.0	0.0	1.3	1.8	2.5	10.1	1.1	0.6	C00	0.0	0.0
Tongue	9	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	1.1	3.0	4.9	4.5	5.3	7.1	0.0	5.8	2.3	1.5	C01-02	0.1	0.1
Mouth	16	0.0	0.0	0.0	0.0	1.5	1.9	5.9	1.2	3.3	2.0	3.9	4.5	9.3	7.1	17.6	14.5	4.2	2.6	C03-06	0.2	0.3
Salivary glands	6	0.0	0.0	0.0	1.4	1.5	1.9	0.0	1.2	1.1	3.0	1.0	1.1	5.3	1.8	5.0	0.0	1.5	1.2	C07-08	0.1	0.1
Tonsil	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.3	0.0	5.0	0.0	0.4	0.2	C09	0.0	0.0
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.2	0.1	C10	0.0	0.0
Nasopharynx	5	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	1.1	1.0	2.0	3.4	1.3	3.6	2.5	5.8	1.4	0.8	C11	0.1	0.1
Hypopharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.9	0.0	1.3	0.0	0.0	1.4	0.5	0.3	C12-13	0.0	0.0
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.4	0.2	0.1	C14	0.0	0.0
Oesophagus	5	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.0	2.0	3.4	5.3	3.6	0.0	1.4	1.2	0.7	C15	0.1	0.1
Stomach	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.2	3.0	5.9	6.8	9.3	14.2	20.1	20.2	4.8	2.6	C16	0.1	0.3
Small intestine	2	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	2.6	1.8	0.0	0.0	0.4	0.3	C17	0.0	0.0
Colon	71	0.0	0.0	0.0	0.0	4.6	0.0	10.3	7.4	4.4	11.2	23.5	40.6	31.7	28.4	82.9	72.3	18.6	10.4	C18	0.7	1.2
Rectum	37	0.0	0.0	0.0	0.0	1.5	0.0	4.4	3.7	10.0	6.1	10.8	15.8	18.5	39.1	30.2	24.6	9.7	5.8	C19-20	0.4	0.7
Anus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.1	0.0	1.0	0.0	2.6	1.8	2.5	1.4	0.7	0.4	C21	0.0	0.1
Liver and bile duct	89	0.0	0.0	0.0	0.0	1.5	3.7	4.4	2.5	2.2	15.2	23.5	48.5	47.6	76.4	98.0	83.8	23.3	12.8	C22,C24	0.7	1.6
Gallbladder	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.9	1.1	2.6	3.6	2.5	4.3	1.2	0.7	C23	0.0	0.1
Pancreas	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.0	1.0	5.6	6.6	7.1	5.0	11.6	2.4	1.3	C25	0.1	0.1
Nose, sinuses etc.	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	1.1	0.0	1.8	5.0	2.9	0.8	0.4	C30-31	0.0	0.1
Larynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	3.4	0.0	3.6	0.0	4.3	0.8	0.4	C32	0.0	0.0
Trachea, Bronchus and lung	73	0.0	0.0	0.0	0.0	0.0	1.9	4.4	4.9	4.4	9.1	17.6	29.3	59.5	58.6	55.3	76.6	19.0	10.4	C33-34	0.7	1.2
Other thoracic organs	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.1	1.0	2.0	3.4	1.3	0.0	2.5	2.9	1.0	0.6	C37-38	0.1	0.1
Bone	8	0.0	1.6	0.0	1.4	4.6	5.6	1.5	0.0	1.1	2.0	2.0	5.6	1.3	0.0	7.5	0.0	2.0	1.9	C40-C41	0.1	0.2
Melanoma of skin	4	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.2	0.0	0.0	1.0	1.1	5.3	0.0	5.0	4.3	1.1	0.7	C43	0.1	0.1
Other skin	41	0.0	0.0	0.0	2.8	0.0	1.9	1.5	1.2	3.3	6.1	5.9	10.1	13.2	24.9	45.2	76.6	10.8	5.5	C44	0.2	0.6
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.1	0.0	C45	0.0	0.0
Kaposi's sarcoma	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.4	0.2	0.1	C46	0.0	0.0
Connective tissue	8	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.2	3.3	2.0	2.9	3.4	4.0	5.3	2.5	5.8	2.1	1.3	C47,C49	0.1	0.1
Breast	227	0.0	0.0	0.0	0.0	6.1	18.5	25.1	51.9	71.2	115.6	124.1	127.4	95.2	99.5	77.9	43.4	59.1	38.3	C50	3.2	4.1
Vulva	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.1	1.0	0.0	1.1	0.0	0.0	2.5	0.0	0.4	0.3	C51	0.0	0.0
Vagina	2	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.1	0.0	1.0	0.0	0.0	1.8	2.5	0.0	0.4	0.4	C52	0.0	0.0
Cervix uteri	65	0.0	0.0	0.0	0.0	3.0	1.9	13.3	18.5	23.4	26.4	33.2	28.2	26.5	28.4	32.7	20.2	17.0	11.0	C53	0.9	1.2
Corpus uteri	81	0.0	0.0	0.0	0.0	6.1	11.1	8.8	17.3	12.2	30.4	45.0	53.0	41.0	42.6	27.6	18.8	21.1	13.7	C54	1.1	1.5
Uterus unspecified	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.1	2.0	1.0	1.1	1.3	1.8	0.0	1.4	0.8	0.5	C55	0.0	0.0
Ovary	42	0.0	0.0	0.0	1.4	7.6	1.9	5.9	9.9	11.1	10.1	20.5	24.8	21.2	16.0	30.2	10.1	11.0	7.3	C56	0.6	0.8
Other female genital organs	2	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.0	0.0	1.1	0.0	1.8	0.0	1.4	0.4	0.3	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	6	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.2	1.1	1.0	0.0	2.3	4.0	1.8	7.5	5.8	1.5	0.9	C64	0.1	0.1
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C65	0.0	0.0
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C66	0.0	0.0
Bladder	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.0	1.1	5.3	7.1	5.0	18.8	2.5	1.2	C67	0.1	0.1
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.1	0.1	C68	0.0	0.0
Eye	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C69	0.0	0.0
Brain, nervous system	13	0.0	0.0	1.4	0.0	0.0	0.0	2.9	3.7	2.2	9.1	3.9	2.3	6.6	5.3	10.1	7.2	3.5	2.3	C70-72	0.2	0.2
Thyroid	31	0.0	0.0	0.0	2.8	3.0	9.3	17.7	9.9	16.7	12.2	7.8	5.6	9.3	12.4	2.5	11.6	8.0	6.3	C73	0.5	0.5
Adrenal gland	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	C74	0.0	0.0
Other endocrine	2	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.0	0.0	0.0	1.3	1.8	0.0	1.4	0.4	0.3	C75	0.0	0.0
Hodgkin disease	1	0.0	0.0	0.0	2.8	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	C81	0.0	0.0
Non-Hodgkin lymphoma	46	0.0	1.6	8.4	8.4	10.7	7.4	4.4	9.9	4.4	8.1	11.7	13.5	15.9	32.0	22.6	41.9	12.1	8.7	C82-85,C96	0.5	0.8
Multiple myeloma	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.3	1.3	3.6	5.0	7.2	1.1	0.5	C90	0.0	0.1
Lymphoid leukemia	4	1.8	3.2	0.0	0.0	1.5	0.0	0.0	1.2	0.0	1.0	0.0	1.1	2.6	1.8	0.0	1.4	1.0	1.0	C91	0.1	0.1
Myeloid leukemia	6	1.8	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	2.3	1.3	0.0	20.1	4.3	1.7	1.1	C92-94	0.0	0.1
Leukemia unspecified	12	5.3	3.2	2.8	1.4	4.6	1.9	0.0	0.0	1.1	4.1	1.0	1.1	4.0	3.6	2.5	15.9	3.1	2.9	C95	0.2	0.2
Myelodysplastic disease	20	5.3	1.6	1.4	1.4	1.5	3.7	1.5	3.7	0.0	1.0	2.9	4.5	6.6	8.9	20.1	30.3	5.2	3.7	D45-D47	0.2	0.3
Other and unspecified	20	0.0	0.0	0.0	0.0	1.5	1.9	1.5	3.7	2.2	3.0	2.0	4.5	6.6	14.2	30.2	24.6	5.1	3.0	O&U	0.1	0.4
<b>All sites</b>	<b>1,030</b>	<b>14.3</b>	<b>11.2</b>	<b>16.8</b>	<b>26.6</b>	<b>65.4</b>	<b>85.2</b>	<b>118.0</b>	<b>164.4</b>	<b>191.3</b>	<b>305.3</b>	<b>379.3</b>	<b>472.4</b>	<b>493.4</b>	<b>575.5</b>	<b>696.0</b>	<b>700.9</b>	<b>268.4</b>	<b>168.3</b>	<b>ALL</b>	<b>11.7</b>	<b>18.1</b>

**Table 4.8.3** Mean annual incidence, Lop Buri, 2016-2018

Site	Male							Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74		
													(per 100,000)	
Lip	2	0.2	0.6	0.5	0.0	0.1	4	0.4	1.1	0.6	0.0	0.0	C00	
Tongue	18	1.8	4.8	3.1	0.3	0.3	9	0.9	2.3	1.5	0.1	0.1	C01-02	
Mouth	25	2.5	6.6	4.5	0.4	0.5	16	1.6	4.2	2.6	0.2	0.3	C03-06	
Salivary glands	5	0.5	1.4	1.0	0.1	0.1	6	0.6	1.5	1.2	0.1	0.1	C07-08	
Tonsil	8	0.7	2.0	1.4	0.1	0.1	2	0.2	0.4	0.2	0.0	0.0	C09	
Other oropharynx	6	0.6	1.7	1.1	0.1	0.1	1	0.1	0.2	0.1	0.0	0.0	C10	
Nasopharynx	11	1.0	2.8	1.9	0.2	0.2	5	0.5	1.4	0.8	0.1	0.1	C11	
Hypopharynx	18	1.7	4.7	3.1	0.2	0.4	2	0.2	0.5	0.3	0.0	0.0	C12-13	
Pharynx unspecified	3	0.3	0.8	0.5	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C14	
Oesophagus	36	3.4	9.3	6.1	0.4	0.8	5	0.5	1.2	0.7	0.1	0.1	C15	
Stomach	19	1.8	4.9	3.3	0.2	0.4	18	1.8	4.8	2.6	0.1	0.3	C16	
Small intestine	4	0.4	1.0	0.6	0.0	0.1	2	0.2	0.4	0.3	0.0	0.0	C17	
Colon	78	7.6	20.4	13.5	0.7	1.7	71	6.9	18.6	10.4	0.7	1.2	C18	
Rectum	58	5.6	15.2	9.9	0.5	1.3	37	3.6	9.7	5.8	0.4	0.7	C19-20	
Anus	2	0.2	0.5	0.3	0.0	0.0	3	0.3	0.7	0.4	0.0	0.1	C21	
Liver and bile duct	214	20.7	55.8	37.0	2.6	4.5	89	8.7	23.3	12.8	0.7	1.6	C22,C24	
Gallbladder	6	0.6	1.7	1.1	0.1	0.1	5	0.5	1.2	0.7	0.0	0.1	C23	
Pancreas	16	1.5	4.2	2.7	0.1	0.3	9	0.9	2.4	1.3	0.1	0.1	C25	
Nose, sinuses etc.	4	0.4	1.1	0.7	0.1	0.1	3	0.3	0.8	0.4	0.0	0.1	C30-31	
Larynx	19	1.8	5.0	3.2	0.2	0.4	3	0.3	0.8	0.4	0.0	0.0	C32	
Trachea, Bronchus and lung	139	13.4	36.0	22.7	1.2	2.6	73	7.1	19.0	10.4	0.7	1.2	C33-34	
Other thoracic organs	4	0.4	1.1	0.8	0.0	0.1	4	0.4	1.0	0.6	0.1	0.1	C37-38	
Bone	10	1.0	2.6	2.1	0.1	0.2	8	0.7	2.0	1.9	0.1	0.2	C40-C41	
Melanoma of skin	6	0.6	1.7	1.0	0.1	0.1	4	0.4	1.1	0.7	0.1	0.1	C43	
Other skin	30	2.9	7.7	4.9	0.2	0.6	41	4.0	10.8	5.5	0.2	0.6	C44	
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C45	
Kaposi's sarcoma	1	0.1	0.2	0.2	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C46	
Connective tissue	10	0.9	2.5	1.7	0.1	0.2	8	0.8	2.1	1.3	0.1	0.1	C47,C49	
Breast	4	0.4	1.0	0.7	0.1	0.1	227	22.0	59.1	38.3	3.2	4.1	C50	
Vulva							2	0.2	0.4	0.3	0.0	0.0	C51	
Vagina							2	0.2	0.4	0.4	0.0	0.0	C52	
Cervix uteri							65	6.3	17.0	11.0	0.9	1.2	C53	
Corpus uteri							81	7.9	21.1	13.7	1.1	1.5	C54	
Uterus unspecified							3	0.3	0.8	0.5	0.0	0.0	C55	
Ovary							42	4.1	11.0	7.3	0.6	0.8	C56	
Other female genital organs							2	0.2	0.4	0.3	0.0	0.0	C57	
Placenta							0	0.0	0.1	0.1	0.0	0.0	C58	
Penis	4	0.4	1.0	0.8	0.0	0.1							C60	
Prostate	68	6.6	17.7	10.3	0.3	1.1							C61	
Testis	4	0.4	1.0	0.8	0.1	0.1							C62	
Other male genital organs	1	0.1	0.3	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C63	
Kidney	10	0.9	2.5	1.6	0.1	0.2	6	0.6	1.5	0.9	0.1	0.1	C64	
Renal pelvis	0	0.0	0.1	0.0	0.0	0.0	1	0.1	0.0	0.0	0.0	0.0	C65	
Ureter	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0	C66	
Bladder	25	2.4	6.5	3.9	0.1	0.4	10	0.9	2.5	1.2	0.1	0.1	C67	
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0	C68	
Eye	1	0.1	0.3	0.2	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0	C69	
Brain, nervous system	15	1.5	4.0	2.7	0.2	0.3	13	1.3	3.5	2.3	0.2	0.2	C70-72	
Thyroid	9	0.9	2.4	1.9	0.1	0.2	31	3.0	8.0	6.3	0.5	0.5	C73	
Adrenal gland	0	0.0	0.1	0.1	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C74	
Other endocrine	1	0.1	0.2	0.2	0.0	0.0	2	0.2	0.4	0.3	0.0	0.0	C75	
Hodgkin disease	3	0.3	0.8	0.8	0.1	0.1	1	0.1	0.3	0.4	0.0	0.0	C81	
Non-Hodgkin lymphoma	55	5.3	14.3	10.2	0.6	1.0	46	4.5	12.1	8.7	0.5	0.8	C82-85,C96	
Multiple myeloma	5	0.5	1.4	0.9	0.1	0.1	4	0.4	1.1	0.5	0.0	0.1	C90	
Lymphoid leukemia	4	0.4	1.1	1.1	0.1	0.1	4	0.4	1.0	1.0	0.1	0.1	C91	
Myeloid leukemia	11	1.0	2.8	2.3	0.1	0.2	6	0.6	1.7	1.1	0.0	0.1	C92-94	
Leukemia unspecified	12	1.2	3.2	3.7	0.2	0.2	12	1.2	3.1	2.9	0.2	0.2	C95	
Myelodysplastic disease	18	1.7	4.7	4.1	0.2	0.4	20	1.9	5.2	3.7	0.2	0.3	D45-D47	
Other and unspecified	31	3.0	8.0	5.2	0.3	0.6	20	1.9	5.1	3.0	0.1	0.4	O&U	
<b>All sites</b>	<b>1,034</b>	<b>100.0</b>	<b>269.4</b>	<b>180.7</b>	<b>10.8</b>	<b>20.5</b>	<b>1,030</b>	<b>100.0</b>	<b>268.4</b>	<b>168.3</b>	<b>11.7</b>	<b>18.1</b>	<b>ALL</b>	

**Table 4.8.4** Percentage of morphologically verified and death certificate only cases, Lop Buri

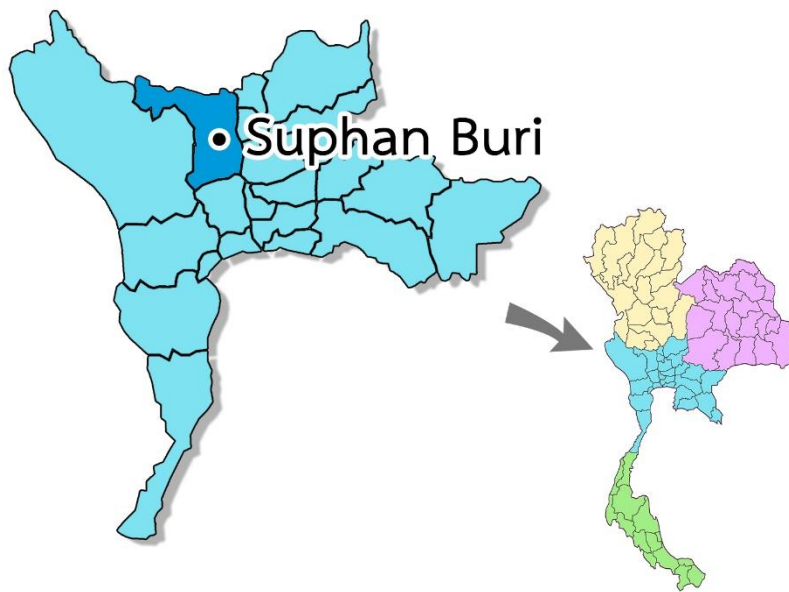
Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	154	97.4	0.6	105	89.5	0.0	C00-C08
Oropharynx	51	100.0	0.0	9	88.9	0.0	C09-C10,C14
Nasopharynx	32	100.0	0.0	16	87.5	0.0	C11
Hypopharynx	54	98.1	0.0	6	100.0	0.0	C12-C13
Esophagus	107	92.5	2.8	14	92.9	0.0	C15
Stomach	56	83.9	0.0	55	87.3	0.0	C16
Small intestine	11	81.8	9.1	5	100.0	0.0	C17
Colon and rectum	416	92.3	1.7	334	91.3	0.6	C18-C21
Liver and bile duct	642	17.9	5.8	268	21.6	3.7	C22,C24
Gallbladder	19	52.6	0.0	14	64.3	0.0	C23
pancrease	48	52.1	8.3	28	71.4	3.6	C25
Nose,sinuses etc	13	92.3	0.0	9	77.8	0.0	C30-C31
Larynx	57	94.7	1.8	9	100.0	0.0	C32
Trachea, bronchus and lung	415	89.6	2.2	218	91.7	0.5	C33-C34
Other thoracic organs	13	38.5	0.0	12	41.7	0.0	C37-C38
Bone	30	20.0	3.3	23	26.1	0.0	C40-C41
Melanoma of skin	19	100.0	0.0	13	100.0	0.0	C43
Other skin	89	93.3	0.0	124	96.0	0.0	C44
Mesothelioma	0	0.0	0.0	1	100.0	0.0	C45
Kaposi sarcoma	2	100.0	0.0	2	100.0	0.0	C46
Connective and soft tissue	29	93.1	0.0	24	83.3	0.0	C47,C49
Breast	12	91.7	0.0	680	96.6	0.6	C50
Vulva				5	100.0	0.0	C51
Vagina				5	60.0	0.0	C52
Cervix uteri				196	100.0	0.0	C53
Corpus uteri				243	84.0	0.0	C54
Uterus unspecified				9	55.6	11.1	C55
Ovary				126	76.2	0.0	C56
Other female genital organs				5	60.0	0.0	C57
Placenta				1	100.0	0.0	C58
Penis	12	91.7	0.0				C60
Prostate	204	94.1	0.5				C61
Testis	11	72.7	0.0				C62
Other male genital organs	3	33.3	0.0				C63
Kidney	29	89.7	0.0	17	76.5	0.0	C64
Renal pelvis	1	100.0	0.0	1	100.0	0.0	C65
Ureter	0	0.0	0.0	1	100.0	0.0	C66
Bladder	75	94.7	2.7	29	93.1	0.0	C67
Other urinary organs	0	0.0	0.0	1	100.0	0.0	C68
Eye	3	33.3	0.0	1	0.0	0.0	C69
Brain, nervous system	46	43.5	17.4	40	47.5	2.5	C70-C72
Thyroid	28	100.0	0.0	92	94.6	0.0	C73
Adrenal gland	1	100.0	0.0	2	50.0	0.0	C74
Other endocrine	2	0.0	0.0	5	40.0	0.0	C75
Hodgkin disease	9	100.0	0.0	3	100.0	0.0	C81
Non-Hodgkin lymphoma	164	100.0	0.0	139	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	16	100.0	0.0	13	100.0	0.0	C90
Leukemia	82	100.0	0.0	66	100.0	0.0	C91-C95
Myelodysplastic	54	100.0	0.0	60	100.0	0.0	D45-D47
Other and unspecified	92	62.0	7.6	59	74.6	8.5	O&U
<b>All sites</b>	<b>3,101</b>	<b>74.4</b>	<b>2.6</b>	<b>3,088</b>	<b>84.5</b>	<b>0.8</b>	<b>All</b>
<b>All sites without liver</b>	<b>2,459</b>	<b>89.2</b>	<b>1.8</b>	<b>2,820</b>	<b>90.5</b>	<b>0.5</b>	<b>All</b>

## 4.9 Suphan Buri Cancer Registry

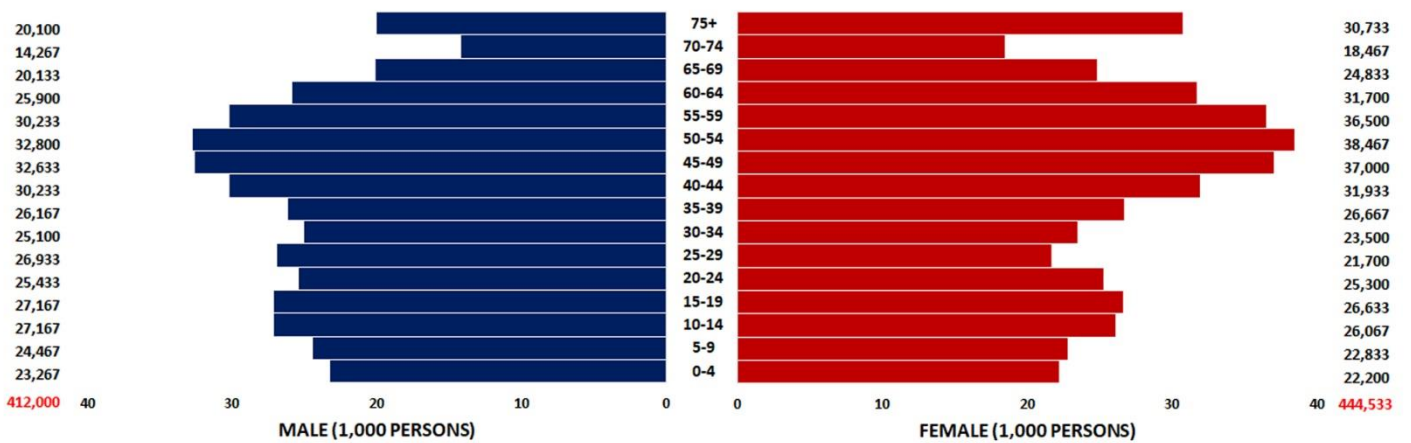
### Registration area

Suphan Buri Province located in the central region of Thailand is one of 76 provinces with the first-level administrative divisions. Neighboring provinces are Uthai Thani, ChaiNat, Sing Buri, Ang Thong, PhraNakhon Si Ayutthaya, Nakhon Pathom and Kanchanaburi. The estimated population in 2017 was 856,533 with 412,000 males and 444,533 females

The terrain of the province is mostly river lower plains, with small mountain ranges in the north and the west of the province. The total forest area is 631 km<sup>2</sup> (244 mi<sup>2</sup>) or 11.7 percent of provincial area.



Population pyramid Suphan Buri  
estimated population in 2017 (2016 – 2018)



### **Cancer care facilities**

There are 10 hospitals in Suphan Buri province are 10 Hospitals, compose of 2 provincial hospitals, 8 community hospitals, 3 private hospitals. Cancer diagnostic services including radiological (X-ray, ultrasound, CT scan and mammography), pathological investigations and cancer surgery services are available Suphan Buri provincial hospitals. Cancer diagnostic and cancer chemotherapy are provided in Suphan Buri provincial. Most of the cancer patients are diagnosed and treated in the province. Only few patients are referred to Lop Buri Cancer Hospital, National Cancer Institute, Ratchaburi Hospital and Bangkok for cancer diagnosis or cancer treatment. All hospital in the province provide palliative care.

### **Registry procedures**

Population-based cancer registration of Suphan Buri province was established by Cancer Registry Unit of Lop Buri Cancer Hospital in 2007. All data on cancer patients were collected by passive methods with notification by the staff of Suphan Buri provincial hospitals, 3 private hospitals, and 8 community hospitals which were under supervision of Suphan Buri Provincial Public Health Service. New cancer cases were collected from out and in patient departments, medical record, radiotherapy unit, surgery unit, cytology unit, hematology unit, pathological unit and autopsy service. The data information was collected includes demographic details for each cancer patient that consisted of registry number, name, residential address, date of birth, age, sex, date of diagnosis, site of cancer, histology of cancer, staging, extension of disease, method of diagnosis, treatment, date of last contact and vital status of cancer patients. Information of deaths from all causes of death were collected from Bureau of Health policy and Strategy, Ministry of Public Health. The follow-up of all registered cases was carried out by passive methods with linking database of National Health Security office.

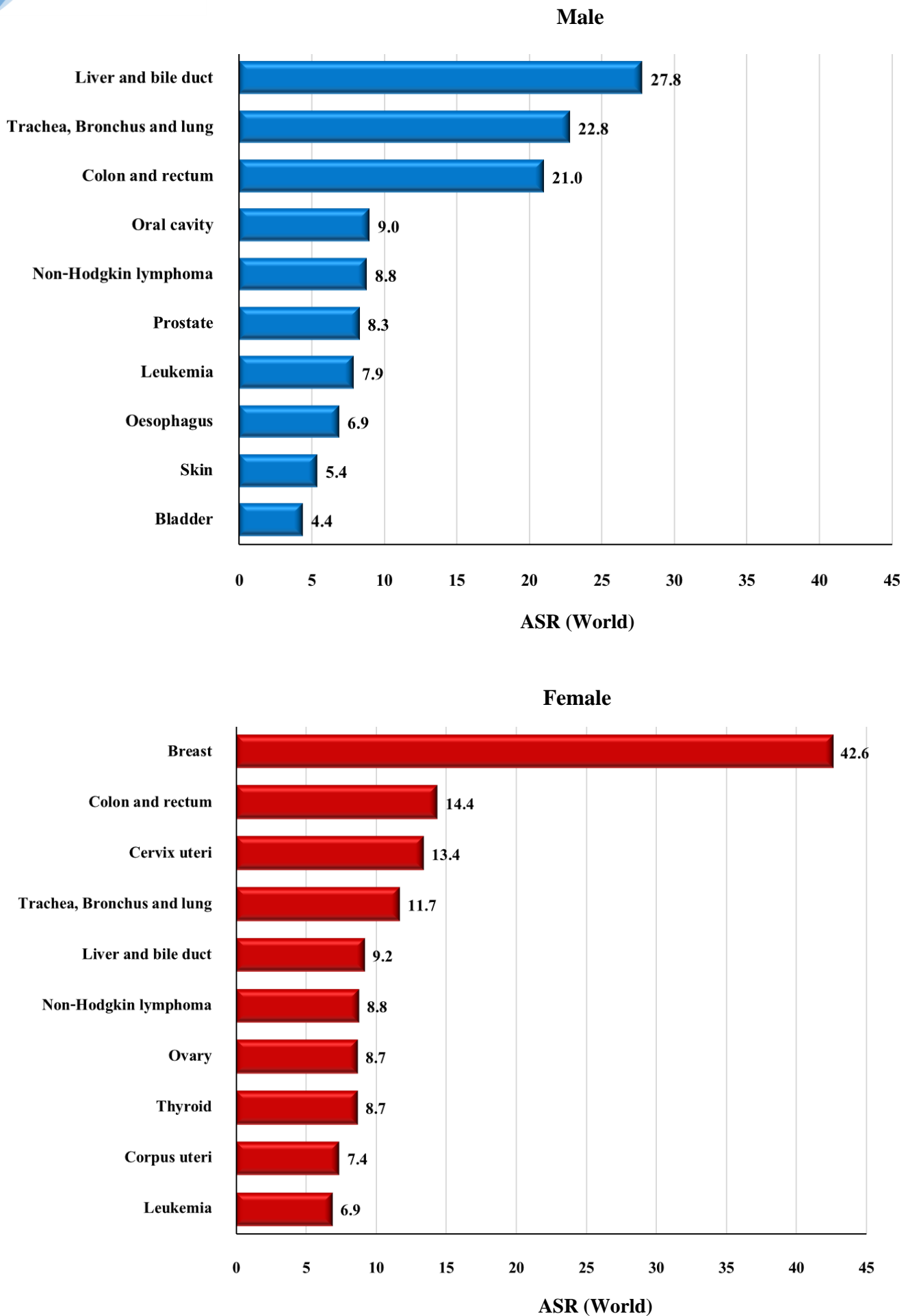
The primary site and histology were coded according to ICD-O, third edition. Second primary cancer was also registered, a new registration number was, given for each new primary cancer. All death certificates were matched with the incidence case records of the registry. Death certificates were obtained from Bureau of Policy and Strategy, Ministry of Public Health.

The completed data from were checked manually, and entered into the database file in a personal computer at Cancer Registry Unit of Chaophayayommarat Hospital, using TCB (Thai Cancer Based) software for data entry and analysis. Cases of carcinoma in situ were registered but not included in the analysis.

### **Summary of results**

New cases registered in 2017; 1,087 were males and 1,268 were females, making 2,355 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 160.0 per 100,000, with liver and bile duct cancer ranking first (ASR = 27.8) followed by trachea, bronchus and lung (ASR = 22.8), colon and rectum (ASR = 21.0). The ASR of all cancer sites in females was 167.3 per 100,000, the three leading cancer sites being breast (ASR = 42.6), colon and rectum (ASR = 14.4) and cervix uteri (ASR = (13.4).

**Figure 4.9.1** Leading cancer in Suphan Buri (mean annual ASR 2016-2018)



**Table 4.9.1** Suphan Buri (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	2.6	0.0	0.0	5.0	0.5	0.3	C00	0.0	0.0
Tongue	28	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.3	3.3	5.1	15.2	11.0	18.0	18.2	21.0	23.2	6.7	4.0	C01-02	0.3	0.5
Mouth	27	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.1	7.2	12.2	16.5	18.0	16.6	11.7	24.9	6.5	3.8	C03-06	0.3	0.4
Salivary glands	6	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	2.2	1.0	2.0	1.1	1.3	5.0	4.7	8.3	1.5	0.9	C07-08	0.0	0.1
Tonsil	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	4.4	5.1	6.1	7.7	7.7	3.3	7.0	3.3	2.9	1.9	C09	0.2	0.2
Other oropharynx	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.0	1.0	5.5	0.0	5.0	2.3	3.3	1.1	0.7	C10	0.0	0.1
Nasopharynx	14	0.0	0.0	0.0	0.0	0.0	1.2	1.3	1.3	7.7	5.1	8.1	9.9	5.1	3.3	4.7	5.0	3.5	2.3	C11	0.2	0.2
Hypopharynx	10	0.0	0.0	0.0	0.0	0.0	1.2	1.3	1.3	1.1	3.1	4.1	2.2	2.6	8.3	2.3	13.3	2.3	1.5	C12-13	0.1	0.1
Pharynx unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.1	0.0	1.7	0.0	3.3	0.4	0.2	C14	0.0	0.0
Oesophagus	47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.2	12.3	33.5	32.0	25.7	38.1	23.4	16.6	11.4	6.9	C15	0.5	0.8
Stomach	28	0.0	0.0	0.0	0.0	1.3	1.2	1.3	2.5	3.3	4.1	10.2	8.8	12.9	23.2	37.4	21.6	6.7	4.1	C16	0.2	0.5
Small intestine	4	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.0	0.0	0.0	2.6	1.7	0.0	11.6	1.0	0.5	C17	0.0	0.0
Colon	88	0.0	0.0	0.0	0.0	0.0	0.0	1.3	6.4	7.7	8.2	22.4	35.3	61.8	53.0	88.8	116.1	21.3	12.1	C18	0.7	1.4
Rectum	63	0.0	0.0	0.0	0.0	1.3	0.0	1.3	2.5	4.4	10.2	14.2	26.5	29.6	59.6	70.1	73.0	15.3	8.8	C19-20	0.5	1.1
Anus	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.7	0.0	0.0	0.2	0.1	C21	0.0	0.0
Liver and bile duct	189	0.0	0.0	0.0	0.0	0.0	2.5	8.0	16.6	35.3	41.9	65.0	98.1	144.1	115.9	112.1	144.3	45.6	27.8	C22,C24	2.1	3.2
Gallbladder	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.1	2.6	1.7	4.7	5.0	0.8	0.5	C23	0.0	0.1
Pancreas	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	11.0	7.7	1.7	14.0	18.2	3.0	1.6	C25	0.1	0.2
Nose, sinuses etc.	6	0.0	0.0	0.0	0.0	1.3	0.0	1.3	5.1	0.0	0.0	3.0	3.3	1.3	1.7	2.3	5.0	1.5	1.0	C30-31	0.1	0.1
Larynx	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.2	3.1	7.1	12.1	14.2	19.9	16.4	18.2	5.3	3.1	C32	0.2	0.4
Trachea, Bronchus and lung	167	0.0	0.0	0.0	0.0	1.3	1.2	2.7	12.7	13.2	21.5	31.5	76.1	78.5	114.2	158.9	260.4	40.6	22.8	C33-34	1.2	2.6
Other thoracic organs	4	0.0	0.0	0.0	0.0	0.0	2.5	0.0	1.3	1.1	1.0	0.0	0.0	2.6	0.0	2.3	5.0	0.9	0.7	C37-38	0.0	0.1
Bone	12	1.4	0.0	1.2	1.2	1.3	3.7	1.3	0.0	3.3	0.0	2.0	8.8	2.6	5.0	14.0	6.6	2.9	2.2	C40-C41	0.1	0.2
Melanoma of skin	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.0	2.0	0.0	2.6	5.0	0.0	8.3	1.1	0.6	C43	0.0	0.1
Other skin	39	0.0	0.0	0.0	0.0	0.0	1.2	1.3	1.3	1.1	2.0	6.1	11.0	10.3	16.6	35.0	101.2	9.4	4.8	C44	0.2	0.4
Connective tissue	8	0.0	0.0	0.0	1.2	0.0	1.2	2.7	1.3	0.0	2.0	1.0	2.2	6.4	5.0	4.7	6.6	1.9	1.3	C47,C49	0.1	0.1
Breast	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.1	0.0	1.0	1.1	1.3	3.3	2.3	5.0	0.9	0.5	C50	0.0	0.1
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	12	0.0	0.0	0.0	0.0	0.0	1.2	1.3	1.3	1.1	6.1	0.0	3.3	7.7	9.9	7.0	14.9	3.0	1.9	C60	0.1	0.2
Prostate	66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.1	1.0	5.1	11.0	33.5	59.6	65.4	149.3	16.0	8.3	C61	0.3	0.9
Testis	2	0.0	0.0	0.0	0.0	0.0	1.2	2.7	0.0	1.1	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	C62	0.0	0.0
Other male genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.7	0.2	0.1	C63	0.0	0.0
Kidney	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.1	3.1	3.0	6.6	3.9	5.0	7.0	6.6	2.3	1.4	C64	0.1	0.2
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.0	0.0	0.0	0.0	1.7	2.3	0.0	0.3	0.2	C65	0.0	0.0
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.1	0.0	C66	0.0	0.0
Bladder	32	0.0	0.0	0.0	0.0	1.3	1.2	0.0	2.5	0.0	4.1	2.0	9.9	27.0	18.2	28.0	54.7	7.8	4.4	C67	0.2	0.5
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.1	0.0	C68	0.0	0.0
Eye	2	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.1	1.3	0.0	2.3	1.7	0.4	0.3	0.3	C69	0.0	0.0
Brain, nervous system	13	0.0	1.4	0.0	1.2	1.3	0.0	4.0	1.3	4.4	2.0	2.0	5.5	6.4	8.3	14.0	6.6	3.2	2.3	C70-72	0.1	0.3
Thyroid	12	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	3.3	7.2	5.1	3.3	3.9	9.9	9.3	5.0	2.9	1.9	C73	0.1	0.2
Adrenal gland	2	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	2.3	3.3	0.4	0.3	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.7	0.2	0.1	C75	0.0	0.0
Hodgkin disease	2	0.0	0.0	0.0	0.0	1.3	2.5	0.0	0.0	1.1	0.0	0.0	1.1	1.3	0.0	0.0	0.0	0.5	0.5	C81	0.0	0.0
Non-Hodgkin lymphoma	55	1.4	2.7	0.0	3.7	2.6	3.7	0.0	10.2	7.7	11.2	20.3	16.5	33.5	38.1	30.4	51.4	13.3	8.8	C82-85,C96	0.6	0.9
Multiple myeloma	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	3.3	0.0	8.3	2.3	8.3	1.3	0.7	C90	0.0	0.1
Lymphoid leukemia	7	4.3	2.7	2.5	3.7	1.3	1.2	0.0	0.0	1.0	1.0	1.1	3.9	0.0	2.3	1.7	1.6	1.9	1.9	C91	0.1	0.1
Myeloid leukemia	9	0.0	1.4	1.2	0.0	1.3	1.2	2.7	0.0	0.0	3.1	3.0	2.2	6.4	6.6	0.0	8.3	2.3	1.7	C92-94	0.1	0.1
Leukemia unspecified	17	11.5	2.7	7.4	1.2	1.3	2.5	1.3	2.5	2.2	0.0	2.0	4.4	2.6	14.9	9.3	10.0	4.2	4.3	C95	0.2	0.3
Myelodysplastic disease	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.2	0.1	D45-D47	0.0	0.0
Other and unspecified	30	1.4	0.0	0.0	0.0	2.6	3.7	8.0	3.8	3.3	10.2	8.1	5.5	9.0	14.9	23.4	39.8	7.4	4.9	O&U	0.3	0.5
<b>All sites</b>	<b>1,087</b>	<b>20.1</b>	<b>10.9</b>	<b>12.3</b>	<b>13.5</b>	<b>22.3</b>	<b>37.1</b>	<b>46.5</b>	<b>89.2</b>	<b>123.5</b>	<b>191.0</b>	<b>307.9</b>	<b>463.1</b>	<b>603.6</b>	<b>726.8</b>	<b>845.8</b>	<b>1,280.3</b>	<b>263.7</b>	<b>160.0</b>	<b>ALL</b>	<b>9.7</b>	<b>17.6</b>

**Table 4.9.2** Suphan Buri (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	8	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.0	0.0	0.0	0.0	4.2	8.1	7.2	9.8	1.9	0.9	C00	0.0	0.1
Tongue	7	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	2.1	0.0	2.6	1.8	1.1	6.7	5.4	4.3	1.6	1.0	C01-02	0.1	0.1
Mouth	17	0.0	0.0	0.0	0.0	2.6	0.0	1.4	2.5	2.1	1.8	4.3	5.5	4.2	6.7	7.2	20.6	3.9	2.0	C03-06	0.1	0.2
Salivary glands	5	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.2	0.0	0.9	1.7	2.7	3.2	5.4	0.0	0.0	1.1	0.7	C07-08	0.1	0.1
Tonsil	2	0.0	0.0	0.0	0.0	0.0	1.5	0.0	2.5	0.0	0.0	0.0	0.9	0.0	1.3	0.0	1.1	0.4	0.4	C09	0.0	0.0
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.1	0.1	C10	0.0	0.0
Nasopharynx	5	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.0	0.9	2.6	1.8	1.1	6.7	0.0	1.1	1.1	0.7	C11	0.0	0.1
Hypopharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.3	1.8	0.0	0.2	0.1	C12-13	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14	0.0	0.0
Oesophagus	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.7	0.9	3.2	9.4	1.8	6.5	1.6	0.8	C15	0.0	0.1
Stomach	32	0.0	0.0	0.0	0.0	1.3	1.5	0.0	5.0	3.1	1.8	7.8	12.8	10.5	14.8	14.4	35.8	7.2	3.6	C16	0.2	0.4
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	1.8	1.1	0.4	0.2	C17	0.0	0.0
Colon	76	0.0	0.0	0.0	0.0	0.0	0.0	4.3	3.7	6.3	14.4	11.3	26.5	32.6	49.7	50.5	68.3	17.2	8.5	C18	0.5	1.0
Rectum	47	0.0	0.0	0.0	0.0	0.0	3.1	2.8	2.5	9.4	1.8	7.8	22.8	27.3	30.9	30.7	27.1	10.6	5.7	C19-20	0.4	0.7
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.3	1.8	2.2	0.4	0.2	C21	0.0	0.0
Liver and bile duct	85	0.0	0.0	0.0	0.0	1.3	1.5	5.7	1.2	6.3	8.1	20.8	23.7	35.8	47.0	57.8	87.9	19.0	9.2	C22,C24	0.5	1.0
Gallbladder	6	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.9	2.7	3.2	2.7	3.6	5.4	1.3	0.7	C23	0.0	0.1
Pancreas	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.0	0.9	6.9	4.6	5.3	5.4	18.1	20.6	4.0	1.9	C25	0.1	0.2
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.9	2.1	1.3	5.4	5.4	1.0	0.4	C30-31	0.0	0.1
Larynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.8	0.0	2.7	0.0	0.0	0.4	0.2	C32	0.0	0.0
Trachea, Bronchus and lung	105	0.0	0.0	0.0	0.0	1.3	6.1	2.8	1.2	11.5	14.4	24.3	32.9	41.0	60.4	63.2	105.2	23.6	11.7	C33-34	0.7	1.3
Other thoracic organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.8	0.0	0.0	0.0	0.0	0.0	3.3	0.4	0.2	C37-38	0.0	0.0
Bone	14	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	1.0	2.7	4.3	5.5	6.3	8.1	9.0	8.7	3.1	1.7	C40-C41	0.1	0.2
Melanoma of skin	7	0.0	0.0	0.0	1.3	0.0	0.0	1.4	0.0	0.0	0.9	0.9	2.7	1.1	4.0	5.4	6.5	1.5	0.8	C43	0.0	0.1
Other skin	52	0.0	0.0	0.0	0.0	1.3	4.6	2.8	2.5	0.0	3.6	4.3	11.0	13.7	18.8	34.3	87.9	11.7	5.2	C44	0.2	0.5
Connective tissue	11	0.0	0.0	0.0	0.0	2.6	3.1	1.4	2.5	2.1	2.7	3.5	3.7	4.2	1.3	3.6	6.5	2.5	1.7	C47,C49	0.1	0.2
Breast	305	0.0	0.0	0.0	0.0	6.6	9.2	32.6	61.2	84.6	100.0	122.2	132.4	144.1	140.9	97.5	62.9	68.6	42.6	C50	3.5	4.7
Vulva	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.9	1.8	1.1	4.0	0.0	6.5	1.0	0.5	C51	0.0	0.0
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.1	0.1	C52	0.0	0.0
Cervix uteri	90	0.0	0.0	0.0	0.0	1.3	13.8	14.2	21.2	29.2	30.6	36.4	35.6	23.1	30.9	45.1	22.8	20.3	13.4	C53	1.0	1.4
Corpus uteri	56	0.0	0.0	0.0	0.0	0.0	1.5	7.1	8.8	10.4	12.6	22.5	25.6	22.1	32.2	30.7	17.4	12.7	7.4	C54	0.6	0.9
Uterus unspecified	8	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	6.3	3.6	3.5	2.7	3.2	2.7	1.8	0.0	1.8	1.2	C55	0.1	0.1
Ovary	60	0.0	0.0	0.0	0.0	6.6	3.1	8.5	15.0	13.6	19.8	23.4	24.7	20.0	24.2	25.3	16.3	13.5	8.7	C56	0.7	0.9
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	3	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.1	1.3	3.6	3.3	0.7	0.4	C64	0.0	0.0
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.1	0.1	0.1	C65	0.0	0.0
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C66	0.0	0.0
Bladder	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.9	0.9	4.6	4.2	4.0	5.4	11.9	2.4	1.2	C67	0.1	0.1
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C68	0.0	0.0
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.1	0.1	C69	0.0	0.0
Brain, nervous system	19	0.0	1.5	1.3	0.0	4.0	0.0	2.8	2.5	6.3	2.7	5.2	9.1	4.2	8.1	9.0	7.6	4.2	2.8	C70-72	0.2	0.3
Thyroid	51	0.0	0.0	0.0	0.0	9.2	15.4	19.9	7.5	13.6	17.1	25.1	11.9	16.8	14.8	10.8	10.8	11.5	8.7	C73	0.7	0.8
Adrenal gland	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.1	0.0	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.1	0.1	0.1	C75	0.0	0.0
Hodgkin disease	2	0.0	1.5	1.3	2.5	0.0	0.0	0.0	1.2	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6	C81	0.0	0.0
Non-Hodgkin lymphoma	62	0.0	1.5	3.8	5.0	4.0	7.7	8.5	8.8	9.4	9.9	9.5	20.1	23.1	32.2	43.3	36.9	13.9	8.8	C82-85,C96	0.6	0.9
Multiple myeloma	8	0.0	0.0	0.0	1.3	0.0	0.0	1.4	0.0	0.0	1.8	1.7	3.7	2.1	5.4	3.6	5.4	1.7	1.0	C90	0.1	0.1
Lymphoid leukemia	5	1.5	1.5	2.6	2.5	0.0	0.0	1.4	0.0	0.0	0.9	0.0	0.9	2.1	1.3	0.0	2.2	1.0	1.1	C91	0.1	0.1
Myeloid leukemia	10	0.0	1.5	0.0	0.0	1.3	0.0	1.4	1.2	2.1	0.9	0.9	0.0	4.2	6.7	9.0	7.6	2.2	1.3	C92-94	0.1	0.1
Leukemia unspecified	22	7.5	4.4	3.8	1.3	2.6	1.5	7.1	6.2	2.1	2.7	3.5	4.6	5.3	10.7	12.6	8.7	5.0	4.5	C95	0.3	0.4
Myelodysplastic disease	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.7	0.0	4.3	0.6	0.3	D45-D47	0.0	0.0
Other and unspecified	26	0.0	0.0	0.0	0.0	2.6	0.0	4.3	6.2	6.3	6.3	2.6	4.6	6.3	13.4	9.0	28.2	5.8	3.3	O&U	0.2	0.3
<b>All sites</b>	<b>1,268</b>	<b>9.0</b>	<b>11.7</b>	<b>15.3</b>	<b>13.8</b>	<b>51.4</b>	<b>82.9</b>	<b>131.9</b>	<b>170.0</b>	<b>241.1</b>	<b>267.6</b>	<b>367.4</b>	<b>449.3</b>	<b>491.1</b>	<b>632.2</b>	<b>635.4</b>	<b>770.1</b>	<b>285.2</b>	<b>167.3</b>	<b>ALL</b>	<b>11.5</b>	<b>17.9</b>

**Table 4.9.3** Mean annual incidence, Suphan Buri, 2016-2018

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	
			(per 100,000)	(percent)				(per 100,000)	(percent)				
Lip	2	0.2	0.5	0.3	0.0	0.0	8	0.7	1.9	0.9	0.0	0.1	C00
Tongue	28	2.5	6.7	4.0	0.3	0.5	7	0.6	1.6	1.0	0.1	0.1	C01-02
Mouth	27	2.5	6.5	3.8	0.3	0.4	17	1.4	3.9	2.0	0.1	0.2	C03-06
Salivary glands	6	0.6	1.5	0.9	0.0	0.1	5	0.4	1.1	0.7	0.1	0.1	C07-08
Tonsil	12	1.1	2.9	1.9	0.2	0.2	2	0.2	0.4	0.4	0.0	0.0	C09
Other oropharynx	5	0.4	1.1	0.7	0.0	0.1	1	0.1	0.1	0.1	0.0	0.0	C10
Nasopharynx	14	1.3	3.5	2.3	0.2	0.2	5	0.4	1.1	0.7	0.0	0.1	C11
Hypopharynx	10	0.9	2.3	1.5	0.1	0.1	1	0.1	0.2	0.1	0.0	0.0	C12-13
Pharynx unspecified	2	0.2	0.4	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	47	4.3	11.4	6.9	0.5	0.8	7	0.6	1.6	0.8	0.0	0.1	C15
Stomach	28	2.5	6.7	4.1	0.2	0.5	32	2.5	7.2	3.6	0.2	0.4	C16
Small intestine	4	0.4	1.0	0.5	0.0	0.0	2	0.1	0.4	0.2	0.0	0.0	C17
Colon	88	8.1	21.3	12.1	0.7	1.4	76	6.0	17.2	8.5	0.5	1.0	C18
Rectum	63	5.8	15.3	8.8	0.5	1.1	47	3.7	10.6	5.7	0.4	0.7	C19-20
Anus	1	0.1	0.2	0.1	0.0	0.0	2	0.1	0.4	0.2	0.0	0.0	C21
Liver and bile duct	189	17.4	45.6	27.8	2.1	3.2	85	6.7	19.0	9.2	0.5	1.0	C22,C24
Gallbladder	3	0.3	0.8	0.5	0.0	0.1	6	0.4	1.3	0.7	0.0	0.1	C23
Pancreas	12	1.1	3.0	1.6	0.1	0.2	18	1.4	4.0	1.9	0.1	0.2	C25
Nose, sinuses etc.	6	0.6	1.5	1.0	0.1	0.1	4	0.3	1.0	0.4	0.0	0.1	C30-31
Larynx	22	2.0	5.3	3.1	0.2	0.4	2	0.1	0.4	0.2	0.0	0.0	C32
Trachea, Bronchus and lung	167	15.4	40.6	22.8	1.2	2.6	105	8.3	23.6	11.7	0.7	1.3	C33-34
Other thoracic organs	4	0.3	0.9	0.7	0.0	0.1	2	0.2	0.4	0.2	0.0	0.0	C37-38
Bone	12	1.1	2.9	2.2	0.1	0.2	14	1.1	3.1	1.7	0.1	0.2	C40-C41
Melanoma of skin	5	0.4	1.1	0.6	0.0	0.1	7	0.5	1.5	0.8	0.0	0.1	C43
Other skin	39	3.6	9.4	4.8	0.2	0.4	52	4.1	11.7	5.2	0.2	0.5	C44
Connective tissue	8	0.7	1.9	1.3	0.1	0.1	11	0.9	2.5	1.7	0.1	0.2	C47,C49
Breast	4	0.3	0.9	0.5	0.0	0.1	305	24.1	68.6	42.6	3.5	4.7	C50
Vulva							5	0.4	1.0	0.5	0.0	0.0	C51
Vagina							1	0.1	0.1	0.1	0.0	0.0	C52
Cervix uteri							90	7.1	20.3	13.4	1.0	1.4	C53
Corpus uteri							56	4.4	12.7	7.4	0.6	0.9	C54
Uterus unspecified							8	0.6	1.8	1.2	0.1	0.1	C55
Ovary							60	4.7	13.5	8.7	0.7	0.9	C56
Other female genital organs							0	0.0	0.1	0.0	0.0	0.0	C57
Placenta							0	0.0	0.1	0.1	0.0	0.0	C58
Penis	12	1.1	3.0	1.9	0.1	0.2							C60
Prostate	66	6.1	16.0	8.3	0.3	0.9							C61
Testis	2	0.2	0.6	0.5	0.0	0.0							C62
Other male genital organs	1	0.1	0.2	0.1	0.0	0.0							C63
Kidney	9	0.9	2.3	1.4	0.1	0.2	3	0.3	0.7	0.4	0.0	0.0	C64
Renal pelvis	1	0.1	0.3	0.2	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C65
Ureter	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C66
Bladder	32	2.9	7.8	4.4	0.2	0.5	11	0.8	2.4	1.2	0.1	0.1	C67
Other urinary organs	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C68
Eye	2	0.2	0.4	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C69
Brain, nervous system	13	1.2	3.2	2.3	0.1	0.3	19	1.5	4.2	2.8	0.2	0.3	C70-72
Thyroid	12	1.1	2.9	1.9	0.1	0.2	51	4.0	11.5	8.7	0.7	0.8	C73
Adrenal gland	2	0.2	0.4	0.3	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C74
Other endocrine	1	0.1	0.2	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C75
Hodgkin disease	2	0.2	0.5	0.5	0.0	0.0	2	0.2	0.4	0.6	0.0	0.0	C81
Non-Hodgkin lymphoma	55	5.1	13.3	8.8	0.6	0.9	62	4.9	13.9	8.8	0.6	0.9	C82-85,C96
Multiple myeloma	5	0.5	1.3	0.7	0.0	0.1	8	0.6	1.7	1.0	0.1	0.1	C90
Lymphoid leukemia	7	0.6	1.6	1.9	0.1	0.1	5	0.4	1.0	1.1	0.1	0.1	C91
Myeloid leukemia	9	0.9	2.3	1.7	0.1	0.1	10	0.8	2.2	1.3	0.1	0.1	C92-94
Leukemia unspecified	17	1.6	4.2	4.3	0.2	0.3	22	1.8	5.0	4.5	0.3	0.4	C95
Myelodysplastic disease	1	0.1	0.2	0.1	0.0	0.0	3	0.2	0.6	0.3	0.0	0.0	D45-D47
Other and unspecified	30	2.8	7.4	4.9	0.3	0.5	26	2.1	5.8	3.3	0.2	0.3	O&U
<b>All sites</b>	<b>1,087</b>	<b>100.0</b>	<b>263.7</b>	<b>160.0</b>	<b>9.7</b>	<b>17.6</b>	<b>1,268</b>	<b>100.0</b>	<b>285.2</b>	<b>167.3</b>	<b>11.5</b>	<b>17.9</b>	<b>ALL</b>

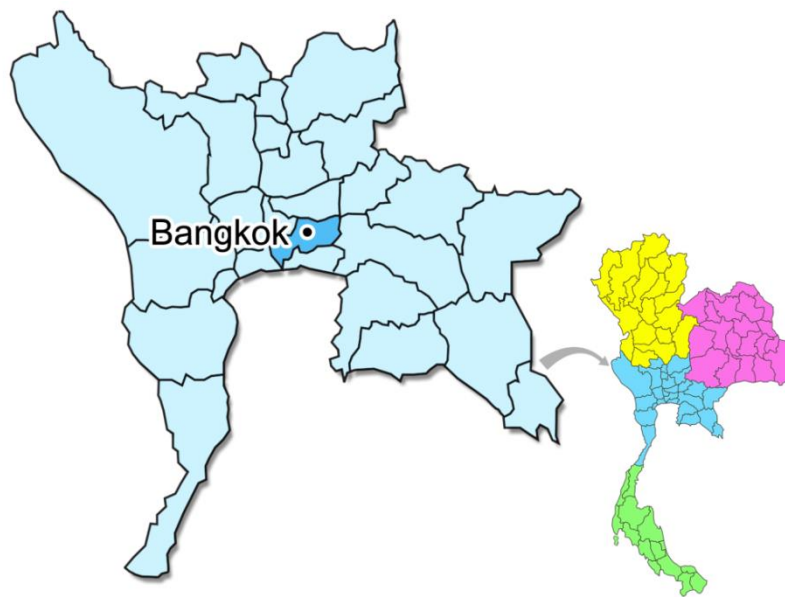
**Table 4.9.4** Percentage of morphologically verified and death certificate only cases, Suphan Buri

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	187	95.2	1.6	114	91.2	0.0	C00-C08
Oropharynx	55	94.5	0.0	8	87.5	0.0	C09-C10,C14
Nasopharynx	43	83.7	2.3	15	93.3	0.0	C11
Hypopharynx	29	86.2	3.4	3	100.0	0.0	C12-C13
Esophagus	141	90.8	3.5	21	85.7	4.8	C15
Stomach	83	77.1	15.7	96	84.4	6.3	C16
Small intestine	12	75.0	0.0	5	60.0	0.0	C17
Colon and rectum	454	93.2	2.6	376	94.4	1.3	C18-C21
Liver and bile duct	565	17.3	8.1	254	17.3	11.8	C22,C24
Gallbladder	10	20.0	0.0	17	23.5	23.5	C23
pancrease	37	70.3	2.7	54	55.6	9.3	C25
Nose,sinuses etc	18	61.1	0.0	13	61.5	0.0	C30-C31
Larynx	65	89.2	6.2	5	40.0	20.0	C32
Trachea, bronchus and lung	502	89.6	5.8	315	90.2	4.8	C33-C34
Other thoracic organs	11	36.4	0.0	6	66.7	0.0	C37-C38
Bone	36	11.1	5.6	42	4.8	9.5	C40-C41
Melanoma of skin	14	100.0	0.0	20	100.0	0.0	C43
Other skin	116	92.2	2.6	156	92.3	0.0	C44
Mesothelioma	0	0.0	0.0	0	0.0	0.0	C45
Kaposi sarcoma	0	0.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	24	87.5	4.2	33	72.7	0.0	C47,C49
Breast	11	100.0	0.0	915	95.3	1.2	C50
Vulva				14	78.6	0.0	C51
Vagina				2	100.0	0.0	C52
Cervix uteri				271	100.0	0.0	C53
Corpus uteri				169	81.1	2.4	C54
Uterus unspecified				24	20.8	20.8	C55
Ovary				180	75.6	5.0	C56
Other female genital organs				1	0.0	0.0	C57
Placenta				1	0.0	0.0	C58
Penis	37	81.1	0.0				C60
Prostate	198	85.9	4.5				C61
Testis	7	85.7	0.0				C62
Other male genital organs	2	0.0	0.0				C63
Kidney	28	75.0	0.0	10	90.0	0.0	C64
Renal pelvis	4	25.0	0.0	2	0.0	0.0	C65
Ureter	1	100.0	0.0	0	0.0	0.0	C66
Bladder	96	88.5	1.0	32	93.8	0.0	C67
Other urinary organs	1	0.0	0.0	1	0.0	0.0	C68
Eye	5	60.0	0.0	2	0.0	50.0	C69
Brain, nervous system	40	35.0	30.0	56	33.9	26.8	C70-C72
Thyroid	36	86.1	0.0	154	92.9	0.6	C73
Adrenal gland	5	40.0	0.0	1	0.0	0.0	C74
Other endocrine	2	0.0	0.0	2	0.0	0.0	C75
Hodgkin disease	6	100.0	0.0	6	100.0	0.0	C81
Non-Hodgkin lymphoma	165	100.0	0.0	186	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	16	100.0	0.0	23	100.0	0.0	C90
Leukemia	100	100.0	0.0	110	100.0	0.0	C91-C95
Myelodysplastic	2	100.0	0.0	8	100.0	0.0	D45-D47
Other and unspecified	91	53.8	29.7	78	57.7	20.5	O&U
<b>All sites</b>	<b>3,255</b>	<b>74.4</b>	<b>5.2</b>	<b>3,801</b>	<b>83.2</b>	<b>3.5</b>	<b>All</b>
<b>All sites without liver</b>	<b>2,690</b>	<b>86.4</b>	<b>4.6</b>	<b>3,547</b>	<b>88.0</b>	<b>2.9</b>	<b>All</b>

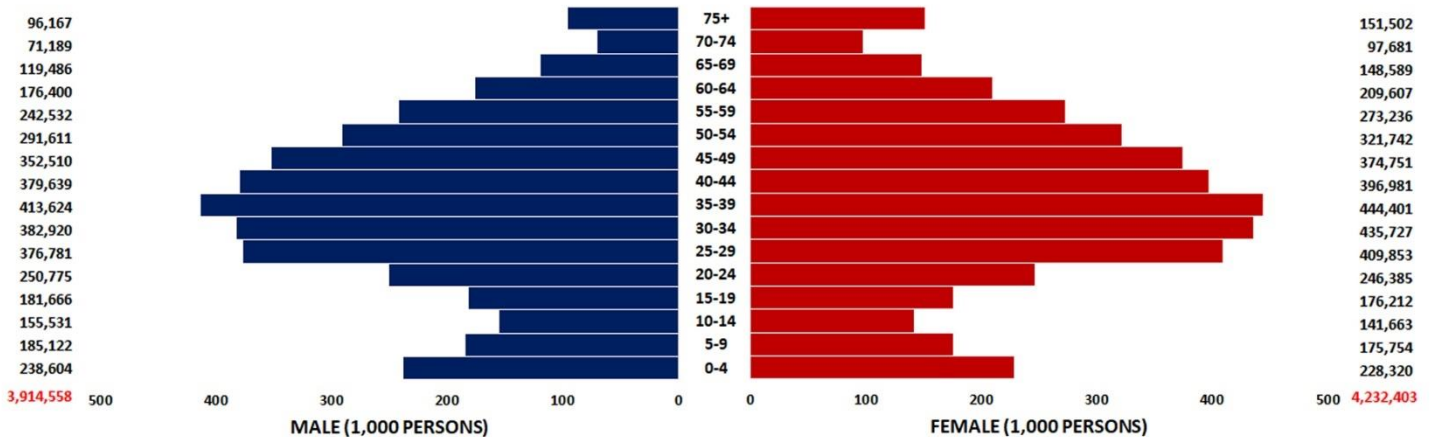
## 4.10 Bangkok Cancer Registry

### Registration area

Bangkok Metropolis is the capital of Thailand, located in the central part of the country on the low-flat plain of the Chao Phraya River at latitude 13:45 N and longitude 100:28 E. It is the center of politics, economy, education, culture and transportation. The climate is tropical, influenced by seasonal monsoons, with long hours of sunshine, high temperature and humidity. Bangkok comprises 50 districts with a total area of 1,569 square kilometers. Bangkok Metropolitan Administration is the sole organization at the local authority level responsible for the well-being of Bangkok residents with some financial support from the central government. Bangkok is the commercial center of Thailand, as well as Southeast Asia, for import and export. Bangkok is moving towards a westernized metropolitan status with a wide range of standards of living. Traffic congestion is a major unsolved problem and cause of air pollution. The estimated population in 2017 was 8,146,961 with 3,914,558 males and 4,232,403 females.



Population pyramid Bangkok  
estimated population in 2017 (2016 – 2018)



### **Cancer care facilities**

In Bangkok, there are 9 excellent government cancer centers of all 12 centers in Thailand, namely the National Cancer Institute, King Chulalongkorn Memorial hospital, Siriraj hospital, Ramathibodi hospital, Phra Mongkutklao hospital, Queen Sirikit National Institute of Child Health, Rajavithi hospital, Vajira hospital and Bhumibhol Adulyadej hospital. Moreover, there are three international private cancer centers; Bangkok hospital, Bumrungrad hospital and Samitivej hospital. From historical data, more than half of patients are treated in government hospitals. Regarding Public Health statistics, Bangkok has the highest level of facilities for general health care. The ratio of population per physician is 793:1, while it is 6,237:1 in other parts of Thailand. The Bangkok cancer registry is an important base for collection of cancer cases and in addition, referring the data of those non-resident patients treated in Bangkok back to other cancer registries.

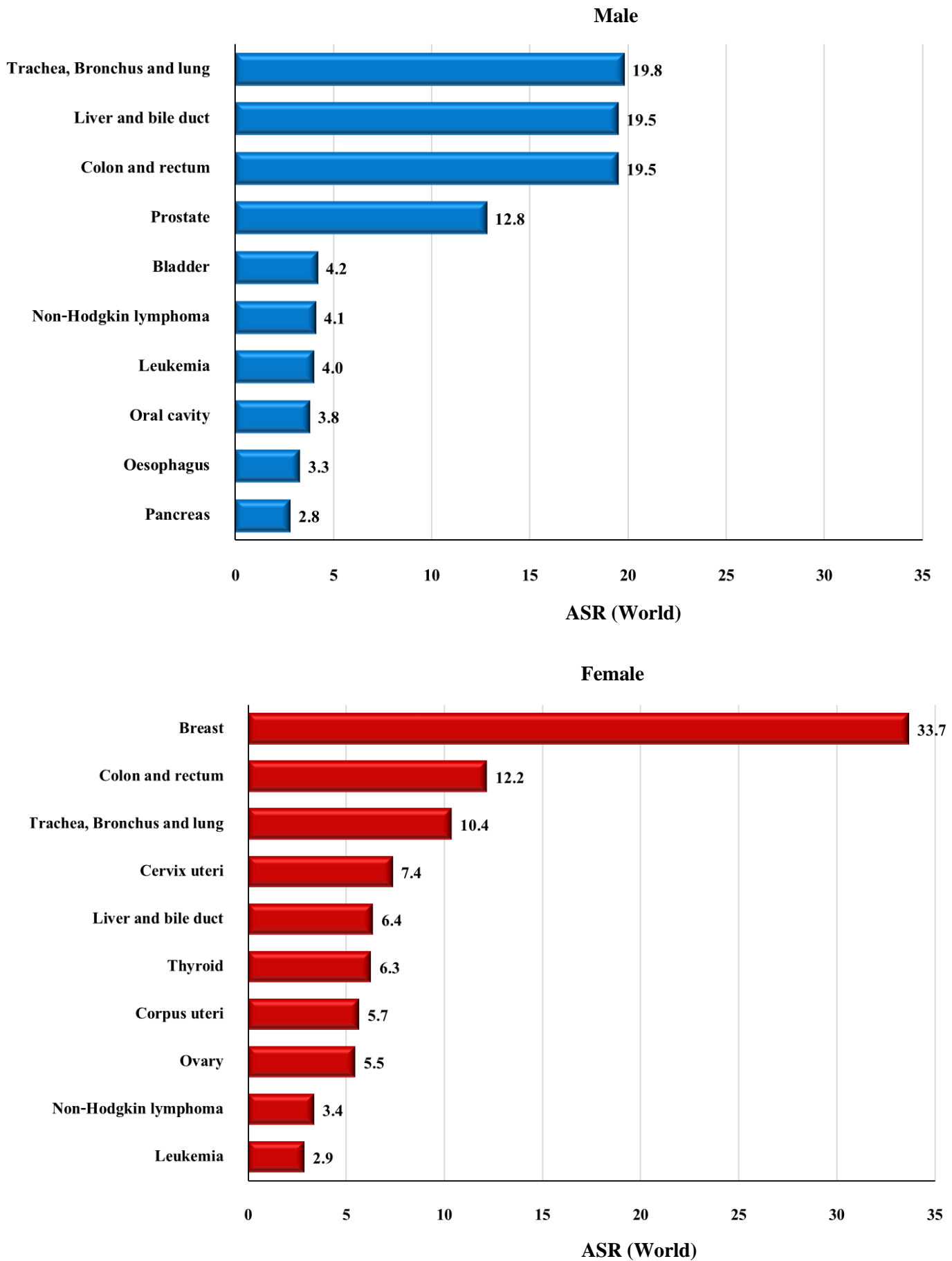
### **Registry procedures**

The cancer registry functions as one unit of the National Cancer Institute (NCI). The registry is supported by the government and funded partly by the Cancer Research Foundation of the NCI, which first established a population - based cancer registry for Bangkok Metropolis in 1990. The work began with a retrospective review of records covering the period 1988-1990. Data are collected both actively and passively from the government cancer centers, university hospital, government hospitals, private hospitals, pathology laboratories and from death certificates. All death certificates are reviewed to match with the incident case records, and efforts are made to trace further information before registering the case as a DCO.

### **Summary of results**

New cases registered in 2017; 5,785 were males and 7,042 were females, making 12,827 for both sexes. The age - standardized incidence rate (ASR) of all sites in males was 124.7 per 100,000, with trachea, bronchus and trachea, bronchus and lung ranking first (ASR = 19.8) followed by liver and bile duct (ASR = 19.5) and colon and rectum (ASR = 19.5). The ASR of all cancers in females was 117.8, the three leading sites being breast (ASR = 33.7) followed by colon and rectum (ASR = 12.2) and trachea, bronchus and lung (ASR = 10.4).

**Figure 4.10.1** Leading cancer in Bangkok (mean annual ASR 2016-2018)



**Table 4.10.1** Bangkok (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.5	0.3	0.1	0.0	C00	0.0	0.0
Tongue	92	0.0	0.0	0.0	0.0	0.3	0.5	0.6	0.6	1.8	2.4	5.6	5.1	8.7	10.0	8.0	8.0	2.4	1.8	C01-02	0.1	0.2
Mouth	78	0.0	0.0	0.0	0.2	0.0	0.3	0.3	0.1	0.9	1.4	3.0	4.5	5.1	6.1	13.6	21.1	2.0	1.6	C03-06	0.1	0.2
Salivary glands	22	0.0	0.0	0.0	0.2	0.4	0.0	0.3	0.2	0.4	0.8	1.1	1.1	0.6	2.2	1.4	3.8	0.6	0.4	C07-08	0.0	0.0
Tonsil	33	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.6	0.5	1.0	2.7	1.5	2.6	2.2	2.3	4.2	0.8	C09	0.2	0.1
Other oropharynx	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.8	0.6	2.1	1.3	1.1	0.5	1.0	0.4	0.3	C10	0.0	0.0
Nasopharynx	127	0.0	0.0	0.0	0.2	0.5	0.4	1.2	1.9	3.5	5.0	5.6	9.8	8.9	9.2	5.6	9.4	3.2	2.4	C11	0.2	0.3
Hypopharynx	44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	1.5	1.9	3.3	3.4	4.2	8.0	5.2	1.1	0.9	C12-13	0.1	0.1
Pharynx unspecified	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.5	0.8	0.6	0.9	1.7	0.2	0.2	C14	0.0	0.0
Oesophagus	158	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.4	3.5	8.0	10.9	13.8	22.9	26.2	19.4	4.0	3.3	C15	0.2	0.4
Stomach	127	0.0	0.0	0.2	0.0	0.3	0.2	0.3	0.8	1.4	2.5	3.9	4.8	9.4	16.5	19.2	35.4	3.2	2.7	C16	0.1	0.3
Small intestine	21	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.4	0.3	0.8	1.8	1.9	1.4	1.4	4.2	0.5	0.4	C17	0.0	0.0
Colon	547	0.1	0.0	0.0	0.2	0.3	0.4	1.0	2.6	3.3	6.9	15.0	28.4	40.6	76.4	93.6	155.6	14.0	11.7	C18	0.5	1.3
Rectum	353	0.3	0.0	0.0	0.0	0.3	0.1	0.5	1.6	3.8	7.6	12.7	19.8	34.2	52.2	57.1	55.1	9.0	7.5	C19-20	0.4	1.0
Anus	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.5	0.5	0.7	1.5	0.8	1.9	1.4	0.3	0.3	C21	0.0	0.0
Liver and bile duct	934	1.0	0.0	0.2	0.2	0.0	0.7	0.9	4.0	9.0	19.2	35.7	64.0	92.2	113.3	131.6	161.5	23.9	19.5	C22,C24	1.1	2.4
Gallbladder	21	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.5	0.6	0.7	1.9	0.8	4.2	8.0	0.5	0.4	C23	0.0	0.0
Pancreas	131	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	2.5	4.1	6.2	11.3	18.7	17.3	38.1	3.4	2.8	C25	0.1	0.3
Nose, sinuses etc.	16	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.5	0.4	0.2	0.9	0.7	1.1	1.7	1.9	1.4	0.4	0.3	C30-31	0.0	0.0
Larynx	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	1.4	4.6	6.5	9.6	10.9	12.6	18.4	2.4	1.9	C32	0.1	0.2
Trachea, Bronchus and lung	920	0.1	0.2	0.2	0.6	0.5	0.2	1.1	1.8	6.5	13.8	23.8	49.9	82.4	134.2	145.2	240.9	23.5	19.8	C33-34	0.9	2.3
Other thoracic organs	23	0.3	0.0	0.0	0.7	0.9	0.2	0.4	0.2	0.4	0.1	0.8	0.5	1.1	1.1	4.2	3.5	0.6	0.5	C37-38	0.0	0.1
Bone	30	0.0	0.4	1.5	2.6	0.7	0.4	0.4	0.6	0.6	0.5	0.7	0.7	1.7	1.7	0.9	2.1	0.8	0.8	C40-C41	0.1	0.1
Melanoma of skin	5	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.2	0.6	0.5	0.7	0.1	0.1	C43	0.0	0.0
Other skin	102	0.0	0.0	0.0	0.2	0.1	0.0	0.4	0.4	0.4	1.4	2.4	3.7	6.0	11.7	16.9	40.2	2.6	2.2	C44	0.1	0.2
Mesothelioma	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.3	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	C46	0.0	0.0
Connective tissue	44	0.1	0.4	0.6	0.2	0.9	0.5	0.4	0.7	0.4	0.9	0.6	2.3	2.3	3.6	3.3	10.7	1.1	1.0	C47,C49	0.1	0.1
Breast	17	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.4	0.2	0.5	1.4	1.5	2.5	2.8	1.4	0.4	0.4	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	15	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.3	0.6	0.8	0.4	0.6	1.4	4.2	0.4	0.3	C60	0.0	0.0
Prostate	554	0.0	0.0	0.0	0.0	0.4	0.0	0.1	0.4	0.6	4.3	14.2	42.0	98.8	160.6	203.1	14.1	12.8	C61	0.3	1.6	
Testis	17	0.4	0.0	0.0	0.2	1.9	0.4	0.8	0.6	0.3	0.3	0.3	0.3	0.2	0.0	0.0	0.0	0.4	0.4	C62	0.0	0.0
Other male genital organs	4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.4	0.6	0.9	1.0	0.1	0.1	C63	0.0	0.0
Kidney	100	0.3	0.0	0.0	0.2	0.1	0.0	0.4	1.1	1.6	1.6	4.5	4.8	8.9	12.3	7.5	21.1	2.6	2.1	C64	0.1	0.2
Renal pelvis	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.2	0.0	0.9	1.7	0.1	0.1	C65	0.0	0.0
Ureter	8	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.6	1.1	2.3	3.5	0.2	0.2	C66	0.0	0.0
Bladder	188	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.0	1.3	2.1	6.5	14.7	24.3	45.0	72.8	4.8	4.2	C67	0.1	0.5
Other urinary organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.3	0.5	0.3	0.1	0.0	C68	0.0	0.0
Eye	4	0.4	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.6	0.0	0.7	0.1	0.1	C69	0.0	0.0
Brain, nervous system	78	1.1	1.1	1.5	1.7	1.1	0.4	0.8	1.0	1.1	2.1	3.0	3.4	5.5	5.0	7.0	7.3	2.0	1.9	C70-72	0.1	0.2
Thyroid	86	0.0	0.2	0.4	0.4	1.3	1.4	1.3	1.9	1.6	2.3	3.9	4.4	4.9	7.3	5.6	5.5	2.2	1.7	C73	0.1	0.2
Adrenal gland	4	0.4	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.3	0.0	0.7	0.1	0.1	C74	0.0	0.0
Other endocrine	7	0.0	0.0	0.9	0.4	0.4	0.2	0.0	0.1	0.1	0.2	0.3	0.0	0.0	0.0	0.5	0.3	0.2	0.2	C75	0.0	0.0
Hodgkin disease	21	0.1	0.0	0.2	0.6	2.0	0.5	0.5	0.6	0.3	0.2	0.3	0.1	0.2	1.4	0.9	2.1	0.5	0.5	C81	0.0	0.0
Non-Hodgkin lymphoma	189	0.6	0.2	0.6	0.9	2.3	1.2	1.8	2.2	2.3	4.0	5.7	8.4	14.6	20.1	22.0	34.7	4.8	4.1	C82-85,C96	0.2	0.4
Multiple myeloma	48	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.2	0.5	1.0	1.3	2.9	4.2	5.9	8.0	10.4	1.2	1.0	C90	0.1	0.1
Lymphoid leukemia	53	1.7	1.3	1.5	0.7	0.4	0.3	0.4	0.4	0.8	1.5	2.2	2.6	3.3	3.3	11.8	1.3	1.4	1.4	C91	0.1	0.1
Myeloid leukemia	53	0.1	0.4	0.2	0.7	1.1	0.4	0.3	0.3	1.1	0.9	1.9	2.2	3.8	5.3	7.0	8.0	1.4	1.2	C92-94	0.1	0.1
Leukemia unspecified	53	2.0	0.5	1.1	1.1	0.5	0.4	0.2	0.4	0.8	0.9	1.6	1.1	3.6	3.6	5.6	10.4	1.4	1.4	C95	0.1	0.1
Myelodysplastic disease	18	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.7	1.9	1.7	2.3	5.9	0.4	0.4	D45-D47	0.0	0.0
Other and unspecified	294	0.1	0.2	0.6	0.6	0.4	0.6	0.9	1.5	1.4	4.1	9.9	15.1	21.7	33.5	51.0	81.8	7.5	6.3	O&U	0.3	0.7
<b>All sites</b>	<b>5,785</b>	<b>9.2</b>	<b>5.0</b>	<b>10.1</b>	<b>13.0</b>	<b>17.5</b>	<b>11.0</b>	<b>16.7</b>	<b>30.1</b>	<b>51.4</b>	<b>96.4</b>	<b>178.3</b>	<b>299.8</b>	<b>476.0</b>	<b>733.1</b>	<b>914.5</b>	<b>1,342.1</b>	<b>147.7</b>	<b>124.7</b>	<b>ALL</b>	<b>6.1</b>	<b>14.3</b>

**Table 4.10.2** Bangkok (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.2	0.9	0.3	1.1	0.1	0.1	C00	0.0	0.0
Tongue	38	0.0	0.0	0.0	0.0	0.1	0.4	0.2	0.8	0.6	1.0	1.5	1.5	1.9	2.0	1.4	5.7	0.9	0.6	C01-02	0.0	0.1
Mouth	25	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.1	0.4	1.1	0.4	1.0	1.8	2.4	5.9	0.6	0.4	C03-06	0.0	0.0
Salivary glands	20	0.0	0.0	0.0	0.2	0.1	0.5	0.2	0.2	0.6	0.6	0.6	0.5	0.6	0.4	2.0	2.0	0.5	0.3	C07-08	0.0	0.0
Tonsil	8	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2	0.3	0.3	0.5	0.5	0.7	0.7	0.7	0.2	0.1	C09	0.0	0.0
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	C10	0.0	0.0
Nasopharynx	45	0.0	0.0	0.2	0.2	0.3	0.3	0.3	0.8	1.1	1.6	2.0	2.3	2.2	1.8	2.0	3.5	1.1	0.8	C11	0.1	0.1
Hypopharynx	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.7	1.0	0.2	0.1	0.1	C12-13	0.0	0.0
Pharynx unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.7	0.1	0.0	C14	0.0	0.0
Oesophagus	24	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.3	0.8	1.2	2.5	2.0	2.0	3.5	0.6	0.4	C15	0.0	0.0
Stomach	143	0.0	0.0	0.0	0.0	0.1	0.7	0.5	1.0	1.8	2.8	3.9	4.8	5.4	14.1	14.7	29.0	3.4	2.3	C16	0.1	0.2
Small intestine	18	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.3	0.8	1.1	0.5	1.6	2.0	2.6	0.4	0.3	C17	0.0	0.0
Colon	496	0.0	0.0	0.0	0.2	0.0	0.3	0.8	2.2	3.8	6.5	9.7	19.3	28.5	41.5	60.7	116.4	11.7	8.0	C18	0.4	0.9
Rectum	233	0.0	0.0	0.0	0.0	0.1	0.0	0.5	0.5	3.0	4.7	7.8	9.6	17.7	23.3	24.6	33.7	5.5	3.9	C19-20	0.2	0.5
Anus	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.5	1.2	1.0	2.5	3.4	2.6	0.5	0.3	C21	0.0	0.0
Liver and bile duct	387	0.1	0.0	0.0	0.2	0.4	0.2	0.5	1.0	1.6	3.6	6.9	12.8	23.5	40.6	50.5	92.8	9.1	6.4	C22,C24	0.3	0.7
Gallbladder	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.8	0.6	2.2	3.4	5.5	6.4	0.7	0.5	C23	0.0	0.1
Pancreas	145	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.4	0.4	1.5	2.3	4.8	8.1	13.9	22.9	35.6	3.4	2.4	C25	0.1	0.3
Nose, sinuses etc.	13	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.1	0.2	0.6	0.5	1.0	1.1	1.4	0.9	0.3	0.2	C30-31	0.0	0.0
Larynx	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0.7	1.4	1.8	0.2	0.1	C32	0.0	0.0
Trachea, Bronchus and lung	628	0.0	0.0	0.0	0.2	0.3	0.2	0.7	2.0	5.0	8.9	15.1	27.0	45.2	57.0	74.7	123.4	14.8	10.4	C33-34	0.5	1.2
Other thoracic organs	16	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.1	0.4	0.3	0.3	0.5	0.3	2.2	2.0	2.2	0.4	0.3	C37-38	0.0	0.0
Bone	20	0.4	0.2	1.4	0.4	0.4	0.3	0.2	0.5	0.4	0.4	0.4	0.6	0.5	0.9	1.0	0.9	0.5	0.5	C40-C41	0.0	0.0
Melanoma of skin	11	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.5	0.9	1.0	2.0	0.3	0.2	C43	0.0	0.0
Other skin	134	0.0	0.2	0.0	0.0	0.3	0.4	0.4	0.9	1.3	1.1	1.8	4.6	5.7	11.4	13.3	36.3	3.1	2.1	C44	0.1	0.2
Mesothelioma	2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.0	0.1	0.0	0.2	0.0	0.0	0.1	0.0	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	46	0.0	0.0	0.2	0.2	0.7	0.6	0.7	0.8	1.1	0.6	1.3	2.0	2.7	2.0	1.7	5.3	1.1	0.8	C47,C49	0.1	0.1
Breast	2058	0.1	0.0	0.2	0.4	1.2	3.4	11.5	24.5	46.2	78.1	100.3	107.7	127.7	137.1	128.7	125.6	48.6	33.7	C50	2.5	3.8
Vulva	12	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.0	0.3	0.2	0.6	0.8	0.7	1.0	2.2	0.3	0.2	C51	0.0	0.0
Vagina	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.7	0.7	0.5	0.9	0.7	2.4	0.3	0.2	C52	0.0	0.0
Cervix uteri	455	0.0	0.0	0.0	0.0	0.4	2.4	5.8	7.6	12.3	16.5	18.6	19.5	24.5	23.3	34.5	27.3	10.8	7.4	C53	0.5	0.8
Corpus uteri	342	0.0	0.0	0.0	0.0	0.3	0.2	1.8	2.3	4.7	7.6	14.3	22.4	25.6	32.3	31.4	23.8	8.1	5.7	C54	0.4	0.7
Uterus unspecified	29	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.8	1.0	1.3	3.0	3.1	2.4	1.5	0.7	0.5	C55	0.0	0.1
Ovary	313	0.3	0.8	0.9	1.9	2.0	1.8	1.8	3.2	5.5	10.7	14.9	16.0	20.0	17.7	18.4	21.6	7.4	5.5	C56	0.4	0.6
Other female genital organs	6	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.3	0.1	0.0	0.4	0.3	0.4	0.7	0.4	0.1	0.1	C57	0.0	0.0
Placenta	6	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	55	0.0	0.2	0.0	0.0	0.0	0.0	0.4	0.5	0.9	0.7	1.8	2.1	4.5	4.0	3.8	9.5	1.3	0.9	C64	0.1	0.1
Renal pelvis	6	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.4	0.3	2.2	0.1	0.1	C65	0.0	0.0
Ureter	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6	0.9	1.4	2.9	0.2	0.1	C66	0.0	0.0
Bladder	76	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.6	1.3	2.7	3.5	7.4	9.9	20.7	1.8	1.2	C67	0.0	0.1
Other urinary organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.9	0.0	0.0	C68	0.0	0.0
Eye	8	0.7	0.0	0.2	0.0	0.3	0.2	0.1	0.0	0.0	0.2	0.0	0.1	0.3	0.0	1.0	0.7	0.2	0.2	C69	0.0	0.0
Brain, nervous system	60	0.6	1.1	1.2	0.9	0.7	0.3	0.4	1.0	0.7	1.4	1.9	2.1	3.5	3.4	5.1	5.1	1.4	1.3	C70-72	0.1	0.1
Thyroid	373	0.0	0.0	1.2	1.1	5.7	7.5	7.2	8.7	10.8	11.7	12.2	15.2	12.1	13.5	17.4	16.1	8.8	6.3	C73	0.5	0.6
Adrenal gland	9	0.7	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.2	0.0	0.2	0.2	0.2	0.4	1.0	1.1	0.2	0.2	C74	0.0	0.0
Other endocrine	3	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.2	0.0	0.0	0.1	0.1	C75	0.0	0.0
Hodgkin disease	11	0.0	0.0	0.0	0.4	0.4	0.7	0.3	0.2	0.2	0.0	0.2	0.1	0.5	0.4	0.0	0.4	0.3	0.2	C81	0.0	0.0
Non-Hodgkin lymphoma	192	0.1	0.2	0.5	1.1	1.9	1.3	1.5	1.4	1.9	2.8	4.5	8.7	9.5	15.9	26.3	27.1	4.5	3.4	C82-85,C96	0.2	0.4
Multiple myeloma	44	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.0	0.5	0.6	2.2	4.3	3.6	6.8	7.3	1.0	0.7	C90	0.0	0.1
Lymphoid leukemia	42	2.6	1.1	0.9	0.6	0.1	0.1	0.1	0.2	0.6	0.3	0.9	1.2	1.4	4.5	2.7	5.1	1.0	1.1	C91	0.1	0.1
Myeloid leukemia	41	0.6	0.4	0.5	0.2	0.9	0.3	0.5	0.3	0.8	0.7	1.1	1.5	1.3	2.0	3.4	5.1	1.0	0.8	C92-94	0.0	0.1
Leukemia unspecified	53	0.9	0.4	0.7	0.2	0.3	0.6	0.6	0.7	0.4	1.2	0.5	2.0	3.3	4.0	4.4	6.6	1.3	1.0	C95	0.1	0.1
Myelodysplastic disease	12	0.0	0.0	0.0	0.2	0.0	0.1	0.2	0.1	0.0	0.0	0.3	0.2	0.6	0.4	1.0	3.5	0.3	0.2	D45-D47	0.0	0.0
Other and unspecified	283	0.3	0.2	0.2	0.0	0.3	0.7	1.0	1.2	1.9	3.8	6.9	12.4	15.4	26.0	30.4	59.0	6.7	4.7	O&U	0.2	0.5
All sites	7,042	7.6	4.9	9.2	9.3	18.1	24.3	39.6	64.9	111.5	175.0	243.1	316.9	416.5	531.0	627.9	893.7	166.3	117.8	ALL	7.2	13.0

**Table 4.10.3** Mean annual incidence, Bangkok, 2016-2018

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. 0-64 (percent)	Rate. 0-74 (percent)	No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. 0-64 (percent)	Rate. 0-74 (percent)	
Lip	2	0.0	0.1	0.0	0.0	0.0	5	0.1	0.1	0.1	0.0	0.0	C00
Tongue	92	1.6	2.4	1.8	0.1	0.2	38	0.5	0.9	0.6	0.0	0.1	C01-02
Mouth	78	1.3	2.0	1.6	0.1	0.2	25	0.4	0.6	0.4	0.0	0.0	C03-06
Salivary glands	22	0.4	0.6	0.4	0.0	0.0	20	0.3	0.5	0.3	0.0	0.0	C07-08
Tonsil	33	0.6	0.8	0.6	0.0	0.1	8	0.1	0.2	0.1	0.0	0.0	C09
Other oropharynx	15	0.3	0.4	0.3	0.0	0.0	1	0.0	0.0	0.0	0.0	0.0	C10
Nasopharynx	127	2.2	3.2	2.4	0.2	0.3	45	0.6	1.1	0.8	0.1	0.1	C11
Hypopharynx	44	0.8	1.1	0.9	0.1	0.1	4	0.1	0.1	0.1	0.0	0.0	C12-13
Pharynx unspecified	8	0.1	0.2	0.2	0.0	0.0	2	0.0	0.1	0.0	0.0	0.0	C14
Oesophagus	158	2.7	4.0	3.3	0.2	0.4	24	0.3	0.6	0.4	0.0	0.0	C15
Stomach	127	2.2	3.2	2.7	0.1	0.3	143	2.0	3.4	2.3	0.1	0.2	C16
Small intestine	21	0.4	0.5	0.4	0.0	0.0	18	0.3	0.4	0.3	0.0	0.0	C17
Colon	547	9.5	14.0	11.7	0.5	1.3	496	7.0	11.7	8.0	0.4	0.9	C18
Rectum	353	6.1	9.0	7.5	0.4	1.0	233	3.3	5.5	3.9	0.2	0.5	C19-20
Anus	13	0.2	0.3	0.3	0.0	0.0	20	0.3	0.5	0.3	0.0	0.0	C21
Liver and bile duct	934	16.2	23.9	19.5	1.1	2.4	387	5.5	9.1	6.4	0.3	0.7	C22,C24
Gallbladder	21	0.4	0.5	0.4	0.0	0.0	30	0.4	0.7	0.5	0.0	0.1	C23
Pancreas	131	2.3	3.4	2.8	0.1	0.3	145	2.1	3.4	2.4	0.1	0.3	C25
Nose, sinuses etc.	16	0.3	0.4	0.3	0.0	0.0	13	0.2	0.3	0.2	0.0	0.0	C30-31
Larynx	93	1.6	2.4	1.9	0.1	0.2	8	0.1	0.2	0.1	0.0	0.0	C32
Trachea, Bronchus and lung	920	15.9	23.5	19.8	0.9	2.3	628	8.9	14.8	10.4	0.5	1.2	C33-34
Other thoracic organs	23	0.4	0.6	0.5	0.0	0.1	16	0.2	0.4	0.3	0.0	0.0	C37-38
Bone	30	0.5	0.8	0.8	0.1	0.1	20	0.3	0.5	0.5	0.0	0.0	C40-C41
Melanoma of skin	5	0.1	0.1	0.1	0.0	0.0	11	0.2	0.3	0.2	0.0	0.0	C43
Other skin	102	1.8	2.6	2.2	0.1	0.2	134	1.9	3.1	2.1	0.1	0.2	C44
Mesothelioma	2	0.0	0.0	0.0	0.0	0.0	2	0.0	0.1	0.0	0.0	0.0	C45
Kaposi's sarcoma	2	0.0	0.1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	44	0.8	1.1	1.0	0.1	0.1	46	0.6	1.1	0.8	0.1	0.1	C47,C49
Breast	17	0.3	0.4	0.4	0.0	0.0	2058	29.2	48.6	33.7	2.5	3.8	C50
Vulva							12	0.2	0.3	0.2	0.0	0.0	C51
Vagina							12	0.2	0.3	0.2	0.0	0.0	C52
Cervix uteri							455	6.5	10.8	7.4	0.5	0.8	C53
Corpus uteri							342	4.9	8.1	5.7	0.4	0.7	C54
Uterus unspecified							29	0.4	0.7	0.5	0.0	0.1	C55
Ovary							313	4.4	7.4	5.5	0.4	0.6	C56
Other female genital organs							6	0.1	0.1	0.1	0.0	0.0	C57
Placenta							6	0.1	0.1	0.1	0.0	0.0	C58
Penis	15	0.3	0.4	0.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C60
Prostate	554	9.6	14.1	12.8	0.3	1.6	0	0.0	0.0	0.0	0.0	0.0	C61
Testis	17	0.3	0.4	0.4	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C62
Other male genital organs	4	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C63
Kidney	100	1.7	2.6	2.1	0.1	0.2	55	0.8	1.3	0.9	0.1	0.1	C64
Renal pelvis	4	0.1	0.1	0.1	0.0	0.0	6	0.1	0.1	0.1	0.0	0.0	C65
Ureter	8	0.1	0.2	0.2	0.0	0.0	9	0.1	0.2	0.1	0.0	0.0	C66
Bladder	188	3.2	4.8	4.2	0.1	0.5	76	1.1	1.8	1.2	0.0	0.1	C67
Other urinary organs	2	0.0	0.1	0.0	0.0	0.0	2	0.0	0.0	0.0	0.0	0.0	C68
Eye	4	0.1	0.1	0.1	0.0	0.0	8	0.1	0.2	0.2	0.0	0.0	C69
Brain, nervous system	78	1.3	2.0	1.9	0.1	0.2	60	0.9	1.4	1.3	0.1	0.1	C70-72
Thyroid	86	1.5	2.2	1.7	0.1	0.2	373	5.3	8.8	6.3	0.5	0.6	C73
Adrenal gland	4	0.1	0.1	0.1	0.0	0.0	9	0.1	0.2	0.2	0.0	0.0	C74
Other endocrine	7	0.1	0.2	0.2	0.0	0.0	3	0.0	0.1	0.1	0.0	0.0	C75
Hodgkin disease	21	0.4	0.5	0.5	0.0	0.0	11	0.2	0.3	0.2	0.0	0.0	C81
Non-Hodgkin lymphoma	189	3.3	4.8	4.1	0.2	0.4	192	2.7	4.5	3.4	0.2	0.4	C82-85,C96
Multiple myeloma	48	0.8	1.2	1.0	0.1	0.1	44	0.6	1.0	0.7	0.0	0.1	C90
Lymphoid leukemia	53	0.9	1.3	1.4	0.1	0.1	42	0.6	1.0	1.1	0.1	0.1	C91
Myeloid leukemia	53	0.9	1.4	1.2	0.1	0.1	41	0.6	1.0	0.8	0.0	0.1	C92-94
Leukemia unspecified	53	0.9	1.4	1.4	0.1	0.1	53	0.8	1.3	1.0	0.1	0.1	C95
Myelodysplastic disease	18	0.3	0.5	0.4	0.0	0.0	12	0.2	0.3	0.2	0.0	0.0	D45-D47
Other and unspecified	294	5.1	7.5	6.3	0.3	0.7	283	4.0	6.7	4.7	0.2	0.5	O&U
<b>All sites</b>	<b>5,785</b>	<b>100.0</b>	<b>147.7</b>	<b>124.7</b>	<b>6.1</b>	<b>14.3</b>	<b>7,042</b>	<b>100.0</b>	<b>166.3</b>	<b>117.8</b>	<b>7.2</b>	<b>13.0</b>	<b>ALL</b>

**Table 4.10.4** Percentage of morphologically verified and death certificate only cases, Bangkok

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	581	84.2	9.0	263	89.4	3.0	C00-C08
Oropharynx	168	92.9	3.6	34	97.1	0.0	C09-C10,C14
Nasopharynx	380	85.8	5.5	136	81.6	4.4	C11
Hypopharynx	133	91.7	0.8	13	69.2	0.0	C12-C13
Esophagus	473	81.2	3.6	73	83.6	1.4	C15
Stomach	381	76.1	3.4	430	75.3	4.2	C16
Small intestine	62	74.2	9.7	54	83.3	9.3	C17
Colon and rectum	2,736	84.3	5.0	2,246	84.0	5.6	C18-C21
Liver and bile duct	2,802	49.1	6.5	1,158	52.0	6.6	C22,C24
Gallbladder	62	53.2	9.7	91	60.4	8.8	C23
pancrease	394	60.2	19.5	435	59.5	22.3	C25
Nose,sinuses etc	48	83.3	0.0	38	89.5	5.3	C30-C31
Larynx	278	87.4	4.0	24	87.5	4.2	C32
Trachea, bronchus and lung	2,760	74.9	7.8	1,885	74.9	6.8	C33-C34
Other thoracic organs	68	85.3	1.5	47	76.6	4.3	C37-C38
Bone	90	88.9	0.0	61	80.3	0.0	C40-C41
Melanoma of skin	16	100.0	0.0	32	100.0	0.0	C43
Other skin	306	96.1	2.6	400	94.3	2.3	C44
Mesothelioma	5	100.0	0.0	7	100.0	0.0	C45
Kaposi sarcoma	6	100.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	133	90.2	6.0	137	89.8	4.4	C47,C49
Breast	50	96.0	0.0	6,174	89.8	1.6	C50
Vulva				35	80.0	0.0	C51
Vagina				37	89.2	2.7	C52
Cervix uteri				1,365	87.8	0.4	C53
Corpus uteri				1,027	93.8	1.9	C54
Uterus unspecified				86	80.2	15.1	C55
Ovary				940	83.2	5.2	C56
Other female genital organs				17	82.4	5.9	C57
Placenta				19	52.6	0.0	C58
Penis	45	93.3	0.0				C60
Prostate	1,661	89.6	1.3				C61
Testis	51	92.2	0.0				C62
Other male genital organs	12	83.3	8.3				C63
Kidney	300	84.7	0.0	166	81.3	0.0	C64
Renal pelvis	13	84.6	0.0	17	100.0	0.0	C65
Ureter	24	91.7	0.0	26	92.3	0.0	C66
Bladder	563	81.3	2.5	227	78.9	1.3	C67
Other urinary organs	7	42.9	14.3	6	50.0	33.3	C68
Eye	13	69.2	7.7	23	91.3	4.3	C69
Brain, nervous system	233	79.4	4.7	181	74.0	5.5	C70-C72
Thyroid	258	93.4	0.4	1,119	94.7	0.2	C73
Adrenal gland	13	61.5	30.8	26	76.9	11.5	C74
Other endocrine	20	60.0	25.0	9	77.8	11.1	C75
Hodgkin disease	62	100.0	0.0	33	100.0	0.0	C81
Non-Hodgkin lymphoma	566	100.0	0.0	577	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	143	100.0	0.0	131	100.0	0.0	C90
Leukemia	477	100.0	0.0	406	100.0	0.0	C91-C95
Myelodysplastic	53	100.0	0.0	35	100.0	0.0	D45-D47
Other and unspecified	883	50.7	23.1	849	51.5	17.9	O&U
<b>All sites</b>	<b>17,329</b>	<b>76.7</b>	<b>5.9</b>	<b>21,095</b>	<b>83.3</b>	<b>4.1</b>	<b>All</b>
<b>All sites without liver</b>	<b>14,527</b>	<b>82.0</b>	<b>5.8</b>	<b>19,937</b>	<b>85.1</b>	<b>3.9</b>	<b>All</b>

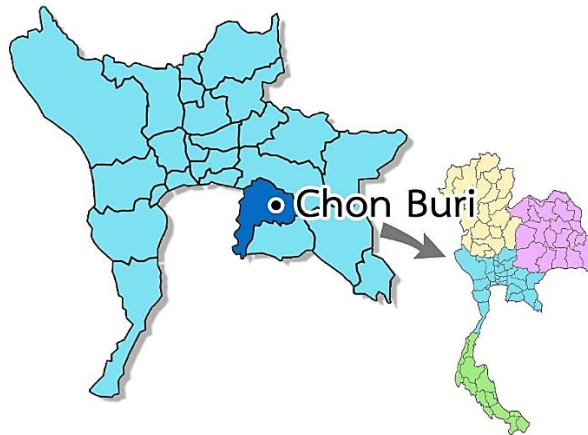
## 4.11 Chon Buri Cancer Registry

### Registration area

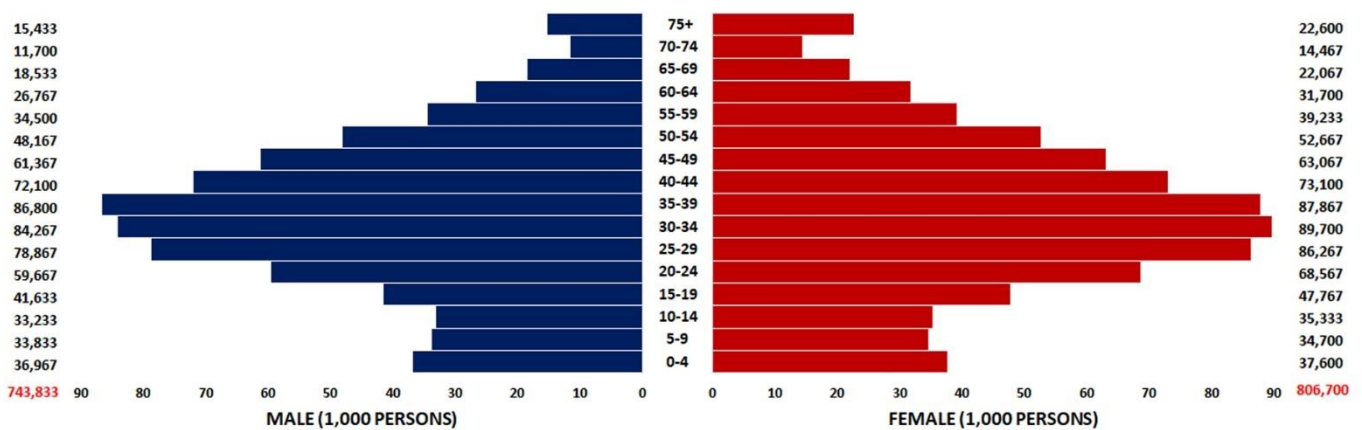
Chonburi is one of the eight provinces in the Eastern part of Thailand situated between 12° 30' - 13° 43' N and 100° 45' -101° 45' E. This province is far from Bangkok, 81 kilometers, about 200 meters above sea level. It covers 4,363 square kilometers and is bordered on the North by Chachoengsao, the South by Rayong, the East by Chachoengsao, Chanthaburi, Rayong, and the West by the Gulf of Thailand. The districts of Chon Buri were: Mueang Chonburi, Sri Racha, Ban Bueng, Nong Yai, Bang Lamung, Sattahip, Phan Thong, Phanat Nikhom, Bo Thong, Ko Sichang, and Ko Chan.

The central part of the province is predominantly mountainous, stretching from northwest to south-east, about 200 meters above sea level. The climate is hot and dry; the highest temperature is about 42 o C in summer from March to May, in winter from November to February, the rainy season started from June to October. The average total rainfall is 1,342.2 millimeters per year.

The estimated population in 2017 was 1,550,533 with 743,833 males and 806,700 females. The essential occupations are farming sugar beans, fishing, and shrimp farming. The Industrial Estate Authority of the Eastern part of Thailand is situated in this area. Nowadays, it is becoming appreciated for its tourism potential, especially Bang Saen, Ko Sichang, Pattaya.



Population pyramid Chon Buri  
estimated population in 2017 (2016 – 2018)



### **Cancer care facilities**

The total number of hospitals in Chonburi province was 36, composed of 14 community hospitals, 17 private hospitals, a provincial hospital, 3 military hospitals, and a university hospital, providing 5,697 total beds. Cancer diagnostic services, including radiological diagnosis equipment such as X-ray, ultrasound, Computed Tomography scan, mammogram, and pathological investigations, were available in Chonburi Provincial Hospital, private hospitals, and Chonburi Cancer Hospital. MRI was functional in Samitivej Sriracha Hospital, Chonburi UD Medical, Phayathai Sriracha Hospital, Bangkok Pattaya Hospital, Queen Savangvadthana Memorial Hospital, and Burapha University Hospital. Radiotherapy was available only in Chonburi Cancer Hospital. Radiotherapy equipment consisted of Digital Simulator, Computed Tomography Simulator, Two Dimension Radiotherapy Treatment Planning, Three Dimension Radiotherapy Treatment Planning, Three Dimension for Intensity Modulated Radiotherapy Treatment Planning, Cobalt-60 machine, linear accelerator (LINAC), and Remote After-Loading Devices for Brachytherapy. Cancer surgery and chemotherapy services were provided in Chonburi Cancer Hospital, Chonburi Provincial Hospital, and private hospitals.

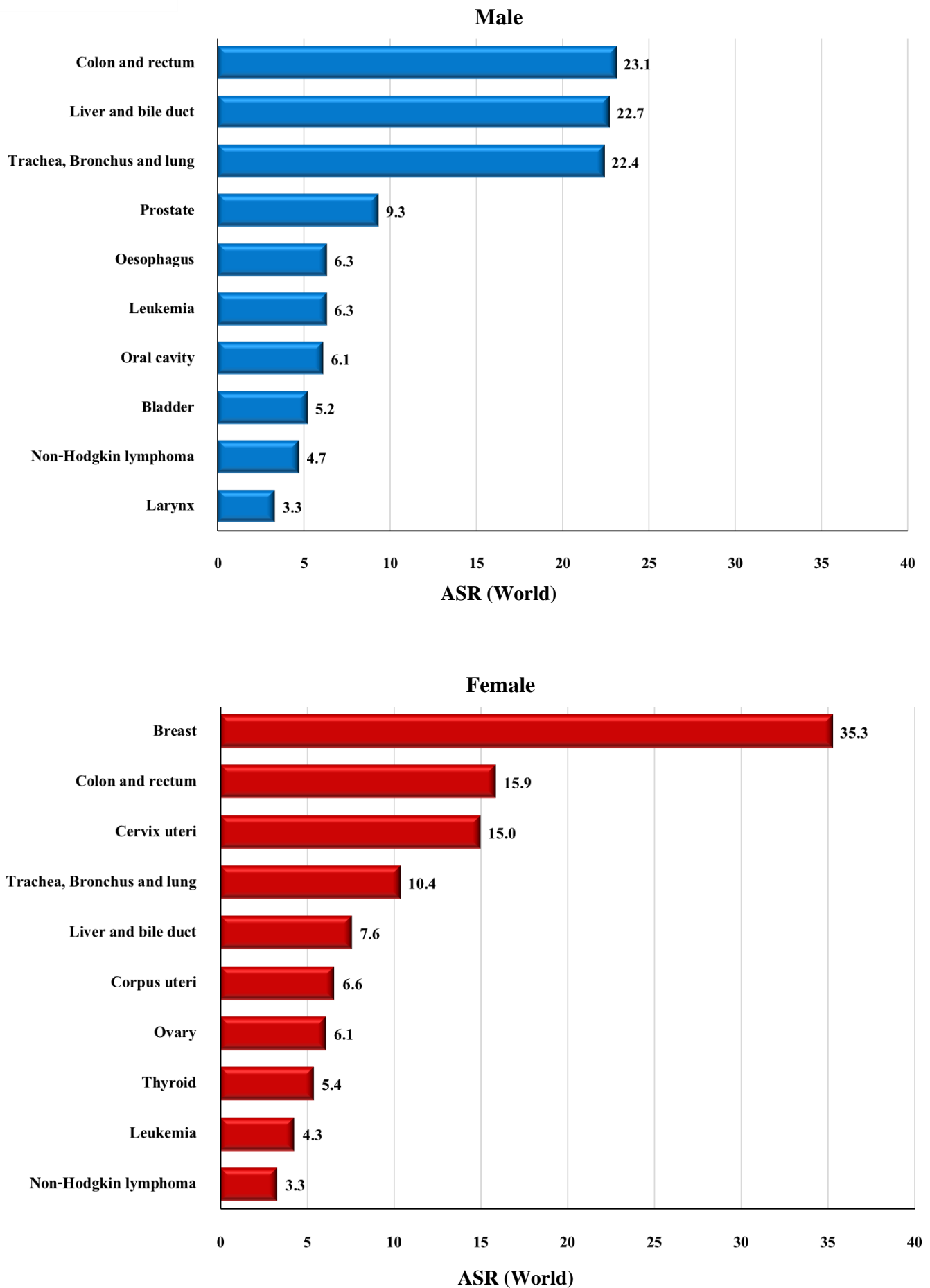
### **Registry procedures**

All data on cancer patients were collected by a mixture of passive and active methods involving notification by the staff of all hospitals in Chonburi. In addition, new cancer cases were collected from outpatient departments, wards, radiotherapy unit, surgery unit, cytology unit, hematology unit, medical record, pathological unit, and autopsy service. The data information collected includes demographic details for each cancer patient that consists of: registry number, name, residential address, date of birth, age, sex, date of diagnosis, site of cancer, histology of cancer, staging, the extension of disease, method of diagnosis, treatment, date of last contact and status of cancer patients (alive or dead). Multiple primary cases are checked by physicians using their original records and with any other physicians concerned. All cancer death certificates are matched with the incidence case records of the registry. Individuals certified as having died of cancer are registered as Death Certificate Only (DCO) cases if no other information about the individual can be traced from the different sources.

### **Summary of results**

New cases registered in 2017; 1,112 were males and 1,300 were females, making 2,412 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 146.0 per 100,000, with colon and rectum cancer ranks first (ASR = 23.1) followed by liver and bile duct (ASR =22.7) and trachea, bronchus and lung (ASR =22.4). The ASR of all cancer sites in females was 136.9 per 100,000, three leading cancer sites being breast (ASR = 35.3), colon and rectum (ASR =15.9) and cervix uteri (ASR =15.0).

**Figure 4.11.1** Leading cancer in Chon Buri (mean annual ASR 2016-2018)



**Table 4.11.1** Chon Buri (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	1.0	0.0	0.0	2.8	0.0	0.1	0.1	C00	0.0	0.0
Tongue	27	0.9	0.0	0.0	0.0	0.0	0.8	0.0	0.8	3.7	4.9	11.8	15.5	7.5	10.8	14.2	17.3	3.6	3.2	C01-02	0.2	0.4
Mouth	17	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.9	2.7	4.8	10.6	7.5	10.8	8.5	23.8	2.3	2.2	C03-06	0.1	0.2
Salivary glands	5	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.5	1.4	1.9	0.0	5.4	8.5	2.2	0.6	0.6	C07-08	0.0	0.1
Tonsil	11	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.8	0.5	2.2	4.8	5.8	8.7	1.8	2.8	4.3	1.4	1.3	C09	0.1	0.1
Other oropharynx	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	4.8	4.8	1.2	3.6	2.8	4.3	0.9	0.8	C10	0.1	0.1	
Nasopharynx	28	0.0	0.0	0.0	0.8	0.6	0.8	2.4	2.7	4.2	10.3	9.0	9.7	11.2	5.4	8.5	4.3	3.8	3.1	C11	0.3	0.3
Hypopharynx	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	3.3	6.2	6.8	8.7	14.4	8.5	13.0	2.2	2.1	C12-13	0.1	0.2
Pharynx unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.2	1.8	2.8	2.2	0.2	0.2	0.2	C14	0.0	0.0
Oesophagus	50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	10.3	19.4	35.7	29.9	27.0	34.2	23.8	6.7	6.3	C15	0.5	0.8
Stomach	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.8	3.8	5.5	10.6	10.0	28.8	14.2	28.1	3.4	3.2	C16	0.2	0.4
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	2.9	1.2	3.6	5.7	2.2	0.4	0.5	0.5	C17	0.0	0.1
Colon	105	0.9	1.0	0.0	1.6	0.0	1.7	2.4	1.9	8.3	17.4	22.1	30.9	77.2	52.2	119.7	105.8	14.1	13.8	C18	0.8	1.7
Rectum	70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	3.7	8.1	19.4	33.8	48.6	50.4	42.7	77.8	9.5	9.1	C19-20	0.6	1.0
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.5	0.7	0.0	0.0	0.0	2.2	0.2	0.2	0.2	C21	0.0	0.0
Liver and bile duct	182	0.9	0.0	0.0	0.0	0.6	0.8	1.6	6.9	16.6	31.5	60.9	70.5	105.9	133.1	99.7	151.2	24.4	22.7	C22,C24	1.5	2.6
Gallbladder	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.9	1.2	3.6	5.7	10.8	0.6	0.6	C23	0.0	0.1
Pancreas	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.8	2.7	4.2	8.7	11.2	18.0	22.8	19.4	2.7	2.7	C25	0.1	0.3
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.8	0.5	1.1	0.0	1.0	2.5	0.0	2.8	4.3	0.5	0.4	C30-31	0.0	0.0
Larynx	24	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.9	1.6	3.5	14.5	21.2	23.4	22.8	17.3	3.3	3.3	C32	0.2	0.4
Trachea, Bronchus and lung	169	0.0	0.0	0.0	0.0	0.0	0.8	1.2	1.9	6.9	22.8	33.9	62.8	77.2	125.9	190.9	274.3	22.7	22.4	C33-34	1.0	2.6
Other thoracic organs	6	0.9	0.0	0.0	0.8	1.1	0.0	0.8	0.4	0.5	0.5	0.0	1.9	1.2	1.8	5.7	8.6	0.9	0.9	C37-38	0.0	0.1
Bone	7	0.0	0.0	5.0	0.8	2.2	0.0	1.2	0.0	0.5	0.0	0.7	1.0	0.0	1.8	5.7	2.2	0.9	1.1	C40-C41	0.1	0.1
Melanoma of skin	5	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.7	1.9	3.7	3.6	2.8	6.5	0.7	0.7	C43	0.0	0.1
Other skin	18	0.0	0.0	1.0	0.0	0.0	0.0	0.8	1.2	0.0	1.6	2.1	5.8	6.2	12.6	19.9	32.4	2.3	2.3	C44	0.1	0.3
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	12	0.9	1.0	0.0	0.0	0.0	0.8	1.2	0.4	0.0	1.1	3.5	3.9	5.0	9.0	5.7	13.0	1.6	1.6	C47,C49	0.1	0.2
Breast	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	2.8	2.9	1.2	7.2	0.0	2.2	0.7	0.6	C50	0.0	0.1
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	7	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	1.4	1.6	1.4	1.9	1.2	1.8	5.7	10.8	0.9	0.8	C60	0.0	0.1
Prostate	65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	2.1	19.3	19.9	71.9	99.7	170.6	8.7	9.3	C61	0.2	1.1
Testis	3	0.0	0.0	0.0	0.0	0.6	0.4	1.2	0.0	0.9	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	10	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.2	0.0	3.3	2.8	1.9	7.5	5.4	5.7	6.5	1.3	1.2	C64	0.1	0.1
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	2.8	2.2	0.1	0.1	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	2.8	0.0	0.1	0.1	C66	0.0	0.0
Bladder	38	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	5.4	3.5	13.5	14.9	34.2	31.3	90.7	5.2	5.2	C67	0.2	0.5
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	C68	0.0	0.0
Eye	1	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.1	0.3	C69	0.0	0.0
Brain, nervous system	11	1.8	2.0	1.0	0.8	0.0	0.4	0.8	1.2	0.5	2.7	1.4	2.9	5.0	3.6	2.8	4.3	1.4	1.6	C70-72	0.1	0.1
Thyroid	12	0.0	0.0	0.0	0.0	0.0	1.7	1.6	1.5	1.4	1.1	0.7	6.8	5.0	5.4	2.8	6.5	1.6	1.3	C73	0.1	0.1
Adrenal gland	1	1.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.2	0.4	C74	0.0	0.0
Hodgkin disease	4	0.0	0.0	3.0	1.6	0.0	0.4	0.4	0.4	0.5	0.0	0.7	1.9	0.0	0.0	0.0	0.0	0.5	0.6	C81	0.0	0.0
Non-Hodgkin lymphoma	35	0.0	2.0	2.0	1.6	1.1	2.5	1.2	1.5	2.8	4.3	6.2	13.5	10.0	21.6	42.7	25.9	4.7	4.7	C82-85,C96	0.2	0.6
Multiple myeloma	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.4	1.6	2.8	4.8	3.7	7.2	5.7	4.3	1.3	1.1	C90	0.1	0.1
Lymphoid leukemia	13	9.0	4.9	4.0	2.4	1.1	0.0	0.4	0.0	0.9	0.5	0.0	1.9	1.2	5.4	5.7	8.6	1.8	2.9	C91	0.1	0.2
Myeloid leukemia	21	4.5	0.0	0.0	2.4	1.1	0.0	0.8	2.7	1.4	2.2	2.8	5.8	3.7	16.2	11.4	21.6	2.8	2.9	C92-94	0.1	0.3
Leukemia unspecified	3	1.8	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.5	0.5	0.0	0.0	1.2	3.6	0.0	2.2	0.4	0.5	C95	0.0	0.0
Myelodysplastic disease	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.5	5.4	5.7	4.3	0.4	0.5	0.5	D45-D47	0.0	0.1
Other and unspecified	45	0.0	1.0	0.0	0.8	0.0	0.8	0.4	1.5	2.8	4.9	13.1	15.5	26.2	19.8	42.7	64.8	6.1	5.9	O&U	0.3	0.6
<b>All sites</b>	<b>1,112</b>	<b>25.2</b>	<b>13.8</b>	<b>16.0</b>	<b>13.6</b>	<b>8.9</b>	<b>13.9</b>	<b>21.4</b>	<b>33.8</b>	<b>71.7</b>	<b>160.8</b>	<b>260.9</b>	<b>440.6</b>	<b>552.9</b>	<b>757.2</b>	<b>934.5</b>	<b>1,280.8</b>	<b>149.5</b>	<b>146.0</b>	<b>ALL</b>	<b>8.2</b>	<b>16.6</b>

**Table 4.11.2** Chon Buri (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	1.5	0.1	0.1	C00	0.0	0.0
Tongue	11	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	1.8	4.2	2.5	5.1	2.1	3.0	6.9	4.4	1.4	1.1	C01-02	0.1	0.1
Mouth	9	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.4	0.0	0.5	1.3	1.7	2.1	1.5	4.6	20.6	1.1	0.9	C03-06	0.0	0.1
Salivary glands	4	0.0	0.0	0.9	0.0	0.5	0.0	0.4	0.0	0.9	1.1	0.0	0.8	1.1	1.5	0.0	1.5	0.5	0.4	C07-08	0.0	0.0
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	1.1	1.5	2.3	0.0	0.2	0.2	C09	0.0	0.0
Other oropharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C10	0.0	0.0
Nasopharynx	9	0.0	0.0	0.0	0.0	0.5	0.4	1.1	0.4	1.4	0.5	5.1	0.8	3.2	0.0	9.2	1.5	1.1	0.9	C11	0.0	0.1
Hypopharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C12-13	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14	0.0	0.0
Oesophagus	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	1.3	3.4	2.1	4.5	9.2	11.8	1.0	0.9	C15	0.0	0.1
Stomach	23	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.7	2.3	3.2	7.6	3.4	3.2	13.6	16.1	19.2	2.8	2.3	C16	0.1	0.3
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.8	1.1	1.5	0.0	2.9	0.2	0.2	C17	0.0	0.0
Colon	97	0.0	0.0	0.0	0.0	1.0	1.2	1.9	1.1	4.1	7.9	20.9	40.8	41.0	63.4	80.6	84.1	12.0	10.6	C18	0.6	1.3
Rectum	48	0.0	0.0	0.0	0.0	0.5	0.0	1.5	1.1	3.2	4.2	11.4	19.5	21.0	30.2	18.4	48.7	6.0	5.1	C19-20	0.3	0.6
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.0	0.0	2.9	0.2	0.2	C21	0.0	0.0
Liver and bile duct	71	1.8	0.0	0.0	0.0	0.0	0.0	0.7	1.5	2.3	6.3	13.9	25.5	23.1	42.3	48.4	92.9	8.7	7.6	C22,C24	0.4	0.8
Gallbladder	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	7.6	2.3	10.3	0.6	0.5	C23	0.0	0.1
Pancreas	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.5	2.1	2.5	3.4	8.4	10.6	16.1	17.7	2.0	1.8	C25	0.1	0.2
Nose, sinuses etc.	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.5	0.6	0.0	0.0	0.0	2.3	0.0	0.2	0.1	C30-31	0.0	0.0
Larynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	2.3	1.5	0.1	0.1	C32	0.0	0.0
Trachea, Bronchus and lung	97	0.0	0.0	0.0	0.0	0.4	1.1	4.2	6.4	10.6	18.4	28.9	50.5	63.4	57.6	95.9	12.1	10.4	10.4	C33-34	0.6	1.2
Other thoracic organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.5	1.3	0.0	0.0	1.5	0.0	1.5	0.3	0.2	C37-38	0.0	0.0
Bone	7	0.9	2.9	2.8	0.0	0.0	0.0	0.4	0.4	0.5	1.1	1.9	0.0	2.1	0.0	6.9	0.0	0.8	1.1	C40-C41	0.1	0.1
Melanoma of skin	4	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.7	4.2	0.0	0.0	7.4	0.5	0.4	C43	0.0	0.0
Other skin	27	0.9	0.0	0.0	0.0	0.0	0.0	0.4	1.1	1.8	1.1	3.2	8.5	11.6	10.6	11.5	48.7	3.4	2.9	C44	0.1	0.3
Mesothelioma	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.1	0.1	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	10	0.9	1.0	0.0	0.0	0.0	0.0	1.9	0.8	0.9	0.5	4.4	0.0	1.1	6.0	4.6	4.4	1.2	1.1	C47,C49	0.1	0.1
Breast	351	0.0	0.0	0.0	0.0	1.5	2.3	14.1	27.3	54.3	94.1	112.7	119.8	129.3	140.5	117.5	73.7	43.5	35.3	C50	2.8	4.1
Vulva	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	6.9	2.9	0.2	0.2	C51	0.0	0.0
Vagina	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.7	0.0	4.5	0.0	1.5	0.4	0.3	C52	0.0	0.0
Cervix uteri	151	0.0	0.0	0.0	0.0	1.0	3.5	10.0	14.4	25.5	34.9	41.8	39.1	50.5	54.4	59.9	50.1	18.8	15.0	C53	1.1	1.7
Corpus uteri	61	0.9	0.0	0.0	0.0	0.0	0.8	1.9	2.7	6.4	8.5	13.3	29.7	37.9	31.7	32.3	14.7	7.5	6.6	C54	0.5	0.8
Uterus unspecified	3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.5	0.5	0.6	0.8	0.0	0.0	2.3	2.9	0.4	0.3	C55	0.0	0.0
Ovary	57	0.0	0.0	1.9	2.8	1.5	1.5	1.9	1.9	6.4	12.7	21.5	21.2	22.1	18.1	25.3	11.8	7.1	6.1	C56	0.5	0.7
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.5	0.0	0.0	0.8	0.0	0.0	0.0	1.5	0.2	0.1	C57	0.0	0.0
Placenta	1	0.0	0.0	0.0	0.0	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	9	0.9	0.0	0.0	0.0	0.0	0.4	0.0	1.1	0.9	0.5	2.5	2.5	2.1	1.5	2.3	10.3	1.1	0.9	C64	0.1	0.1
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	2.3	2.9	0.2	0.1	C65	0.0	0.0
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	C66	0.0	0.0
Bladder	12	0.0	0.0	0.0	0.0	0.4	0.0	0.4	1.4	0.5	1.3	0.8	7.4	12.1	9.2	13.3	1.5	1.4	1.4	C67	0.1	0.2
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.8	1.1	0.0	0.0	0.0	0.0	0.1	0.1	C68	0.0	0.0
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.1	0.1	C69	0.0	0.0
Brain, nervous system	15	3.5	1.0	0.0	1.4	1.0	0.8	0.4	0.8	1.8	3.2	3.8	2.5	4.2	1.5	6.9	5.9	1.9	1.9	C70-72	0.1	0.2
Thyroid	56	0.0	0.0	0.9	2.8	3.4	5.0	7.8	7.6	8.7	10.0	8.2	15.3	10.5	13.6	9.2	16.2	7.0	5.4	C73	0.4	0.5
Adrenal gland	2	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.1	0.0	0.0	1.5	0.2	0.3	C74	0.0	0.0
Hodgkin disease	3	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.8	0.9	0.0	0.6	0.0	0.0	0.0	2.3	1.5	0.4	0.3	C81	0.0	0.0
Non-Hodgkin lymphoma	31	0.9	1.0	0.9	0.0	1.0	0.8	1.5	2.7	2.3	3.2	7.0	9.3	9.5	10.6	16.1	26.5	3.8	3.3	C82-85,C96	0.2	0.3
Multiple myeloma	7	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.0	0.0	1.3	5.9	0.0	4.5	11.5	4.4	0.9	0.8	C90	0.0	0.1
Lymphoid leukemia	9	8.0	1.9	0.0	0.7	1.0	0.4	0.0	0.0	0.0	0.0	1.3	0.8	2.1	6.0	0.0	2.9	1.1	1.7	C91	0.1	0.1
Myeloid leukemia	18	0.0	0.0	3.8	0.0	0.0	1.5	0.4	2.7	0.5	3.2	3.2	5.1	4.2	7.6	4.6	13.3	2.2	2.0	C92-94	0.1	0.2
Leukemia unspecified	4	2.7	0.0	0.0	0.0	0.5	0.0	0.0	0.4	0.0	0.5	0.0	0.8	2.1	1.5	2.3	0.0	0.5	0.6	C95	0.0	0.1
Myelodysplastic disease	3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.5	0.0	0.6	0.8	0.0	4.5	2.3	1.5	0.4	0.3	D45-D47	0.0	0.0
Other and unspecified	41	0.0	1.0	0.0	0.7	0.5	0.4	0.4	1.9	3.2	4.8	7.6	11.0	20.0	18.1	23.0	45.7	5.1	4.4	O&U	0.3	0.5
<b>All sites</b>	<b>1,300</b>	<b>23.0</b>	<b>8.6</b>	<b>12.3</b>	<b>8.4</b>	<b>15.1</b>	<b>20.9</b>	<b>50.2</b>	<b>81.6</b>	<b>140.9</b>	<b>222.5</b>	<b>327.8</b>	<b>416.3</b>	<b>483.7</b>	<b>596.7</b>	<b>640.6</b>	<b>787.6</b>	<b>161.2</b>	<b>136.9</b>	<b>ALL</b>	<b>9.1</b>	<b>15.2</b>

**Table 4.11.3** Mean annual incidence, Chon Buri, 2016-2018

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	
	(per 100,000)			(percent)			(per 100,000)			(percent)			
Lip	1	0.1	0.1	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C00
Tongue	27	2.4	3.6	3.2	0.2	0.4	11	0.8	1.4	1.1	0.1	0.1	C01-02
Mouth	17	1.6	2.3	2.2	0.1	0.2	9	0.7	1.1	0.9	0.0	0.1	C03-06
Salivary glands	5	0.4	0.6	0.6	0.0	0.1	4	0.3	0.5	0.4	0.0	0.0	C07-08
Tonsil	11	1.0	1.4	1.3	0.1	0.1	1	0.1	0.2	0.2	0.0	0.0	C09
Other oropharynx	7	0.6	0.9	0.8	0.1	0.1	0	0.0	0.0	0.0	0.0	0.0	C10
Nasopharynx	28	2.5	3.8	3.1	0.3	0.3	9	0.7	1.1	0.9	0.1	0.1	C11
Hypopharynx	17	1.5	2.2	2.1	0.1	0.2	0	0.0	0.0	0.0	0.0	0.0	C12-13
Pharynx unspecified	2	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	50	4.5	6.7	6.3	0.5	0.8	8	0.6	1.0	0.9	0.0	0.1	C15
Stomach	25	2.2	3.4	3.2	0.2	0.4	23	1.7	2.8	2.3	0.1	0.3	C16
Small intestine	3	0.3	0.4	0.5	0.0	0.1	2	0.2	0.2	0.2	0.0	0.0	C17
Colon	105	9.4	14.1	13.8	0.8	1.7	97	7.5	12.0	10.6	0.6	1.3	C18
Rectum	70	6.3	9.5	9.1	0.6	1.0	48	3.7	6.0	5.1	0.3	0.6	C19-20
Anus	2	0.1	0.2	0.2	0.0	0.0	2	0.1	0.2	0.2	0.0	0.0	C21
Liver and bile duct	182	16.3	24.4	22.7	1.5	2.6	71	5.4	8.7	7.6	0.4	0.8	C22,C24
Gallbladder	4	0.4	0.6	0.6	0.0	0.1	5	0.4	0.6	0.5	0.0	0.1	C23
Pancreas	20	1.8	2.7	2.7	0.1	0.3	16	1.3	2.0	1.8	0.1	0.2	C25
Nose, sinuses etc.	4	0.4	0.5	0.4	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C30-31
Larynx	24	2.2	3.3	3.3	0.2	0.4	1	0.1	0.1	0.1	0.0	0.0	C32
Trachea, Bronchus and lung	169	15.2	22.7	22.4	1.0	2.6	97	7.5	12.1	10.4	0.6	1.2	C33-34
Other thoracic organs	6	0.6	0.9	0.9	0.0	0.1	2	0.2	0.3	0.2	0.0	0.0	C37-38
Bone	7	0.6	0.9	1.1	0.1	0.1	7	0.5	0.8	1.1	0.1	0.1	C40-C41
Melanoma of skin	5	0.5	0.7	0.7	0.0	0.1	4	0.3	0.5	0.4	0.0	0.0	C43
Other skin	18	1.6	2.3	2.3	0.1	0.3	27	2.1	3.4	2.9	0.1	0.3	C44
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C45
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	12	1.1	1.6	1.6	0.1	0.2	10	0.7	1.2	1.1	0.1	0.1	C47,C49
Breast	5	0.4	0.7	0.6	0.0	0.1	351	27.0	43.5	35.3	2.8	4.1	C50
Vulva							2	0.2	0.2	0.2	0.0	0.0	C51
Vagina							3	0.2	0.4	0.3	0.0	0.0	C52
Cervix uteri							151	11.6	18.8	15.0	1.1	1.7	C53
Corpus uteri							61	4.7	7.5	6.6	0.5	0.8	C54
Uterus unspecified							3	0.2	0.4	0.3	0.0	0.0	C55
Ovary							57	4.4	7.1	6.1	0.5	0.7	C56
Other female genital organs							1	0.1	0.2	0.1	0.0	0.0	C57
Placenta							1	0.1	0.1	0.1	0.0	0.0	C58
Penis	7	0.6	0.9	0.8	0.0	0.1							C60
Prostate	65	5.8	8.7	9.3	0.2	1.1							C61
Testis	3	0.3	0.4	0.3	0.0	0.0							C62
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0							C63
Kidney	10	0.9	1.3	1.2	0.1	0.1	9	0.7	1.1	0.9	0.1	0.1	C64
Renal pelvis	1	0.1	0.1	0.1	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C65
Ureter	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C66
Bladder	38	3.4	5.2	5.2	0.2	0.5	12	0.9	1.5	1.4	0.1	0.2	C67
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C68
Eye	1	0.1	0.1	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C69
Brain, nervous system	11	1.0	1.4	1.6	0.1	0.1	15	1.2	1.9	1.9	0.1	0.2	C70-72
Thyroid	12	1.1	1.6	1.3	0.1	0.1	56	4.3	7.0	5.4	0.4	0.5	C73
Adrenal gland	1	0.1	0.2	0.4	0.0	0.0	2	0.1	0.2	0.3	0.0	0.0	C74
Hodgkin disease	4	0.4	0.5	0.6	0.0	0.0	3	0.2	0.4	0.3	0.0	0.0	C81
Non-Hodgkin lymphoma	35	3.1	4.7	4.7	0.2	0.6	31	2.4	3.8	3.3	0.2	0.3	C82-85,C96
Multiple myeloma	9	0.8	1.3	1.1	0.1	0.1	7	0.6	0.9	0.8	0.0	0.1	C90
Lymphoid leukemia	13	1.2	1.8	2.9	0.1	0.2	9	0.7	1.1	1.7	0.1	0.1	C91
Myeloid leukemia	21	1.9	2.8	2.9	0.1	0.3	18	1.4	2.2	2.0	0.1	0.2	C92-94
Leukemia unspecified	3	0.3	0.4	0.5	0.0	0.0	4	0.3	0.5	0.6	0.0	0.1	C95
Myelodysplastic disease	3	0.3	0.4	0.5	0.0	0.1	3	0.3	0.4	0.3	0.0	0.0	D45-D47
Other and unspecified	45	4.1	6.1	5.9	0.3	0.6	41	3.2	5.1	4.4	0.3	0.5	O&U
<b>All sites</b>	<b>1,112</b>	<b>100.0</b>	<b>149.5</b>	<b>146.0</b>	<b>8.2</b>	<b>16.6</b>	<b>1,300</b>	<b>100.0</b>	<b>161.2</b>	<b>136.9</b>	<b>9.1</b>	<b>15.2</b>	<b>ALL</b>

**Table 4.11.4** Percentage of morphologically verified and death certificate only cases, Chon Buri

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	149	94.6	1.3	73	93.2	4.1	C00-C08
Oropharynx	58	94.8	0.0	5	100.0	0.0	C09-C10,C14
Nasopharynx	85	94.1	2.4	27	85.2	3.7	C11
Hypopharynx	50	98.0	0.0	0	0.0	0.0	C12-C13
Esophagus	149	79.2	3.4	25	88.0	4.0	C15
Stomach	75	72.0	10.7	68	76.5	7.4	C16
Small intestine	10	90.0	0.0	6	66.7	0.0	C17
Colon and rectum	531	83.2	2.3	441	84.1	1.8	C18-C21
Liver and bile duct	545	14.9	13.2	212	20.8	9.4	C22,C24
Gallbladder	13	23.1	30.8	14	42.9	35.7	C23
pancrease	61	31.1	19.7	49	22.4	16.3	C25
Nose,sinuses etc	12	91.7	8.3	4	100.0	0.0	C30-C31
Larynx	73	87.7	5.5	3	100.0	0.0	C32
Trachea, bronchus and lung	507	62.9	10.1	292	72.3	7.2	C33-C34
Other thoracic organs	19	78.9	5.3	7	85.7	0.0	C37-C38
Bone	20	65.0	25.0	20	70.0	5.0	C40-C41
Melanoma of skin	16	100.0	0.0	12	100.0	0.0	C43
Other skin	53	92.5	3.8	82	93.9	0.0	C44
Mesothelioma	1	100.0	0.0	2	100.0	0.0	C45
Kaposi sarcoma	1	100.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	36	97.2	0.0	29	89.7	0.0	C47,C49
Breast	15	86.7	0.0	1,052	90.8	1.7	C50
Vulva				6	100.0	0.0	C51
Vagina				9	100.0	0.0	C52
Cervix uteri				454	90.3	2.4	C53
Corpus uteri				182	94.0	0.0	C54
Uterus unspecified				9	77.8	22.2	C55
Ovary				172	76.2	2.3	C56
Other female genital organs				4	75.0	25.0	C57
Placenta				2	50.0	0.0	C58
Penis	20	90.0	5.0				C60
Prostate	195	60.0	4.1				C61
Testis	9	100.0	0.0				C62
Other male genital organs	1	100.0	0.0				C63
Kidney	30	73.3	20.0	26	73.1	7.7	C64
Renal pelvis	3	66.7	0.0	4	50.0	0.0	C65
Ureter	2	50.0	0.0	1	0.0	100.0	C66
Bladder	115	80.9	0.9	37	81.1	5.4	C67
Other urinary organs	1	0.0	100.0	3	100.0	0.0	C68
Eye	3	66.7	33.3	2	100.0	0.0	C69
Brain, nervous system	32	75.0	9.4	45	68.9	2.2	C70-C72
Thyroid	36	94.4	0.0	169	93.5	0.0	C73
Adrenal gland	4	100.0	0.0	5	40.0	0.0	C74
Other endocrine	0	0.0	0.0	0	0.0	0.0	C75
Hodgkin disease	12	100.0	0.0	9	88.9	0.0	C81
Non-Hodgkin lymphoma	105	96.2	0.0	92	98.9	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	28	89.3	0.0	22	100.0	0.0	C90
Leukemia	111	100.0	0.0	91	100.0	0.0	C91-C95
Myelodysplastic	10	100.0	0.0	10	100.0	0.0	D45-D47
Other and unspecified	136	37.5	35.3	123	44.7	30.9	O&U
<b>All sites</b>	<b>3,332</b>	<b>66.8</b>	<b>7.5</b>	<b>3,900</b>	<b>81.5</b>	<b>3.9</b>	<b>All</b>
<b>All sites without liver</b>	<b>2,787</b>	<b>76.9</b>	<b>6.4</b>	<b>3,688</b>	<b>85.0</b>	<b>3.6</b>	<b>All</b>

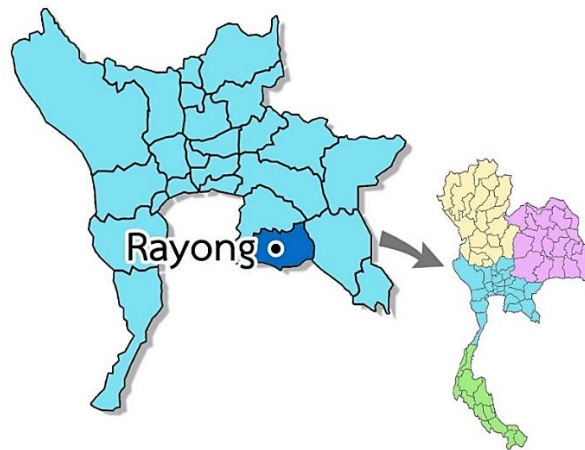
## 4.12 Rayong Cancer Registry

### Registration area

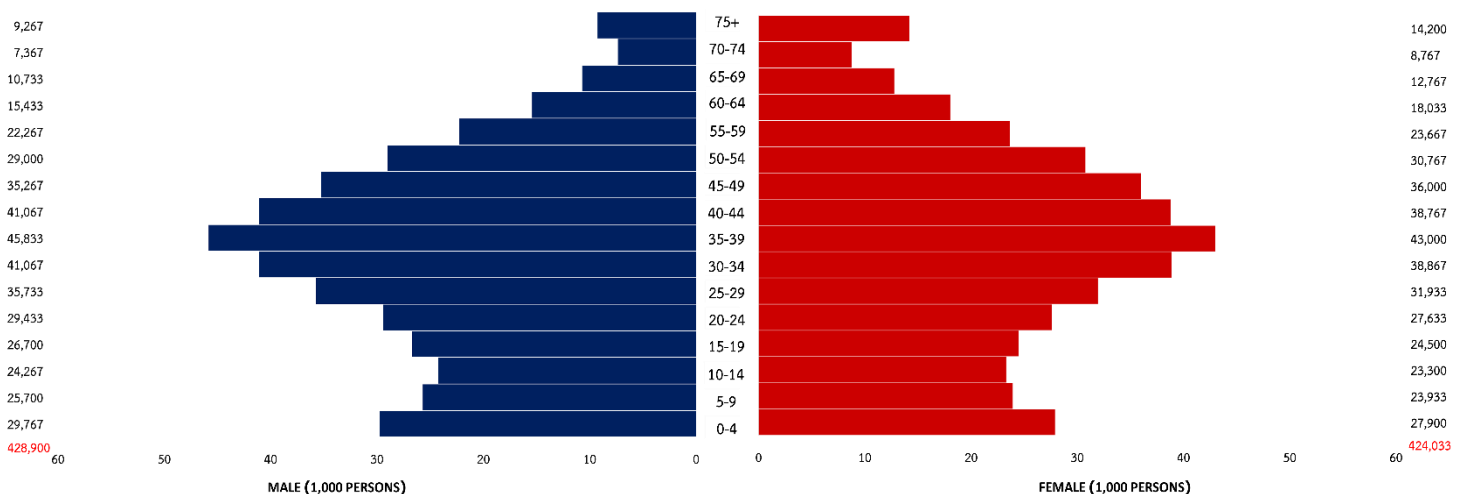
Rayong is one of the eight provinces in the Eastern part of Thailand, which situates between 12°-13° N and 101°-102° E. This province is far from Bangkok, 179 kilometers, 5 meters above sea level. It covers 3,552 square kilometers and is bordered on the North and the West by Chonburi, the East by Chanthaburi, and the South by the Gulf of Thailand.

The province comprises coastal plains, slopes, hilly land, mountains, and two major rivers that flow to the sea about 100 kilometers of seashore on the South. The climate is relatively warm. The highest temperature is about 38.7° C in summer from March to May, 17.8° C in winter from November to February. The rainy season started from May to October. The average total rainfall is 3,509.4 millimeters per year.

The estimated population in 2017 was 852,933 with 428,900 males and 424,033 females. The essential occupations are farming vegetables and fruits, fishing, shrimp, and farming. The Industrial Estate Authority of the Eastern part of Thailand is situated in Rayong since 1981. Many factories are contributing to the successful cultivation of fruits, especially durian, rambutan, mangosteen. Quiet and unspoiled beach, Mu Koh Samet National Park, is a famous beach for Rayong tourism.



Population pyramid Rayong  
estimated population in 2017 (2016 – 2018)



### Cancer care facilities

The total number of hospitals in Rayong province was 12, composed of 8 community hospitals, 3 private hospitals, and a provincial hospital, providing 1,225 total beds. The medical personals composed of 191 registered medical practitioners, 38 dentists, 76 pharmacists, and 1,117 nurses. Cancer diagnostic services, including radiological diagnosis equipment such as X-ray, ultrasound, mammography, Computed Tomography scan (CT scan), and pathological investigation, were available in Rayong Provincial Hospital and some private hospitals. MRI is functional only in Bangkok Rayong hospital. Cancer surgery and chemotherapy services were provided in both Rayong Provincial Hospital and private hospitals. Most of the cancer patients were referred to Chonburi Cancer Hospital for radiotherapy. All hospitals in the province provide palliative care.

### Registry procedures

The data of Rayong residents were extracted from the hospital-based cancer registry of Chonburi Cancer Hospital and a mixture of passively and actively collected data of all hospital in Rayong. New cancer cases were collected from outpatient departments, wards, surgery unit, cytology unit, hematology unit, medical record, pathological unit, and autopsy service. The data information collected includes demographic details for each cancer patient that consists of: registry number, name, residential address, date of birth, age, sex, date of diagnosis, site of cancer, histology of cancer, staging, the extension of disease, method of diagnosis, treatment, date of the last contact, and status of cancer patients (alive or dead). Multiple primary cases are checked by physicians using their original records and with any other physicians concerned. All cancer death certificates are matched with the incidence case records of the registry. Individuals certified as having died of cancer are registered as Death Certificate Only (DCO) cases if no other information about the individual can be traced from the different sources.

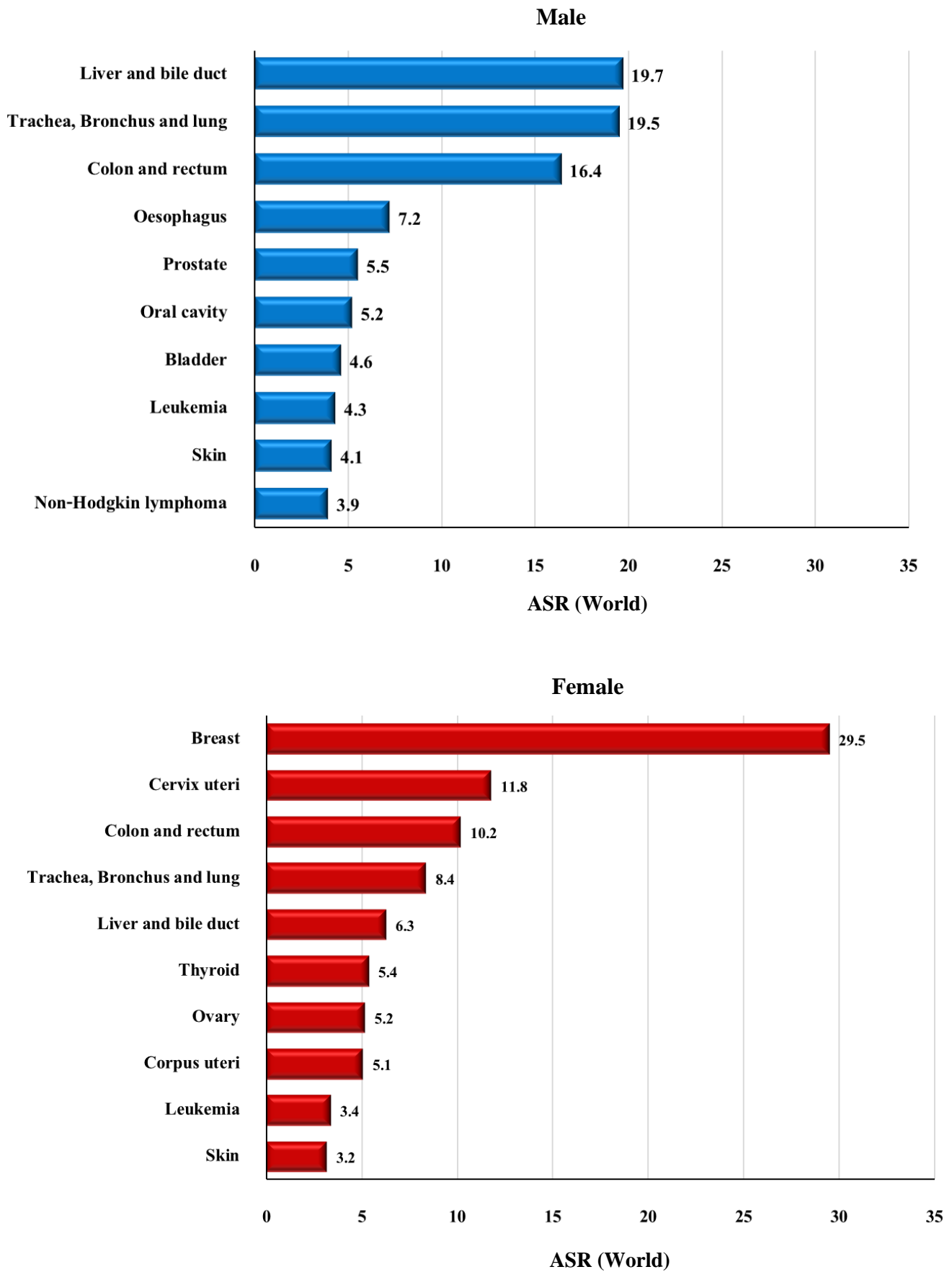
### Summary of results

New cases registered in 2017; 572 were males and 621 were females, making 1,193 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 125.7 per 100,000, with liver and bile duct cancer ranks first (ASR = 19.7) followed by trachea, bronchus and lung (ASR = 19.5) and colon and rectum (ASR = 16.4). The ASR of all cancer sites in females was 113.5 per 100,000, three leading cancer sites being breast (ASR = 29.5), cervix uteri (ASR = 11.8) and colon and rectum (ASR = 10.2).

### Remark

In this volume (Vol. X, 2016-2018), cancer incidence in Rayong dropped in both male and female compared with the Vol. VIII (2010-2012). We do not have the data of Rayong Cancer Registry in the Vol. IX. The incidence of male was 141.5 and 140.5 among female in Vol. VIII, in this volume the incidence among male was 125.7 and 113.5 among female even the new cases during 2016-2018 (3,578 cases) were similar to 2010-2012 period (3,566 cases), this due to change the definition of residential status. From Cancer in Thailand Vol. IX, the cancer registry working committee agree to use resident that indicated in ID card instead of using the resident that recorded in the hospital patient registration form. The different of resident in ID card and in hospital patient registration form could happen in the big city like in Bangkok that lots of people come from different places for work or continue their study. Rayong province become Thailand's hub for manufacturing for several kind of industrial particularly petrochemical for a few decades ago that why Rayong is one of province that have high immigrant people.

**Figure 4.12.1** Leading cancer in Rayong (mean annual ASR 2016-2018)



**Table 4.12.1** Rayong (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C00	0.0	0.0
Tongue	11	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	1.6	1.9	4.6	10.5	6.5	9.3	27.1	10.8	2.5	2.2	C01-02	0.1	0.3
Mouth	12	0.0	0.0	1.4	1.2	0.0	0.9	0.0	0.7	1.6	0.0	4.6	12.0	8.6	15.5	9.0	28.8	2.9	2.7	C03-06	0.2	0.3
Salivary glands	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.5	0.0	0.0	4.5	3.6	0.4	0.3	C07-08	0.0	0.0
Tonsil	9	0.0	0.0	1.4	0.0	0.0	0.9	0.8	0.0	1.6	2.8	6.9	6.0	8.6	3.1	0.0	10.8	2.0	1.8	C09	0.1	0.2
Other oropharynx	3	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.7	0.0	0.0	2.3	4.5	4.3	3.1	0.0	0.0	0.8	0.7	C10	0.1	0.1
Nasopharynx	11	0.0	0.0	0.0	1.2	1.1	0.0	0.8	2.9	3.2	8.5	1.1	7.5	0.0	15.5	0.0	3.6	2.5	2.0	C11	0.1	0.2
Hypopharynx	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	4.7	5.7	6.0	6.5	3.1	18.1	25.2	2.3	2.1	C12-13	0.1	0.2
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.2	0.0	0.0	7.2	0.3	0.3	C14	0.0	0.0
Oesophagus	33	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.5	1.6	12.3	11.5	26.9	47.5	40.4	31.7	39.6	7.7	7.2	C15	0.5	0.9
Stomach	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.9	3.4	13.5	17.3	12.4	45.2	46.8	4.0	3.8	C16	0.2	0.5
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.1	3.0	0.0	0.0	0.0	3.6	0.4	0.3	C17	0.0	0.0
Colon	46	0.0	0.0	0.0	1.2	0.0	0.9	2.4	2.2	4.1	9.5	13.8	34.4	36.7	71.4	58.8	100.7	10.8	10.1	C18	0.5	1.2
Rectum	28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.2	4.7	17.2	16.5	23.8	31.1	54.3	54.0	6.6	6.1	C19-20	0.3	0.8
Anus	1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	C21	0.0	0.0
Liver and bile duct	95	0.0	0.0	0.0	0.0	1.1	0.9	2.4	9.5	15.4	26.5	49.4	70.4	82.1	90.1	95.0	154.7	22.2	19.7	C22,C24	1.3	2.2
Gallbladder	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1	C23	0.0	0.0
Pancreas	14	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.9	5.7	15.0	19.4	24.8	9.0	14.4	3.2	3.0	C25	0.2	0.4
Nose, sinuses etc.	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	3.6	0.2	0.2	C30-31	0.0	0.0
Larynx	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	3.4	10.5	13.0	34.2	13.6	14.4	3.1	3.0	C32	0.2	0.4
Trachea, Bronchus and lung	85	0.0	0.0	0.0	1.2	0.0	0.0	0.0	3.6	1.6	12.3	20.7	61.4	84.2	142.9	167.4	190.6	19.8	19.5	C33-34	0.9	2.5
Other thoracic organs	1	0.0	0.0	0.0	1.2	0.0	0.9	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	3.6	0.3	0.3	C37-38	0.0	0.0
Bone	6	2.2	0.0	0.0	1.2	2.3	0.0	0.8	0.0	1.6	1.9	0.0	1.5	2.2	3.1	0.0	18.0	1.4	1.4	C40-C41	0.1	0.1
Melanoma of skin	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	2.2	0.0	4.5	7.2	0.4	0.4	C43	0.0	0.0
Other skin	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	4.7	2.3	4.5	15.1	21.7	18.1	68.3	3.8	3.7	C44	0.1	0.3
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.1	0.1	C45	0.0	0.0
Connective tissue	4	0.0	0.0	1.4	0.0	1.1	0.0	0.0	0.0	0.0	0.9	1.1	6.0	2.2	3.1	0.0	10.8	1.0	1.0	C47,C49	0.1	0.1
Breast	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.5	0.0	3.1	0.0	3.6	0.3	0.3	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.9	1.1	1.5	6.5	3.1	4.5	18.0	1.1	1.0	C60	0.1	0.1
Prostate	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	7.5	25.9	28.0	31.7	133.1	5.5	5.5	C61	0.2	0.5
Testis	1	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C62	0.0	0.0
Other male genital organs	1	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.2	0.2	C63	0.0	0.0
Kidney	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.8	0.9	0.0	3.0	4.3	9.3	9.0	7.2	1.2	1.1	C64	0.1	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.1	0.1	C65	0.0	0.0
Bladder	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.8	1.9	4.6	7.5	13.0	21.7	45.2	89.9	4.7	4.6	C67	0.1	0.5
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	1	0.0	1.3	0.0	0.0	0.0	0.9	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C69	0.0	0.0
Brain, nervous system	10	1.1	5.2	1.4	1.2	0.0	0.0	0.0	0.7	2.4	2.8	4.6	4.5	8.6	6.2	9.0	3.6	2.3	2.4	C70-72	0.2	0.2
Thyroid	7	0.0	0.0	0.0	0.0	0.0	0.9	0.8	2.2	2.4	1.9	3.4	3.0	4.3	6.2	0.0	3.6	1.6	1.2	C73	0.1	0.1
Adrenal gland	1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C74	0.0	0.0
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.1	0.1	C75	0.0	0.0
Hodgkin disease	2	0.0	1.3	0.0	2.5	1.1	0.0	0.0	0.0	0.8	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.5	0.6	C81	0.0	0.0
Non-Hodgkin lymphoma	18	1.1	0.0	0.0	0.0	2.3	1.9	0.8	0.0	3.2	4.7	6.9	13.5	19.4	12.4	31.7	10.8	4.1	3.9	C82-85,C96	0.3	0.5
Multiple myeloma	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	3.4	0.0	2.2	0.0	4.5	10.8	0.9	0.7	C90	0.0	0.1
Lymphoid leukemia	5	2.2	3.9	2.7	2.5	0.0	0.0	0.8	0.0	0.0	0.0	0.0	1.5	6.5	0.0	4.5	0.0	1.2	1.6	C91	0.1	0.1
Myeloid leukemia	8	2.2	1.3	1.4	1.2	0.0	0.0	2.4	1.5	2.4	0.9	0.0	6.0	2.2	3.1	9.0	3.6	1.8	1.7	C92-94	0.1	0.2
Leukemia unspecified	4	1.1	1.3	0.0	0.0	1.1	0.0	2.4	0.0	0.0	0.0	1.1	4.5	2.2	3.1	4.5	0.0	1.0	1.0	C95	0.1	0.1
Myelodysplastic disease	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.5	2.2	0.0	18.1	14.4	0.9	0.9	D45-D47	0.0	0.1
Other and unspecified	26	0.0	2.6	0.0	0.0	0.0	0.0	0.0	1.5	6.5	8.5	11.5	12.0	6.5	40.4	45.2	50.4	6.1	5.7	O&U	0.2	0.7
<b>All sites</b>	<b>572</b>	<b>11.2</b>	<b>18.2</b>	<b>11.0</b>	<b>15.0</b>	<b>11.3</b>	<b>9.3</b>	<b>17.0</b>	<b>35.6</b>	<b>64.1</b>	<b>128.5</b>	<b>197.7</b>	<b>381.7</b>	<b>492.4</b>	<b>661.5</b>	<b>782.8</b>	<b>1,172.7</b>	<b>133.4</b>	<b>125.7</b>	<b>ALL</b>	<b>7.0</b>	<b>14.2</b>

**Table 4.12.2** Rayong (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	2.6	3.8	14.1	0.7	0.5	C00	0.0	0.0
Tongue	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	1.9	0.0	1.4	3.7	5.2	3.8	0.0	0.8	0.6	C01-02	0.0	0.1
Mouth	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	3.3	2.8	7.4	5.2	11.4	9.4	1.7	1.3	C03-06	0.1	0.2
Salivary glands	2	0.0	0.0	0.0	0.0	0.0	1.0	1.7	0.0	0.9	0.0	0.0	0.0	3.7	2.6	0.0	0.0	0.6	0.5	C07-08	0.0	0.0
Tonsil	2	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	1.4	0.0	0.0	3.8	0.0	0.4	0.4	C09	0.0	0.0
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.2	0.1	C10	0.0	0.0
Nasopharynx	6	0.0	0.0	1.4	1.4	0.0	1.0	0.0	0.0	2.6	4.6	2.2	2.8	1.8	0.0	0.0	4.7	1.4	1.2	C11	0.1	0.1
Hypopharynx	2	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.9	0.0	1.4	0.0	0.0	0.0	4.7	0.4	0.4	0.3	C12-13	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.1	0.1	C14	0.0	0.0
Oesophagus	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.1	5.6	3.7	10.4	11.4	14.1	1.7	1.3	1.3	C15	0.1	0.2
Stomach	9	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	2.6	1.9	1.1	4.2	7.4	5.2	15.2	14.1	2.1	1.6	C16	0.1	0.2
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	3.7	0.0	0.0	4.7	0.6	0.4	C17	0.0	0.0
Colon	43	0.0	0.0	0.0	0.0	1.2	0.0	1.7	4.7	9.5	9.3	18.4	36.6	24.0	23.5	26.6	61.0	10.1	7.4	C18	0.5	0.8
Rectum	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.8	7.6	9.9	12.9	5.2	22.8	23.5	3.5	2.7	C19-20	0.2	0.3
Anus	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.1	0.0	0.0	0.0	0.0	2.3	0.2	0.1	C21	0.0	0.0
Liver and bile duct	34	1.2	0.0	0.0	0.0	0.0	0.0	0.9	2.3	1.7	6.5	13.0	19.7	20.3	36.6	57.0	49.3	7.9	6.3	C22,C24	0.3	0.8
Gallbladder	1	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.9	0.0	1.4	0.0	0.0	0.0	2.3	0.3	0.2	C23	0.0	0.0
Pancreas	8	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.9	3.3	1.4	1.8	7.8	3.8	25.8	1.8	1.3	C25	0.0	0.1
Nose, sinuses etc.	1	0.0	0.0	0.0	0.0	1.2	1.0	0.0	0.0	0.0	1.1	1.4	0.0	0.0	0.0	0.0	0.0	0.3	0.3	C30-31	0.0	0.0
Larynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.9	0.0	0.0	0.0	0.0	0.0	2.3	0.2	0.1	C32	0.0	0.0
Trachea, Bronchus and lung	46	0.0	0.0	0.0	0.0	0.0	1.0	0.9	2.3	2.6	10.2	7.6	32.4	33.3	47.0	68.4	79.8	10.8	8.4	C33-34	0.5	1.0
Other thoracic organs	1	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	2.6	3.8	0.0	0.3	0.3	C37-38	0.0	0.0
Bone	3	0.0	1.4	0.0	0.0	1.2	0.0	0.9	0.8	0.9	0.9	0.0	0.0	1.8	0.0	0.0	7.0	0.8	0.7	C40-C41	0.0	0.0
Melanoma of skin	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.1	0.0	C43	0.0	0.0
Other skin	19	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	0.9	6.5	9.9	1.8	23.5	15.2	61.0	4.4	3.2	C44	0.1	0.3
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Connective tissue	4	0.0	1.4	1.4	0.0	0.0	1.0	0.0	0.8	0.9	0.9	3.3	0.0	0.0	2.6	0.0	4.7	0.9	0.8	C47,C49	0.0	0.1
Breast	168	0.0	0.0	0.0	1.4	1.2	12.5	17.2	34.9	51.6	82.4	91.0	95.8	92.4	86.2	72.2	49.3	39.5	29.5	C50	2.4	3.2
Vulva	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	3.7	0.0	0.0	4.7	0.4	0.3	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C52	0.0	0.0
Cervix uteri	67	0.0	0.0	0.0	0.0	0.0	6.3	10.3	16.3	21.5	23.1	33.6	33.8	35.1	31.3	45.6	35.2	15.9	11.8	C53	0.9	1.3
Corpus uteri	27	0.0	0.0	0.0	1.4	0.0	1.0	1.7	3.1	6.0	7.4	10.8	25.4	20.3	31.3	19.0	4.7	6.4	5.1	C54	0.4	0.6
Uterus unspecified	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	2.6	0.0	9.4	0.6	0.4	0.4	C55	0.0	0.0
Ovary	28	0.0	0.0	0.0	1.4	0.0	4.2	1.7	3.1	6.9	13.0	10.8	14.1	27.7	10.4	26.6	9.4	6.5	5.2	C56	0.4	0.6
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	2.6	3.8	0.0	0.2	0.2	C57	0.0	0.0
Placenta	1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	5	1.2	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.1	1.4	1.8	2.6	11.4	4.7	1.1	1.1	C64	0.1	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C65	0.0	0.0
Bladder	5	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.9	1.1	0.0	3.7	10.4	3.8	11.7	1.2	0.9	C67	0.0	0.1
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.2	0.1	0.1	C68	0.0	0.0
Eye	1	1.2	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.2	0.3	C69	0.0	0.0
Brain, nervous system	7	0.0	1.4	1.4	0.0	2.4	1.0	0.9	0.8	1.7	0.9	2.2	5.6	5.5	2.6	0.0	4.7	1.7	1.5	C70-72	0.1	0.1
Thyroid	28	0.0	0.0	1.4	5.4	6.0	8.4	7.7	7.8	3.4	11.1	8.7	9.9	11.1	10.4	3.8	9.4	6.5	5.4	C73	0.4	0.5
Adrenal gland	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C74	0.0	0.0
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C75	0.0	0.0
Hodgkin disease	1	0.0	0.0	0.0	0.0	1.2	1.0	0.0	0.0	0.9	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.3	0.3	C81	0.0	0.0
Non-Hodgkin lymphoma	14	0.0	0.0	0.0	0.0	2.4	1.0	1.7	2.3	1.7	1.9	6.5	8.5	1.8	23.5	19.0	4.7	3.2	2.6	C82-85,C96	0.1	0.4
Multiple myeloma	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	3.3	1.4	1.8	5.2	3.8	7.0	1.0	0.8	C90	0.0	0.1
Lymphoid leukemia	3	2.4	0.0	1.4	0.0	0.0	0.0	0.9	0.0	0.9	0.0	0.0	1.4	3.7	0.0	0.0	0.0	0.6	0.7	C91	0.1	0.1
Myeloid leukemia	7	1.2	0.0	1.4	0.0	1.2	1.0	0.0	0.8	3.4	0.0	3.3	7.0	5.5	0.0	3.8	2.3	1.7	1.5	C92-94	0.1	0.1
Leukemia unspecified	5	2.4	1.4	1.4	0.0	0.0	1.0	0.0	0.8	0.9	0.9	2.2	4.2	0.0	2.6	0.0	2.3	1.2	1.2	C95	0.1	0.1
Myelodysplastic disease	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	3.7	0.0	3.8	4.7	0.5	0.4	D45-D47	0.0	0.0
Other and unspecified	19	0.0	0.0	1.4	0.0	1.2	2.1	0.0	1.6	4.3	2.8	5.4	8.5	5.5	15.7	38.0	32.9	4.6	3.6	O&U	0.2	0.4
<b>All sites</b>	<b>621</b>	<b>9.6</b>	<b>8.4</b>	<b>12.9</b>	<b>12.2</b>	<b>20.5</b>	<b>48.0</b>	<b>53.2</b>	<b>86.8</b>	<b>135.9</b>	<b>192.6</b>	<b>257.9</b>	<b>352.1</b>	<b>354.9</b>	<b>420.4</b>	<b>501.9</b>	<b>593.9</b>	<b>146.3</b>	<b>113.5</b>	<b>ALL</b>	<b>7.7</b>	<b>12.3</b>

**Table 4.12.3** Mean annual incidence, Rayong, 2016-2018

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude	ASR	Cum.	Rate.	No.Cases Year	Freq. (%)	Crude	ASR	Cum.	Rate.	
			rate	world	0-64	0-74			rate	world	0-64	0-74	
			(per 100,000)		(percent)				(per 100,000)		(percent)		
Lip	0	0.0	0.0	0.0	0.0	0.0	3	0.5	0.7	0.5	0.0	0.0	C00
Tongue	11	1.9	2.5	2.2	0.1	0.3	3	0.5	0.8	0.6	0.0	0.1	C01-02
Mouth	12	2.2	2.9	2.7	0.2	0.3	7	1.1	1.7	1.3	0.1	0.2	C03-06
Salivary glands	2	0.3	0.4	0.3	0.0	0.0	2	0.4	0.6	0.5	0.0	0.0	C07-08
Tonsil	9	1.5	2.0	1.8	0.1	0.2	2	0.3	0.4	0.4	0.0	0.0	C09
Other oropharynx	3	0.6	0.8	0.7	0.1	0.1	1	0.2	0.2	0.1	0.0	0.0	C10
Nasopharynx	11	1.9	2.5	2.0	0.1	0.2	6	1.0	1.4	1.2	0.1	0.1	C11
Hypopharynx	10	1.7	2.3	2.1	0.1	0.2	2	0.3	0.4	0.3	0.0	0.0	C12-13
Pharynx unspecified	1	0.2	0.3	0.3	0.0	0.0	0	0.1	0.1	0.1	0.0	0.0	C14
Oesophagus	33	5.8	7.7	7.2	0.5	0.9	7	1.1	1.7	1.3	0.1	0.2	C15
Stomach	17	3.0	4.0	3.8	0.2	0.5	9	1.4	2.1	1.6	0.1	0.2	C16
Small intestine	2	0.3	0.4	0.3	0.0	0.0	2	0.4	0.6	0.4	0.0	0.0	C17
Colon	46	8.1	10.8	10.1	0.5	1.2	43	6.9	10.1	7.4	0.5	0.8	C18
Rectum	28	5.0	6.6	6.1	0.3	0.8	15	2.4	3.5	2.7	0.2	0.3	C19-20
Anus	1	0.2	0.3	0.2	0.0	0.0	1	0.2	0.2	0.1	0.0	0.0	C21
Liver and bile duct	95	16.7	22.2	19.7	1.3	2.2	34	5.4	7.9	6.3	0.3	0.8	C22,C24
Gallbladder	1	0.1	0.2	0.1	0.0	0.0	1	0.2	0.3	0.2	0.0	0.0	C23
Pancreas	14	2.4	3.2	3.0	0.2	0.4	8	1.2	1.8	1.3	0.0	0.1	C25
Nose, sinuses etc.	1	0.1	0.2	0.2	0.0	0.0	1	0.2	0.3	0.3	0.0	0.0	C30-31
Larynx	13	2.3	3.1	3.0	0.2	0.4	1	0.2	0.2	0.1	0.0	0.0	C32
Trachea, Bronchus and lung	85	14.9	19.8	19.5	0.9	2.5	46	7.4	10.8	8.4	0.5	1.0	C33-34
Other thoracic organs	1	0.2	0.3	0.3	0.0	0.0	1	0.2	0.3	0.3	0.0	0.0	C37-38
Bone	6	1.0	1.4	1.4	0.1	0.1	3	0.5	0.8	0.7	0.0	0.0	C40-C41
Melanoma of skin	2	0.3	0.4	0.4	0.0	0.0	0	0.1	0.1	0.0	0.0	0.0	C43
Other skin	16	2.9	3.8	3.7	0.1	0.3	19	3.1	4.4	3.2	0.1	0.3	C44
Mesothelioma	0	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C45
Connective tissue	4	0.8	1.0	1.0	0.1	0.1	4	0.6	0.9	0.8	0.0	0.1	C47,C49
Breast	1	0.2	0.3	0.3	0.0	0.0	168	27.0	39.5	29.5	2.4	3.2	C50
Vulva							2	0.3	0.4	0.3	0.0	0.0	C51
Vagina							0	0.1	0.1	0.1	0.0	0.0	C52
Cervix uteri							67	10.8	15.9	11.8	0.9	1.3	C53
Corpus uteri							27	4.3	6.4	5.1	0.4	0.6	C54
Uterus unspecified							3	0.4	0.6	0.4	0.0	0.0	C55
Ovary							28	4.5	6.5	5.2	0.4	0.6	C56
Other female genital organs							1	0.2	0.2	0.2	0.0	0.0	C57
Placenta							1	0.1	0.2	0.1	0.0	0.0	C58
Penis	5	0.8	1.1	1.0	0.1	0.1							C60
Prostate	24	4.1	5.5	5.5	0.2	0.5							C61
Testis	1	0.2	0.2	0.2	0.0	0.0							C62
Other male genital organs	1	0.2	0.2	0.2	0.0	0.0							C63
Kidney	5	0.9	1.2	1.1	0.1	0.1	5	0.8	1.1	1.1	0.1	0.1	C64
Renal pelvis	0	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C65
Bladder	20	3.6	4.7	4.6	0.1	0.5	5	0.8	1.2	0.9	0.0	0.1	C67
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C68
Eye	1	0.2	0.2	0.2	0.0	0.0	1	0.2	0.2	0.3	0.0	0.0	C69
Brain, nervous system	10	1.7	2.3	2.4	0.2	0.2	7	1.2	1.7	1.5	0.1	0.1	C70-72
Thyroid	7	1.2	1.6	1.2	0.1	0.1	28	4.5	6.5	5.4	0.4	0.5	C73
Adrenal gland	1	0.2	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C74
Other endocrine	0	0.1	0.1	0.1	0.0	0.0	0	0.1	0.1	0.1	0.0	0.0	C75
Hodgkin disease	2	0.3	0.5	0.6	0.0	0.0	1	0.2	0.3	0.3	0.0	0.0	C81
Non-Hodgkin lymphoma	18	3.1	4.1	3.9	0.3	0.5	14	2.2	3.2	2.6	0.1	0.4	C82-85,C96
Multiple myeloma	4	0.6	0.9	0.7	0.0	0.1	4	0.7	1.0	0.8	0.0	0.1	C90
Lymphoid leukemia	5	0.9	1.2	1.6	0.1	0.1	3	0.4	0.6	0.7	0.1	0.1	C91
Myeloid leukemia	8	1.3	1.8	1.7	0.1	0.2	7	1.2	1.7	1.5	0.1	0.1	C92-94
Leukemia unspecified	4	0.8	1.0	1.0	0.1	0.1	5	0.8	1.2	1.2	0.1	0.1	C95
Myelodysplastic disease	4	0.6	0.9	0.9	0.0	0.1	2	0.3	0.5	0.4	0.0	0.0	D45-D47
Other and unspecified	26	4.6	6.1	5.7	0.2	0.7	19	3.1	4.6	3.6	0.2	0.4	O&U
<b>All sites</b>	<b>572</b>	<b>100.0</b>	<b>133.4</b>	<b>125.7</b>	<b>7.0</b>	<b>14.2</b>	<b>621</b>	<b>100.0</b>	<b>146.3</b>	<b>113.5</b>	<b>7.7</b>	<b>12.3</b>	<b>ALL</b>

**Table 4.12.4** Percentage of morphologically verified and death certificate only cases, Rayong

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	74	87.8	1.4	47	80.9	4.3	C00-C08
Oropharynx	40	85.0	0.0	9	77.8	11.1	C09-C10,C14
Nasopharynx	32	90.6	3.1	18	88.9	0.0	C11
Hypopharynx	30	93.3	0.0	5	100.0	0.0	C12-C13
Esophagus	99	97.0	1.0	21	85.7	4.8	C15
Stomach	51	78.4	13.7	27	74.1	3.7	C16
Small intestine	5	80.0	0.0	7	85.7	0.0	C17
Colon and rectum	228	93.4	0.9	176	86.9	2.8	C18-C21
Liver and bile duct	286	41.6	14.7	101	20.8	22.8	C22,C24
Gallbladder	2	50.0	0.0	4	50.0	0.0	C23
pancreas	41	36.6	12.2	23	17.4	13.0	C25
Nose,sinuses etc	2	100.0	0.0	4	100.0	0.0	C30-C31
Larynx	40	97.5	2.5	3	66.7	0.0	C32
Trachea, bronchus and lung	255	51.4	9.4	137	51.1	11.7	C33-C34
Other thoracic organs	4	50.0	0.0	4	50.0	25.0	C37-C38
Bone	18	44.4	38.9	10	50.0	30.0	C40-C41
Melanoma of skin	5	100.0	0.0	1	100.0	0.0	C43
Other skin	49	100.0	0.0	57	93.0	1.8	C44
Mesothelioma	1	100.0	0.0	0	0.0	0.0	C45
Kaposi sarcoma	0	0.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	13	69.2	15.4	12	91.7	0.0	C47,C49
Breast	4	100.0	0.0	503	93.2	1.2	C50
Vulva				5	100.0	0.0	C51
Vagina				1	100.0	0.0	C52
Cervix uteri				202	87.6	2.0	C53
Corpus uteri				81	92.6	0.0	C54
Uterus unspecified				8	50.0	25.0	C55
Ovary				83	67.5	3.6	C56
Other female genital organs				3	100.0	0.0	C57
Placenta				2	100.0	0.0	C58
Penis	14	85.7	0.0	0			C60
Prostate	71	84.5	1.4	0			C61
Testis	3	100.0	0.0	0			C62
Other male genital organs	3	66.7	0.0	0			C63
Kidney	16	56.3	6.3	14	57.1	7.1	C64
Renal pelvis	1	100.0	0.0	0	0.0	0.0	C65
Ureter	0	0.0	0.0	0	0.0	0.0	C66
Bladder	61	95.1	1.6	15	66.7	6.7	C67
Other urinary organs	0	0.0	0.0	2	0.0	0.0	C68
Eye	3	0.0	0.0	3	100.0	0.0	C69
Brain, nervous system	30	43.3	33.3	22	72.7	13.6	C70-C72
Thyroid	20	100.0	0.0	83	96.4	0.0	C73
Adrenal gland	3	66.7	0.0	0	0.0	0.0	C74
Other endocrine	1	0.0	100.0	1	100.0	0.0	C75
Hodgkin disease	6	100.0	0.0	4	100.0	0.0	C81
Non-Hodgkin lymphoma	53	100.0	0.0	41	97.6	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	11	100.0	0.0	13	100.0	0.0	C90
Leukemia	51	100.0	0.0	45	100.0	0.0	C91-C95
Myelodysplastic	11	100.0	0.0	6	100.0	0.0	D45-D47
Other and unspecified	79	39.2	36.7	58	39.7	32.8	O&U
<b>All sites</b>	<b>1,716</b>	<b>72.1</b>	<b>7.9</b>	<b>1,861</b>	<b>79.5</b>	<b>5.2</b>	<b>All</b>
<b>All sites without liver</b>	<b>1,430</b>	<b>78.2</b>	<b>6.6</b>	<b>1,760</b>	<b>82.8</b>	<b>4.1</b>	<b>All</b>

### 4.13 Surat Thani Cancer Registry

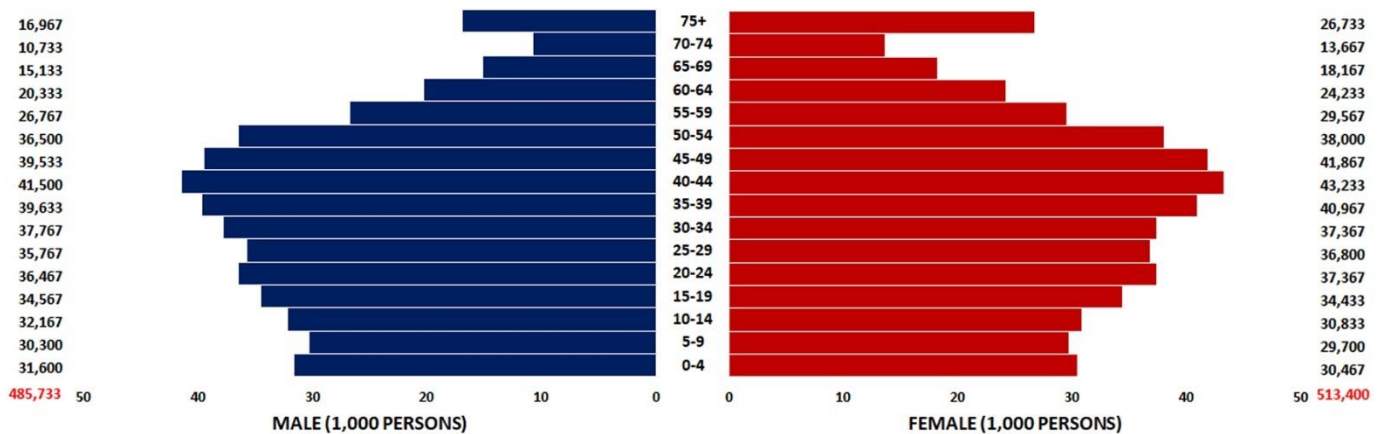
#### Registration area

Surat Thani Province is located in the eastern part of the South. with a variety of terrain, both highlands mountain landscape including the coastal plains Coastal plains, plateaus, and mountainous terrains cover area 40 % of the province's total area. To the north, it is bordered by Ranong, Chumphon and the Gulf of Thailand, the south is Krabi and Nakhon Si Thammarat, the east is Nakhon Si Thammarat and the Gulf of Thailand, and the west is Phang Nga. The estimated population in 2017 was 999,133 with 485,733 males and 513,400 females

Surat Thani Province is divided into 19 districts, 131 sub-districts, 1,074 villages. Most of the population is Buddhist. The main occupation is agriculture. It occupies approximately 45 percent of the total land area for agriculture. In addition, the occupation is livestock, fishery, industry, as well as mining.



Population pyramid Surat Thani  
estimated population in 2017 (2016 – 2018)



### Cancer care facilities

In Surat Thani Province Providing health care services in 20 community hospitals, one hospital in Surat Thani province, three private hospitals, one military hospital and one cancer hospital (Surat Thani Cancer Hospital). For cancer care, these hospitals have cancer diagnostic services. (Including CT scan, Clinical Consultation and radiological, Pathological investigations), oncology surgery, chemotherapy, and targeted therapy are available in Surat Thani Cancer Hospital and Surat Thani Provincial Hospital. Radiation therapy is only in Surat Thani Cancer Hospital. There was one simulator machine, one CT simulator, Two LINAC machines, one Cobalt-60 teletherapy machines, two treatment planning systems for 3D conformal radiation therapy and IMRT and one High Dose Rate machine for brachytherapy are provided in Surat Thani Cancer hospital. All hospitals in the province provide palliative care. However, some patients are referred to the National Cancer Institute. University Hospital in Songkhla Province (Songklanagarind Hospital) and Bangkok.

### Registry procedures

The registry unit is located within Surat Thani Cancer Hospital. The Surat Thani registry was established in 2001. The registration uses passive methods by notification from 20 sources of data consisting of cancer centers, general hospitals, community hospitals, private hospitals, university hospital. The registration uses passive methods by notification from 20 sources of data consisting of cancer centers, general hospitals, community hospitals, private hospitals, university hospital, and pathological laboratories.

Data collection consists of: registry number, name, residential address, date of birth, age, sex, date of diagnosis, site of cancer, histology of cancer, staging, extension of disease, method of diagnosis, treatment, date of last contact and vital status of cancer patients. The primary site and histology were coded according to ICD-O 3<sup>rd</sup> edition (*Fritz et al.*, 2013). Second primary cancer was also registered by multiple primary rule (IARC, 2004). Death certificates were obtained from Bureau of Policy and Strategy, Ministry of Public Health. The follow-up of all registered cases was carried out by passive methods with linking database of National Health Security office.

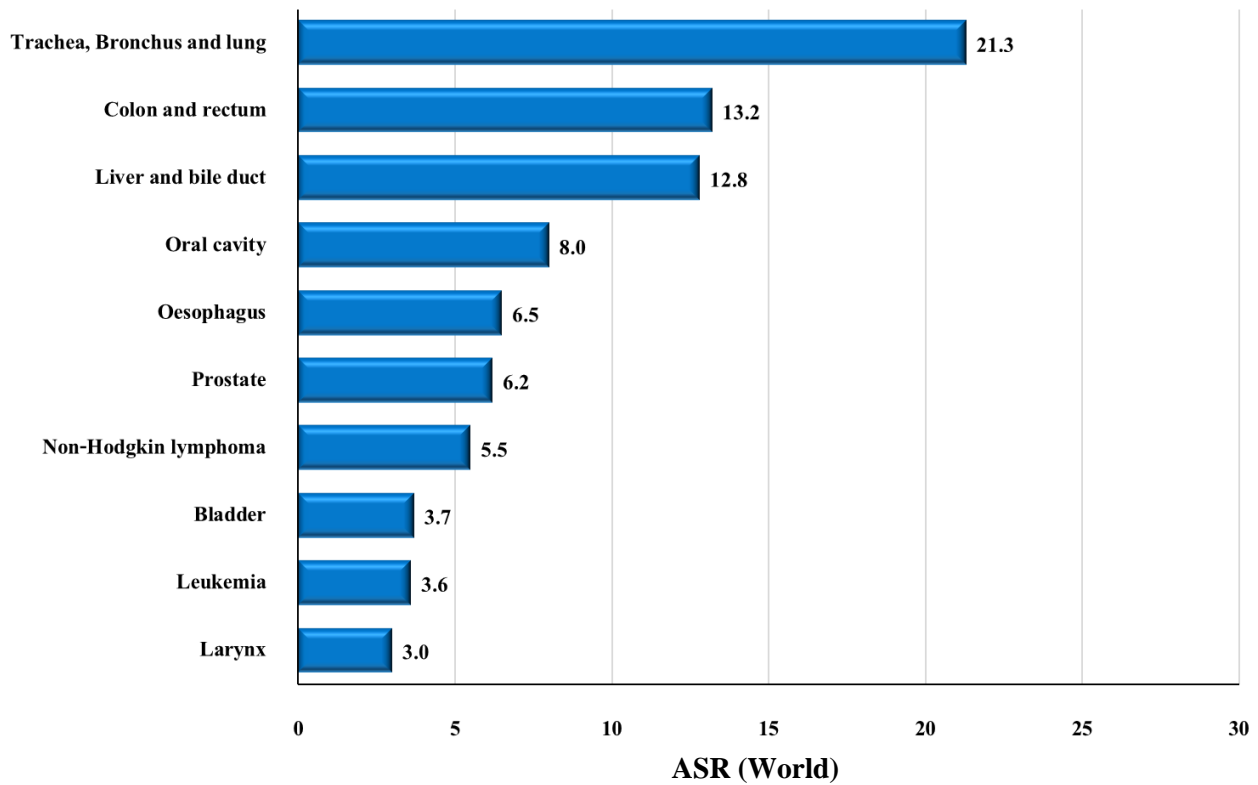
The completed data forms were checked manually and entered into the database file in a personal computer at Cancer Registry Unit of Surat Thani Cancer Hospital. CanReg5 software was using input, store, check and analyze cancer registry data. IARCcrgTools program was using validate data and quality control.

### Summary of results

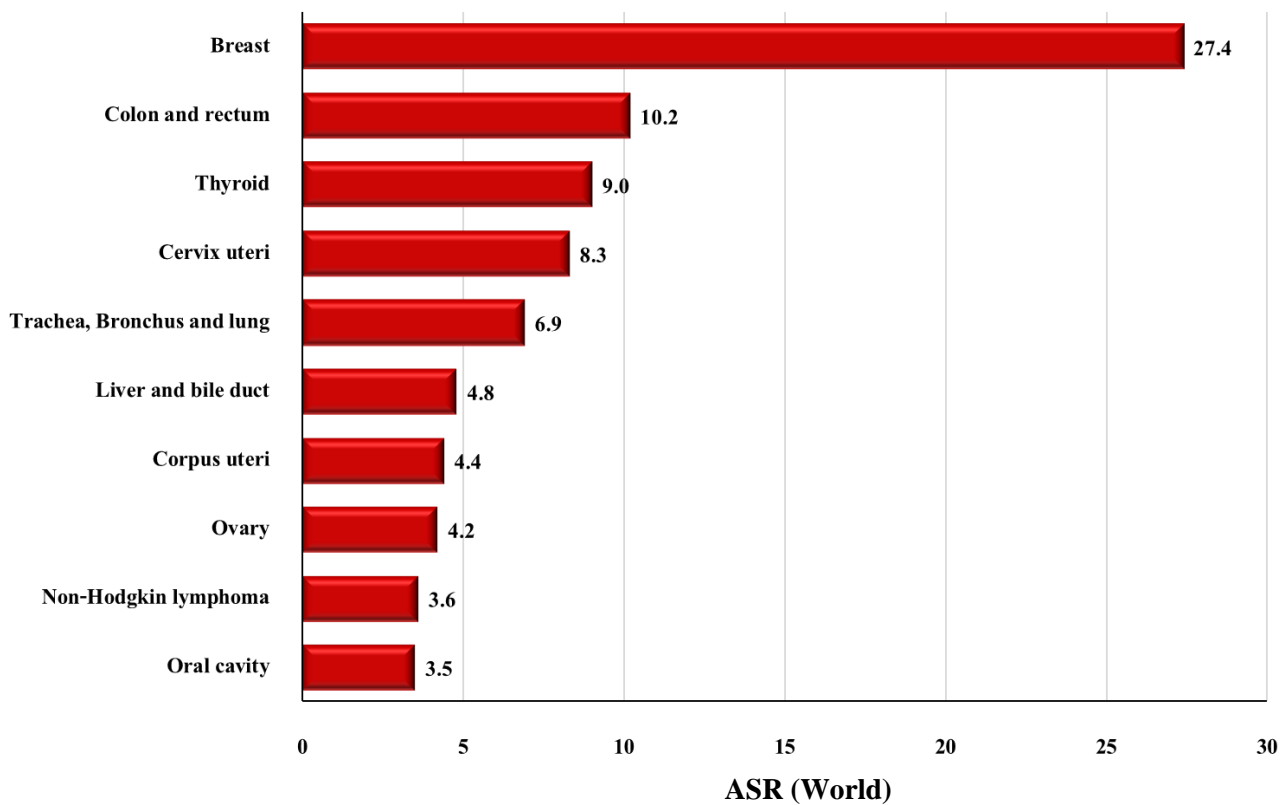
New cases registered in 2017; 703 were males and 728 were females, making 1,431 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 111.6 per 100,000, with trachea, bronchus and lung cancer ranks first (ASR = 21.3) followed by colon and rectum (ASR = 13.2), liver and bile duct (ASR = 12.8). The ASR of all cancer sites in females was 100.6 per 100,000, the three leading cancer sites being breast (ASR = 27.4), colon and rectum (ASR = 10.2) and Thyroid (ASR = 9.0).

**Figure 4.13.1** Leading cancer in Surat Thani (mean annual ASR 2016-2018)

### Male



### Female



**Table 4.13.1** Surat Thani (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C00	0.0	0.0
Tongue	25	0.0	0.0	0.0	0.0	1.8	0.0	4.4	2.5	2.4	5.1	6.4	10.0	8.2	11.0	31.1	39.3	5.1	3.8	C01-02	0.2	0.4
Mouth	22	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	3.2	5.9	6.4	11.2	14.8	11.0	28.0	31.4	4.6	3.5	C03-06	0.2	0.4
Salivary glands	4	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	2.5	0.9	1.2	1.6	2.2	3.1	5.9	0.8	0.6	C07-08	0.0	0.1
Tonsil	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.8	1.7	1.8	2.5	6.6	4.4	3.1	3.9	1.2	1.0	C09	0.1	0.1
Other oropharynx	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.8	0.8	2.7	2.5	1.6	2.2	0.0	3.9	0.9	0.6	C10	0.1	0.1
Nasopharynx	12	0.0	0.0	0.0	0.0	0.0	0.0	2.6	3.4	4.0	4.2	3.7	3.7	3.3	6.6	6.2	9.8	2.5	1.8	C11	0.1	0.2
Hypopharynx	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	3.4	0.0	8.7	14.8	11.0	18.6	23.6	3.0	2.4	C12-13	0.1	0.3
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	2.2	0.0	0.0	0.1	0.1	C14	0.0	0.0
Oesophagus	41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	4.0	10.1	19.2	29.9	26.2	39.6	15.5	43.2	8.5	6.5	C15	0.5	0.7
Stomach	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6	3.4	5.5	3.7	11.5	15.4	6.2	3.9	2.3	1.9	C16	0.1	0.2
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	1.6	2.2	0.0	5.9	0.6	0.4	C17	0.0	0.0
Colon	55	0.0	0.0	1.0	0.0	0.9	0.0	4.4	1.7	3.2	9.3	18.3	31.1	36.1	30.8	55.9	80.6	11.3	8.5	C18	0.5	1.0
Rectum	27	0.0	0.0	0.0	0.0	0.0	1.9	0.0	3.4	0.8	4.2	11.0	16.2	14.8	35.2	24.8	23.6	5.6	4.5	C19-20	0.3	0.6
Anus	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.5	0.0	0.0	3.1	0.0	0.3	0.2	C21	0.0	0.0
Liver and bile duct	82	0.0	0.0	0.0	0.0	0.0	0.0	5.3	4.2	7.2	26.1	35.6	48.6	44.3	48.5	77.6	86.4	17.0	12.8	C22,C24	0.9	1.5
Gallbladder	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	3.1	3.9	0.3	0.2	C23	0.0	0.0
Pancreas	10	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	1.6	0.8	3.7	3.7	1.6	6.6	9.3	21.6	2.0	1.4	C25	0.1	0.1
Nose, sinuses etc.	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.8	1.2	1.6	2.2	0.0	2.0	0.5	0.4	C30-31	0.0	0.0
Larynx	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6	2.5	3.7	13.7	11.5	11.0	31.1	27.5	3.9	3.0	C32	0.2	0.4
Trachea, Bronchus and lung	136	0.0	0.0	0.0	0.0	0.0	0.0	2.6	4.2	6.4	21.9	34.7	78.5	96.7	107.9	136.6	224.0	28.1	21.3	C33-34	1.2	2.4
Other thoracic organs	1	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.3	0.3	C37-38	0.0	0.0
Bone	6	0.0	0.0	0.0	2.9	0.0	0.0	0.9	0.8	2.4	1.7	0.9	1.2	3.3	4.4	0.0	3.9	1.2	1.0	C40-C41	0.1	0.1
Melanoma of skin	3	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	1.2	3.3	8.8	0.0	2.0	0.6	0.6	C43	0.0	0.1
Other skin	7	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.8	0.8	1.8	2.5	3.3	8.8	9.3	7.9	1.4	1.1	C44	0.1	0.1
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C46	0.0	0.0
Connective tissue	4	0.0	0.0	1.0	0.0	0.9	0.0	0.9	0.0	1.6	0.0	2.7	1.2	0.0	2.2	6.2	2.0	0.9	0.7	C47,C49	0.0	0.1
Breast	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.2	1.6	2.2	0.0	5.9	0.5	0.3	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	8	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.6	3.4	3.7	3.7	1.6	6.6	9.3	5.9	1.6	1.3	C60	0.1	0.2
Prostate	41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	6.4	8.7	21.3	41.9	52.8	115.9	8.5	6.2	C61	0.2	0.7
Testis	2	0.0	0.0	0.0	0.0	0.9	0.0	2.6	0.0	0.0	0.0	0.0	1.2	0.0	2.2	0.0	0.0	0.4	0.3	C62	0.0	0.0
Kidney	5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	2.7	3.7	3.3	2.2	0.0	5.9	1.0	0.8	C64	0.1	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.2	0.0	0.0	3.1	0.0	0.2	0.2	C66	0.0	0.0
Bladder	24	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	1.6	0.0	7.3	10.0	21.3	11.0	28.0	51.1	4.9	3.7	C67	0.2	0.4
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	3.1	0.0	0.1	0.1	C68	0.0	0.0
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	2.2	0.0	2.0	0.3	0.2	C69	0.0	0.0
Brain, nervous system	16	0.0	1.1	1.0	1.0	0.9	2.8	1.8	2.5	2.4	6.7	2.7	3.7	9.8	13.2	6.2	11.8	3.4	2.8	C70-72	0.2	0.3
Thyroid	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.8	0.8	3.7	6.2	1.6	4.4	9.3	3.9	1.4	1.1	C73	0.1	0.1
Adrenal gland	1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.1	0.1	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	3.1	0.0	0.3	0.3	C75	0.0	0.0
Hodgkin disease	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.7	3.7	0.0	1.6	2.2	0.0	2.0	0.7	0.5	C81	0.0	0.1
Non-Hodgkin lymphoma	35	0.0	1.1	0.0	0.0	0.9	1.9	3.5	4.2	9.6	10.1	11.0	14.9	13.1	22.0	24.8	35.4	7.2	5.5	C82-85,C96	0.4	0.6
Multiple myeloma	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	5.5	0.0	4.9	6.6	3.1	5.9	1.3	1.0	C90	0.1	0.1
Lymphoid leukemia	6	2.1	2.2	5.2	0.0	0.9	1.9	0.0	0.0	0.8	0.0	0.0	1.2	4.9	0.0	0.0	1.2	1.5	1.5	C91	0.1	0.1
Myeloid leukemia	8	1.1	0.0	0.0	1.9	0.0	0.9	0.9	0.0	0.8	0.0	0.9	3.7	8.2	8.8	3.1	7.9	1.6	1.5	C92-94	0.1	0.2
Leukemia unspecified	3	1.1	0.0	0.0	0.0	0.0	0.9	0.0	0.8	0.8	0.8	1.8	0.0	0.0	2.2	3.1	0.0	0.6	0.6	C95	0.0	0.1
Other and unspecified	29	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	3.2	5.1	7.3	14.9	27.9	22.0	28.0	39.3	6.0	4.6	O&U	0.3	0.5
<b>All sites</b>	<b>703</b>	<b>5.3</b>	<b>4.4</b>	<b>8.3</b>	<b>5.8</b>	<b>11.0</b>	<b>15.8</b>	<b>34.4</b>	<b>35.3</b>	<b>69.1</b>	<b>138.3</b>	<b>220.1</b>	<b>359.9</b>	<b>434.4</b>	<b>524.2</b>	<b>649.1</b>	<b>948.9</b>	<b>145</b>	<b>111.6</b>	<b>ALL</b>	<b>6.7</b>	<b>12.6</b>

**Table 4.13.2** Surat Thani (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	4	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.8	2.4	8.7	0.7	0.4	C00	0.0	0.0
Tongue	8	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.8	0.8	0.0	0.9	3.4	4.1	5.5	7.3	6.2	1.5	1.1	C01-02	0.1	0.1
Mouth	13	0.0	1.1	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	2.6	5.6	2.8	7.3	17.1	21.2	2.6	1.6	C03-06	0.1	0.2
Salivary glands	3	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.8	0.8	0.0	0.0	1.1	2.8	0.0	2.4	3.7	0.6	0.4	C07-08	0.0	0.0
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	2.4	1.2	0.3	0.2	C09	0.0	0.0
Other oropharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C10	0.0	0.0
Nasopharynx	6	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.8	1.5	1.6	4.4	0.0	2.8	0.0	0.0	5.0	1.1	0.7	C11	0.1	0.1
Hypopharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.1	0.0	C12-13	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14	0.0	0.0
Oesophagus	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	3.4	4.1	9.2	12.2	5.0	1.5	1.1	C15	0.1	0.2
Stomach	11	0.0	0.0	0.0	0.0	1.8	0.0	0.9	1.6	2.3	0.8	4.4	0.0	2.8	5.5	2.4	17.5	2.2	1.4	C16	0.1	0.1
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.1	1.4	1.8	2.4	1.2	0.5	0.3	C17	0.0	0.0
Colon	56	0.0	0.0	0.0	0.0	0.9	1.8	0.9	0.8	5.4	7.2	17.5	21.4	42.6	34.9	46.3	49.9	11.0	7.5	C18	0.5	0.9
Rectum	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	3.2	2.6	7.9	13.8	16.5	14.6	17.5	3.8	2.6	C19-20	0.2	0.3
Anus	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.9	0.0	0.0	0.0	0.0	1.2	0.2	0.1	C21	0.0	0.0
Liver and bile duct	41	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	3.9	3.2	9.6	13.5	13.8	18.3	48.8	62.3	8.0	4.8	C22,C24	0.2	0.6
Gallbladder	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	1.1	1.4	0.0	9.8	1.2	0.6	0.4	C23	0.0	0.1
Pancreas	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.8	4.5	8.3	1.8	0.0	11.2	1.5	0.9	C25	0.1	0.1
Nose, sinuses etc.	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.9	0.0	1.4	0.0	0.0	0.0	0.3	0.2	C30-31	0.0	0.0
Larynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	1.2	0.1	0.1	C32	0.0	0.0
Trachea, Bronchus and lung	56	0.0	0.0	0.0	0.0	0.0	0.9	1.8	1.6	0.0	9.6	9.6	24.8	31.6	25.7	56.1	72.3	10.9	6.9	C33-34	0.4	0.8
Other thoracic organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.2	0.2	0.1	C37-38	0.0	0.0
Bone	2	0.0	1.1	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	2.4	0.0	0.4	0.4	C40-C41	0.0	0.0
Melanoma of skin	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.8	0.0	1.1	2.8	0.0	2.4	1.2	0.5	0.4	C43	0.0	0.0
Other skin	15	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.5	0.8	2.6	4.5	0.0	9.2	14.6	29.9	3.0	1.7	C44	0.1	0.2
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.6	1.8	2.3	0.0	3.7	0.0	1.2	0.8	0.5	C47,C49	0.0	0.1
Breast	195	0.0	0.0	0.0	0.0	2.7	5.4	15.2	32.5	56.3	74.0	98.2	99.2	81.2	67.9	56.1	41.1	37.9	27.4	C50	2.3	2.9
Vulva	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	3.7	0.0	2.5	0.3	0.2	C51	0.0	0.0
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.8	0.9	0.0	1.4	0.0	0.0	0.0	0.3	0.2	C52	0.0	0.0
Cervix uteri	59	0.0	0.0	0.0	0.0	1.8	2.7	11.6	12.2	12.3	19.1	18.4	31.6	27.5	20.2	19.5	18.7	11.4	8.3	C53	0.7	0.9
Corpus uteri	30	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.9	1.5	5.6	13.2	22.5	23.4	25.7	9.8	6.2	5.9	4.4	C54	0.4	0.5
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C55	0.0	0.0
Ovary	28	0.0	0.0	0.0	1.9	2.7	4.5	1.8	4.1	6.2	8.0	11.4	9.0	13.8	12.8	9.8	7.5	5.4	4.2	C56	0.3	0.4
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Kidney	2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	1.1	0.0	1.8	2.4	0.0	0.5	0.4	C64	0.0	0.0
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.1	0.0	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	3.7	0.3	0.1	C66	0.0	0.0
Bladder	4	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.6	0.0	1.1	0.0	0.0	12.2	3.7	0.8	0.5	C67	0.0	0.1
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.1	0.1	C69	0.0	0.0
Brain, nervous system	13	0.0	1.1	0.0	1.0	0.0	0.0	1.8	4.1	5.4	0.8	3.5	6.8	2.8	3.7	7.3	7.5	2.6	1.9	C70-72	0.1	0.2
Thyroid	59	0.0	0.0	0.0	3.9	7.1	13.6	16.9	14.6	11.6	15.9	21.9	25.9	12.4	12.8	12.2	10.0	11.4	9.0	C73	0.7	0.8
Adrenal gland	0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C74	0.0	0.0
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.1	0.0	C75	0.0	0.0
Hodgkin disease	3	0.0	0.0	0.0	1.0	1.8	1.8	0.9	0.0	0.8	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.5	0.5	C81	0.0	0.0
Non-Hodgkin lymphoma	23	2.2	1.1	0.0	1.9	1.8	2.7	1.8	2.4	3.9	5.6	3.5	10.1	8.3	11.0	22.0	8.7	4.4	3.6	C82-85,C96	0.2	0.4
Multiple myeloma	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.8	2.3	0.0	3.7	2.4	1.2	0.6	0.4	C90	0.0	0.1
Lymphoid leukemia	4	1.1	1.1	1.1	1.9	0.0	0.0	0.0	0.0	0.0	0.8	0.9	0.0	1.4	3.7	2.4	2.5	0.8	0.9	C91	0.0	0.1
Myeloid leukemia	10	0.0	1.1	1.1	0.0	0.0	0.9	1.8	0.8	1.5	1.6	1.8	4.5	4.1	3.7	4.9	7.5	1.9	1.4	C92-94	0.1	0.1
Leukemia unspecified	1	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.1	0.1	C95	0.0	0.0
Other and unspecified	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.3	3.2	3.5	6.8	13.8	12.8	19.5	20.0	4.0	2.6	O&U	0.2	0.3
<b>All sites</b>	<b>728</b>	<b>5.5</b>	<b>6.7</b>	<b>2.2</b>	<b>14.5</b>	<b>23.2</b>	<b>38.0</b>	<b>60.7</b>	<b>88.7</b>	<b>128.0</b>	<b>169.6</b>	<b>250.0</b>	<b>319.1</b>	<b>327.4</b>	<b>328.4</b>	<b>426.8</b>	<b>465.1</b>	<b>142</b>	<b>100.6</b>	<b>ALL</b>	<b>7.2</b>	<b>10.9</b>

**Table 4.13.3** Mean annual incidence, Surat Thani, 2016-2018

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate  (per 100,000)	ASR world  (percent)	Cum. 0-64  (percent)	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate  (per 100,000)	ASR world  (percent)	Cum. 0-64  (percent)	Rate. 0-74	
Lip	0	0.0	0.1	0.1	0.0	0.0	4	0.5	0.7	0.4	0.0	0.0	C00
Tongue	25	3.5	5.1	3.8	0.2	0.4	8	1.1	1.5	1.1	0.1	0.1	C01-02
Mouth	22	3.2	4.6	3.5	0.2	0.4	13	1.8	2.6	1.6	0.1	0.2	C03-06
Salivary glands	4	0.6	0.8	0.6	0.0	0.1	3	0.5	0.6	0.4	0.0	0.0	C07-08
Tonsil	6	0.9	1.2	1.0	0.1	0.1	1	0.2	0.3	0.2	0.0	0.0	C09
Other oropharynx	4	0.6	0.9	0.6	0.1	0.1	0	0.0	0.0	0.0	0.0	0.0	C10
Nasopharynx	12	1.7	2.5	1.8	0.1	0.2	6	0.8	1.1	0.7	0.1	0.1	C11
Hypopharynx	15	2.1	3.0	2.4	0.1	0.3	0	0.0	0.1	0.0	0.0	0.0	C12-13
Pharynx unspecified	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	41	5.9	8.5	6.5	0.5	0.7	8	1.1	1.5	1.1	0.1	0.2	C15
Stomach	12	1.7	2.3	1.9	0.1	0.2	11	1.6	2.2	1.4	0.1	0.1	C16
Small intestine	3	0.4	0.6	0.4	0.0	0.0	2	0.3	0.5	0.3	0.0	0.0	C17
Colon	55	7.8	11.3	8.5	0.5	1.0	56	7.7	11.0	7.5	0.5	0.9	C18
Rectum	27	3.9	5.6	4.5	0.3	0.6	20	2.7	3.8	2.6	0.2	0.3	C19-20
Anus	1	0.2	0.3	0.2	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C21
Liver and bile duct	82	11.7	17.0	12.8	0.9	1.5	41	5.6	8.0	4.8	0.2	0.6	C22,C24
Gallbladder	2	0.2	0.3	0.2	0.0	0.0	3	0.4	0.6	0.4	0.0	0.1	C23
Pancreas	10	1.4	2.0	1.4	0.1	0.1	8	1.1	1.5	0.9	0.1	0.1	C25
Nose, sinuses etc.	3	0.4	0.5	0.4	0.0	0.0	1	0.2	0.3	0.2	0.0	0.0	C30-31
Larynx	19	2.7	3.9	3.0	0.2	0.4	1	0.1	0.1	0.1	0.0	0.0	C32
Trachea, Bronchus and lung	136	19.4	28.1	21.3	1.2	2.4	56	7.7	10.9	6.9	0.4	0.8	C33-34
Other thoracic organs	1	0.2	0.3	0.3	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C37-38
Bone	6	0.9	1.2	1.0	0.1	0.1	2	0.3	0.4	0.4	0.0	0.0	C40-C41
Melanoma of skin	3	0.4	0.6	0.6	0.0	0.1	3	0.4	0.5	0.4	0.0	0.0	C43
Other skin	7	0.9	1.4	1.1	0.1	0.1	15	2.1	3.0	1.7	0.1	0.2	C44
Kaposi's sarcoma	0	0.0	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	4	0.6	0.9	0.7	0.0	0.1	4	0.5	0.8	0.5	0.0	0.1	C47,C49
Breast	2	0.3	0.5	0.3	0.0	0.0	195	26.7	37.9	27.4	2.3	2.9	C50
Vulva	0	0.0	0.0	0.0	0.0	0.0	2	0.2	0.3	0.2	0.0	0.0	C51
Vagina							1	0.2	0.3	0.2	0.0	0.0	C52
Cervix uteri							59	8.1	11.4	8.3	0.7	0.9	C53
Corpus uteri							30	4.2	5.9	4.4	0.4	0.5	C54
Uterus unspecified							0	0.0	0.1	0.0	0.0	0.0	C55
Ovary							28	3.8	5.4	4.2	0.3	0.4	C56
Other female genital organs							0	0.0	0.1	0.0	0.0	0.0	C57
Placenta							0	0.0	0.1	0.0	0.0	0.0	C58
Penis	8	1.1	1.6	1.3	0.1	0.2							C60
Prostate	41	5.9	8.5	6.2	0.2	0.7							C61
Testis	2	0.3	0.4	0.3	0.0	0.0							C62
Kidney	5	0.7	1.0	0.8	0.1	0.1	2	0.3	0.5	0.4	0.0	0.0	C64
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C65
Ureter	1	0.1	0.2	0.2	0.0	0.0	1	0.2	0.3	0.1	0.0	0.0	C66
Bladder	24	3.4	4.9	3.7	0.2	0.4	4	0.5	0.8	0.5	0.0	0.1	C67
Other urinary organs	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C68
Eye	1	0.2	0.3	0.2	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C69
Brain, nervous system	16	2.3	3.4	2.8	0.2	0.3	13	1.8	2.6	1.9	0.1	0.2	C70-72
Thyroid	7	1.0	1.4	1.1	0.1	0.1	59	8.1	11.4	9.0	0.7	0.8	C73
Adrenal gland	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0	C74
Other endocrine	1	0.2	0.3	0.3	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C75
Hodgkin disease	3	0.5	0.7	0.5	0.0	0.1	3	0.4	0.5	0.5	0.0	0.0	C81
Non-Hodgkin lymphoma	35	5.0	7.2	5.5	0.4	0.6	23	3.1	4.4	3.6	0.2	0.4	C82-85,C96
Multiple myeloma	6	0.9	1.3	1.0	0.1	0.1	3	0.4	0.6	0.4	0.0	0.1	C90
Lymphoid leukemia	6	0.8	1.2	1.5	0.1	0.1	4	0.6	0.8	0.9	0.0	0.1	C91
Myeloid leukemia	8	1.1	1.6	1.5	0.1	0.2	10	1.3	1.9	1.4	0.1	0.1	C92-94
Leukemia unspecified	3	0.4	0.6	0.6	0.0	0.1	1	0.1	0.1	0.1	0.0	0.0	C95
Other and unspecified	29	4.2	6.0	4.6	0.3	0.5	20	2.8	4.0	2.6	0.2	0.3	O&U
<b>All sites</b>	<b>703</b>	<b>100.0</b>	<b>144.7</b>	<b>111.6</b>	<b>6.7</b>	<b>12.6</b>	<b>728</b>	<b>100.0</b>	<b>141.9</b>	<b>100.6</b>	<b>7.2</b>	<b>10.9</b>	<b>ALL</b>

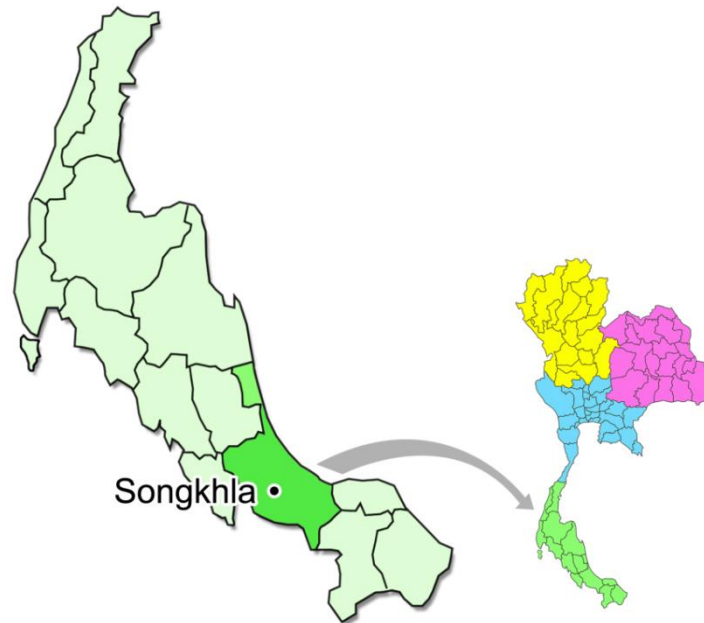
**Table 4.13.4** Percentage of morphologically verified and death certificate only cases, Surat Thani

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	154	86.4	0.0	84	96.4	0.0	C00-C08
Oropharynx	33	97.0	0.0	4	100.0	0.0	C09-C10,C14
Nasopharynx	36	88.9	2.8	17	88.2	5.9	C11
Hypopharynx	44	95.5	0.0	1	100.0	0.0	C12-C13
Esophagus	124	75.8	4.0	23	87.0	4.3	C15
Stomach	35	62.9	11.4	34	55.9	14.7	C16
Small intestine	9	88.9	0.0	7	71.4	14.3	C17
Colon and rectum	250	86.0	4.0	231	80.5	3.9	C18-C21
Liver and bile duct	247	32.0	16.6	123	33.3	16.3	C22,C24
Gallbladder	5	60.0	0.0	9	77.8	0.0	C23
pancrease	29	41.4	20.7	23	8.7	8.7	C25
Nose,sinuses etc	8	87.5	0.0	4	100.0	0.0	C30-C31
Larynx	57	75.4	7.0	2	0.0	50.0	C32
Trachea, bronchus and lung	409	58.2	13.9	168	54.2	15.5	C33-C34
Other thoracic organs	4	75.0	25.0	3	100.0	0.0	C37-C38
Bone	18	44.4	22.2	6	33.3	16.7	C40-C41
Melanoma of skin	9	88.9	0.0	8	100.0	0.0	C43
Other skin	20	90.0	5.0	46	93.5	2.2	C44
Mesothelioma	0	0.0	0.0	0	0.0	0.0	C45
Kaposi sarcoma	1	100.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	13	92.3	0.0	12	100.0	0.0	C47,C49
Breast	7	100.0	0.0	584	92.6	0.7	C50
Vulva				5	100.0	0.0	C51
Vagina				4	100.0	0.0	C52
Cervix uteri				176	89.8	0.0	C53
Corpus uteri				91	94.5	0.0	C54
Uterus unspecified				1	100.0	0.0	C55
Ovary				83	75.9	0.0	C56
Other female genital organs				1	100.0	0.0	C57
Placenta				1	0.0	0.0	C58
Penis	24	91.7	0.0				C60
Prostate	124	81.5	0.8				C61
Testis	6	100.0	0.0				C62
Other male genital organs	0	0.0	0.0				C63
Kidney	15	73.3	6.7	7	100.0	0.0	C64
Renal pelvis	0	0.0	0.0	1	100.0	0.0	C65
Ureter	3	100.0	0.0	4	100.0	0.0	C66
Bladder	72	88.9	0.0	12	75.0	0.0	C67
Other urinary organs	2	50.0	0.0	0	0.0	0.0	C68
Eye	4	100.0	0.0	2	100.0	0.0	C69
Brain, nervous system	49	44.9	8.2	40	47.5	17.5	C70-C72
Thyroid	21	90.5	0.0	176	98.3	0.0	C73
Adrenal gland	2	100.0	0.0	1	100.0	0.0	C74
Other endocrine	4	75.0	0.0	1	100.0	0.0	C75
Hodgkin disease	10	100.0	0.0	8	100.0	0.0	C81
Non-Hodgkin lymphoma	105	100.0	0.0	68	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	19	100.0	0.0	9	100.0	0.0	C90
Leukemia	50	100.0	0.0	44	100.0	0.0	C91-C95
Myelodysplastic	0	0.0	0.0	0	0.0	0.0	D45-D47
Other and unspecified	88	25.0	5.7	61	24.6	4.9	O&U
<b>All sites</b>	<b>2,110</b>	<b>70.2</b>	<b>6.9</b>	<b>2,185</b>	<b>80.7</b>	<b>3.8</b>	<b>All</b>
<b>All sites without liver</b>	<b>1,863</b>	<b>75.3</b>	<b>5.6</b>	<b>2,062</b>	<b>83.6</b>	<b>3.0</b>	<b>All</b>

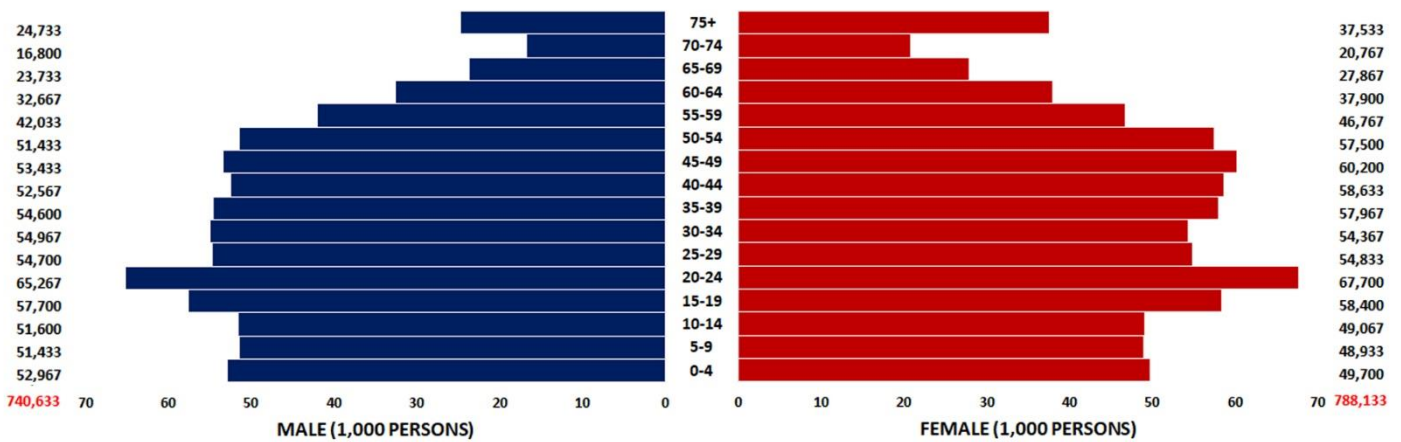
## 4.14 Songkhla Cancer Registry

### Registration area

Songkhla is one of 14 provinces located in the southern part of Thailand at latitude 07:12 N and longitude 100:36 E. The land area is 7,394 square kilometers and Songkhla registry covers 16 districts. The estimated population in 2017 was 1,528,766 with 740,633 males and 788,133 females. About 80% of the population is Buddhist, and nearly 20% are Muslims. Christians and others account of less than 1% of the population. People with Chinese blood live in Songkhla town and Hat Yai city, which are the economic centers of the south of Thailand.



Population pyramid Songkhla  
estimated population in 2017 (2016 – 2018)



## Cancer care facilities

The government of Thailand predominantly provides general health care in the region. There are three hospitals with over 500 beds, 13 community hospitals and an extensive network of health care facilities at the community level. Private practitioners, a few private hospitals, and a few small special hospitals, all in the urban area, supplement this. The university hospital of Prince of Songkla University is the biggest of the two places in the south of Thailand that provides radiotherapy services. A few other large hospitals also have facilities for cancer surgery and chemotherapy. Patients suspected of having cancer in the health care system and community hospitals are referred to Songkhla, Hat Yai or Songklanagarind hospitals.

## Registry procedures

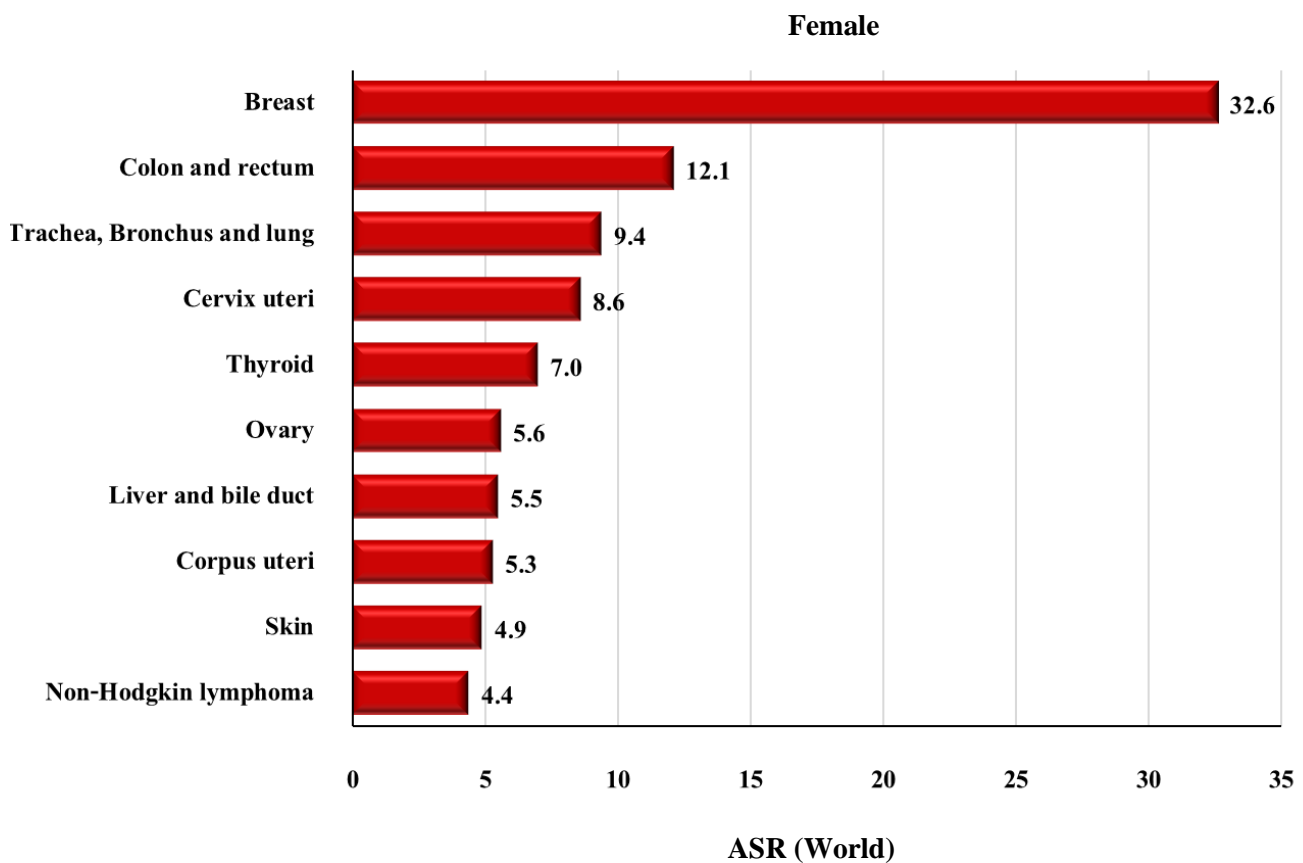
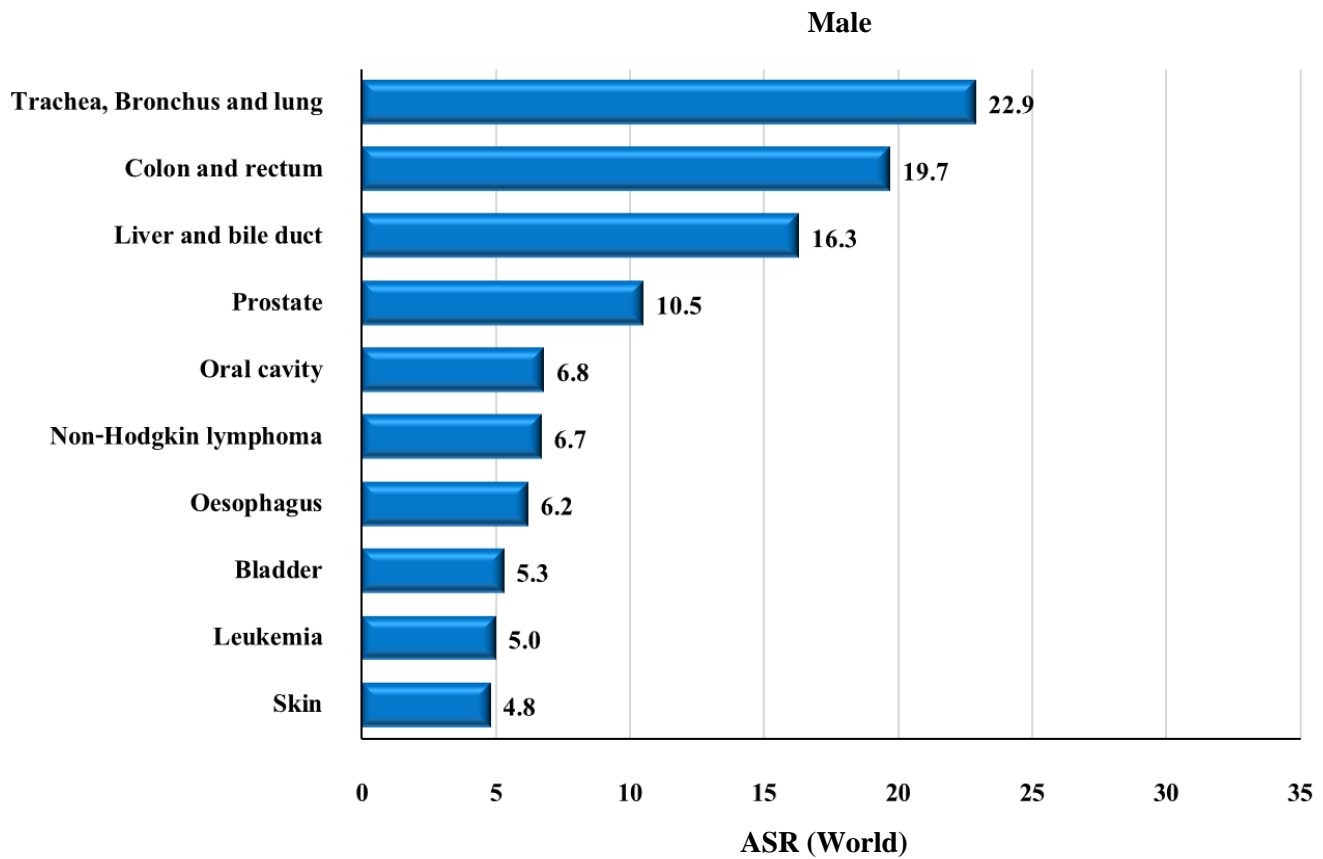
The registry is located within the Faculty of Medicine, Prince of Songkla University. The registry is staffed by two part-time medical doctors, a full-time nurse as a registrar and four full-time workers. The Songkhla registry undertakes active case finding from 17 sources of data consisting of Songklanagarind hospital, Hat Yai hospital, Songkhla hospital, community hospitals, private hospitals and the Bureau of Registration Administration, Department of Provincial Administration, Ministry of Interior. The completeness of death registration is acceptable but the cause of death is not so accurate, being mostly cardiopulmonary arrest and senility. After the national health care reform started in 2000, the validity of the death certificates has been improving. The hospital-based registry of the Songklanagarind hospital is also run by the registry staff and the data are shared with the registry of Songkhla. Hat Yai hospital has its own system of cancer case reporting but not a full-scale hospital-based cancer registry and provides the cases residing in Songkhla to the registry. The registry staff visit Hat Yai, Songkhla, and private hospitals and consult the medical records and pathology records. Assigned staff in community hospitals send the record forms of cancer cases to the registry once a year. They are regularly visited by registry staff to review procedures. Some cases are sent to the registry by the network of cancer registries in Thailand, especially the registry of Bangkok.

The number of undiagnosed and unregistered cancer cases is difficult to estimate. Some Muslims in a remote area in the south of Songkhla visit large hospitals in the two nearby provinces and some of them, especially the elderly, use traditional herbal medicines and never enter the health care system of the country. Because of the linkage between the referral system and the new national health assurance system, it is expected that only a small number of cancer patients in that remote area seek medical facilities outside the province. A few other cases look for special medical care in Bangkok, the capital of Thailand.

## Summary of results

New cases registered in 2017; 1,308 were males and 1,286 were females, making 2,594 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 140.2 per 100,000 in with trachea, bronchus and lung cancer ranking first (ASR = 22.9) followed by colon and rectum (ASR = 19.7), liver and bile duct (ASR = 16.3). The ASR of all cancer in females was 119.3 the three leading sites being breast (ASR = 32.6), colon and rectum (ASR = 12.1) and trachea, bronchus and lung (ASR = 9.4).

**Figure 4.14.1** Leading cancer in Songkhla (mean annual ASR 2016-2018)



**Table 4.14.1** Songkhla (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.0	1.4	2.0	1.3	0.3	0.2	C00	0.0	0.0
Tongue	34	0.0	0.0	0.0	0.0	0.5	0.6	0.6	3.1	0.6	5.6	8.4	10.3	22.4	12.6	17.9	24.3	4.6	3.6	C01-02	0.3	0.4
Mouth	22	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	2.5	5.6	3.2	7.1	6.1	11.2	13.9	24.3	3.0	2.3	C03-06	0.1	0.3
Salivary glands	7	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.6	0.0	1.2	1.9	0.8	5.1	2.8	2.0	4.0	0.9	0.7	C07-08	0.1	0.1
Tonsil	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.9	0.6	3.2	4.0	7.1	8.4	6.0	8.1	1.7	1.3	C09	0.1	0.2
Other oropharynx	6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.6	1.9	0.8	3.1	2.8	2.0	4.0	0.8	0.6	C10	0.0	0.1
Nasopharynx	20	0.0	0.0	0.0	0.6	1.0	1.8	1.2	5.7	4.4	4.5	5.6	12.2	7.0	0.0	2.7	2.7	2.3	2.3	C11	0.2	0.2
Hypopharynx	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	9.1	4.0	11.2	9.8	9.9	9.4	2.5	2.0	2.0	C12-13	0.1	0.2
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.4	0.0	1.3	0.1	0.1	0.1	C14	0.0	0.0
Oesophagus	57	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.8	10.6	12.3	15.9	34.7	35.1	33.7	43.1	7.7	6.2	6.2	C15	0.4	0.7
Stomach	27	0.0	0.0	0.0	0.0	0.0	0.6	0.6	1.2	1.9	3.7	3.2	7.9	14.3	21.1	4.0	31.0	3.7	2.9	C16	0.2	0.3
Small intestine	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.8	1.0	1.4	2.0	6.7	0.5	0.4	C17	0.0	0.0
Colon	105	0.0	0.0	0.0	0.6	0.0	0.6	4.2	1.2	8.9	6.9	13.0	26.2	41.8	74.4	103.2	109.2	14.2	11.2	C18	0.5	1.4
Rectum	74	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.8	3.8	4.4	13.0	27.8	36.7	54.8	55.6	63.3	10.0	7.9	C19-20	0.4	1.0
Anus	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	1.9	0.6	0.8	2.0	1.4	4.0	5.4	0.8	C21	0.0	0.1
Liver and bile duct	151	1.9	0.0	0.0	0.6	0.0	1.2	1.8	4.3	18.4	18.7	42.8	63.4	67.3	85.7	79.4	88.9	20.4	16.3	C22,C24	1.1	1.9
Gallbladder	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.4	0.0	5.4	0.3	0.2	C23	0.0	0.0
Pancreas	16	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.9	1.9	4.5	3.2	6.1	8.4	9.9	17.5	2.2	1.7	C25	0.1	0.2
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.6	0.6	2.6	0.8	1.0	0.0	2.0	1.3	0.5	0.4	C30-31	0.0	0.0
Larynx	33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.3	6.9	6.5	14.3	16.3	16.9	21.8	22.9	4.4	3.5	C32	0.2	0.4
Trachea, Bronchus and lung	218	0.6	0.0	0.0	0.0	1.0	0.0	1.8	3.1	10.1	20.6	37.6	59.5	91.8	150.3	166.7	241.2	29.4	22.9	C33-34	1.1	2.7
Other thoracic organs	4	0.0	0.0	0.0	0.6	1.0	0.6	0.6	0.0	0.0	0.6	1.3	0.0	1.0	0.0	4.0	1.3	0.5	0.5	C37-38	0.0	0.0
Bone	7	0.0	1.3	0.0	1.2	0.0	0.6	1.2	0.0	2.5	0.6	0.0	0.0	2.0	4.2	2.0	4.0	0.9	0.9	C40-C41	0.0	0.1
Melanoma of skin	4	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.6	0.0	4.1	4.2	0.0	2.7	0.5	0.4	0.4	C43	0.0	0.0
Other skin	43	0.6	0.0	0.0	0.0	0.5	1.2	1.2	1.8	1.9	2.5	3.9	11.9	13.3	9.8	35.7	74.1	5.9	4.4	C44	0.2	0.4
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	9	0.0	0.0	1.3	0.0	1.0	1.2	0.0	2.4	0.6	0.0	2.6	3.2	3.1	2.8	2.0	4.0	1.3	1.1	C47,C49	0.1	0.1
Breast	2	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.6	0.0	0.8	1.0	0.0	0.0	1.3	0.3	0.2	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.9	1.2	1.9	0.8	3.1	7.0	11.9	27.0	2.0	1.5	C60	0.0	0.1
Prostate	105	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.9	4.8	36.7	77.2	103.2	217.0	14.1	10.5	C61	0.2	1.1
Testis	6	0.6	0.0	0.0	0.6	0.5	1.2	3.0	0.0	2.5	1.9	1.3	0.0	0.0	0.0	0.0	0.0	0.9	0.8	C62	0.1	0.1
Other male genital organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	0.6	0.0	0.0	0.0	4.0	0.0	0.2	0.2	0.2	C63	0.0	0.0
Kidney	19	0.0	0.6	0.0	0.0	0.0	0.0	0.0	1.2	1.9	1.9	2.6	7.9	4.1	19.7	9.9	14.8	2.6	2.1	C64	0.1	0.2
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.2	0.1	C65	0.0	0.0
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C66	0.0	0.0
Bladder	52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.3	4.4	3.2	9.5	22.4	33.7	41.7	82.2	7.0	5.3	C67	0.2	0.6
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.4	0.0	0.0	0.1	0.1	0.1	C68	0.0	0.0
Eye	2	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.0	0.0	1.4	0.0	1.3	0.3	0.3	C69	0.0	0.0
Brain, nervous system	22	1.3	1.3	3.9	2.9	0.0	0.6	2.4	1.8	1.9	4.4	6.5	2.4	9.2	4.2	7.9	4.0	2.9	2.7	C70-72	0.2	0.3
Thyroid	15	0.0	0.0	0.0	0.6	1.0	1.8	0.6	2.4	3.2	0.0	2.6	5.6	3.1	1.4	9.9	12.1	2.0	1.6	C73	0.1	0.2
Adrenal gland	1	1.3	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.2	0.2	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.3	0.1	0.1	0.1	C75	0.0	0.0
Hodgkin disease	5	0.0	0.0	0.0	1.2	1.0	2.4	0.0	0.6	1.9	0.0	0.6	0.8	0.0	0.0	0.0	0.0	0.6	0.6	C81	0.0	0.0
Non-Hodgkin lymphoma	61	0.0	0.0	1.9	0.6	1.5	3.7	3.0	5.5	11.4	6.9	10.4	15.9	18.4	33.7	35.7	40.4	8.2	6.7	C82-85,C96	0.4	0.7
Multiple myeloma	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.9	4.8	8.2	8.4	4.0	14.8	1.8	1.4	C90	0.1	0.1
Lymphoid leukemia	13	3.1	1.9	2.6	1.2	0.5	1.2	1.2	0.0	1.3	0.6	0.0	0.8	5.1	2.8	6.0	6.7	1.7	1.8	C91	0.1	0.1
Myeloid leukemia	19	2.5	0.6	0.6	1.2	1.5	0.0	0.0	3.1	1.9	2.5	1.9	2.4	2.0	12.6	11.9	14.8	2.6	2.3	C92-94	0.1	0.2
Leukemia unspecified	7	3.1	0.0	0.0	0.0	0.0	0.6	0.0	0.6	0.6	0.6	0.0	0.0	3.1	0.0	2.0	9.4	0.9	0.9	C95	0.0	0.1
Myelodysplastic disease	5	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	1.3	0.8	2.0	1.4	2.0	8.1	0.7	0.5	D45-D47	0.0	0.0
Other and unspecified	56	0.6	0.0	0.0	1.2	1.0	1.8	1.8	2.4	3.8	5.6	13.0	14.3	15.3	29.5	43.7	56.6	7.6	5.9	O&U	0.3	0.7
<b>All sites</b>	<b>1,308</b>	<b>17.6</b>	<b>5.8</b>	<b>10.3</b>	<b>13.9</b>	<b>13.3</b>	<b>23.2</b>	<b>30.3</b>	<b>45.8</b>	<b>106.5</b>	<b>132.9</b>	<b>228.8</b>	<b>341.8</b>	<b>538.8</b>	<b>765.4</b>	<b>875.0</b>	<b>1,319.4</b>	<b>176.6</b>	<b>140.2</b>	<b>ALL</b>	<b>7.5</b>	<b>15.7</b>

**Table 4.14.2** Songkhla (2017), Mean annual ASR per 100,000 (2016-2018) by Age Group - Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74	
Lip	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	1.7	1.2	1.4	1.8	2.4	3.2	6.2	1.1	0.8	C00	0.0	0.0
Tongue	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	1.7	1.2	1.4	1.8	2.4	3.2	6.2	1.1	0.8	C01-02	0.0	0.1	
Mouth	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.4	2.6	4.8	3.2	8.9	1.0	0.6	C03-06	0.0	0.1	
Salivary glands	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.1	1.7	1.4	0.0	1.2	1.6	0.0	0.5	0.3	C07-08	0.0	0.0
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.9	0.1	0.0	0.0	C09	0.0	0.0
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.6	0.0	0.1	0.1	0.0	C10	0.0	0.0
Nasopharynx	6	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.1	2.2	1.7	1.4	0.0	1.2	0.0	1.8	0.8	0.6	0.0	C11	0.0	0.1
Hypopharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.9	0.0	0.0	0.9	0.1	0.1	0.0	C12-13	0.0	0.0
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.9	0.1	0.0	0.0	C14	0.0	0.0
Oesophagus	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.6	2.1	6.2	1.2	1.6	5.3	0.9	0.6	0.0	C15	0.1	0.1
Stomach	13	0.0	0.0	1.1	0.0	0.0	0.0	0.6	1.2	1.1	0.0	1.7	2.1	6.2	7.2	6.4	10.7	1.7	1.1	0.0	C16	0.1	0.1
Small intestine	2	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.2	1.6	2.7	0.3	0.2	0.0	C17	0.0	0.0
Colon	91	0.0	0.0	0.0	0.0	0.5	0.0	3.1	4.6	7.4	7.8	18.6	27.8	26.4	28.7	40.1	72.8	11.5	7.6	0.0	C18	0.5	0.8
Rectum	49	0.7	0.0	0.0	0.0	0.0	0.0	1.8	1.7	1.7	3.9	8.7	12.1	18.5	21.5	25.7	39.1	6.3	4.2	0.0	C19-20	0.2	0.5
Anus	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.7	0.9	3.6	0.0	3.6	0.5	0.3	0.0	C21	0.0	0.0
Liver and bile duct	64	0.7	0.7	0.0	0.0	0.0	0.0	1.2	2.3	2.2	8.7	17.1	15.0	46.7	33.7	53.3	8.1	5.5	0.0	0.0	C22,C24	0.3	0.7
Gallbladder	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	1.4	1.8	4.8	1.6	3.6	0.6	0.4	0.0	C23	0.0	0.1
Pancreas	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	1.1	1.7	5.0	4.4	6.0	9.6	23.1	2.4	1.4	0.0	C25	0.1	0.1
Nose, sinuses etc.	2	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.0	0.0	0.7	0.0	0.0	0.0	2.7	0.3	0.2	0.0	C30-31	0.0	0.0
Larynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.7	0.0	0.0	0.0	0.0	0.1	0.1	0.0	C32	0.0	0.0
Trachea, Bronchus and lung	109	1.3	0.0	0.0	0.0	0.0	0.0	2.5	2.3	7.4	8.3	15.7	23.5	36.1	55.0	78.7	82.6	13.8	9.4	0.0	C33-34	0.5	1.2
Other thoracic organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	1.2	0.7	0.0	0.0	0.0	0.0	0.2	0.2	0.0	C37-38	0.0	0.0
Bone	5	0.0	2.7	2.0	0.6	0.0	0.0	0.6	0.0	1.1	0.0	1.2	0.7	0.0	0.0	0.0	0.0	0.6	0.7	0.0	C40-C41	0.0	0.0
Melanoma of skin	4	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	1.2	0.7	0.0	3.6	3.2	3.6	0.5	0.4	0.0	C43	0.0	0.0
Other skin	56	0.0	0.0	0.0	0.0	0.5	0.0	1.2	1.2	1.1	5.0	6.4	11.4	10.6	34.7	28.9	57.7	7.1	4.5	0.0	C44	0.2	0.5
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	10	0.0	0.0	0.0	0.0	0.5	0.0	0.6	1.7	2.3	1.1	2.3	1.4	4.4	1.2	3.2	3.6	1.2	0.9	0.0	C47,C49	0.1	0.1
Breast	342	2.0	0.0	0.0	0.0	0.5	6.7	17.8	30.5	64.8	95.8	94.5	96.2	116.1	106.5	75.4	66.6	43.4	32.6	0.0	C50	2.6	3.5
Vulva	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.7	0.0	1.2	1.6	6.2	0.5	0.3	0.0	C51	0.0	0.0
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.9	0.0	1.6	0.0	0.2	0.1	0.0	C52	0.0	0.0
Cervix uteri	89	0.0	0.0	0.0	0.6	0.0	3.0	6.1	13.2	18.8	23.8	22.0	20.7	28.1	26.3	14.4	20.4	11.3	8.6	0.0	C53	0.7	0.9
Corpus uteri	55	0.7	0.0	0.0	0.0	0.0	1.8	2.5	4.6	2.8	6.1	15.1	29.2	18.5	28.7	22.5	6.2	7.0	5.3	0.0	C54	0.4	0.7
Uterus unspecified	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.7	1.7	4.3	7.0	1.2	3.2	0.9	1.1	0.8	0.0	0.0	C55	0.1	0.1
Ovary	57	0.0	0.0	1.4	3.4	1.0	5.5	3.7	2.9	5.7	15.0	15.7	17.8	17.6	12.0	11.2	14.2	7.3	5.6	0.0	C56	0.4	0.6
Other female genital organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.4	1.8	0.0	1.6	0.0	0.3	0.2	0.0	C57	0.0	0.0
Placenta	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	8	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.7	0.6	1.4	2.6	7.2	1.6	5.3	1.0	0.8	0.0	C64	0.0	0.1
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.9	0.1	0.1	0.0	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.1	0.0	0.0	C66	0.0	0.0
Bladder	10	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	1.7	2.1	6.2	1.2	8.0	9.8	1.3	0.8	0.0	C67	0.1	0.1
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	2	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.4	0.0	0.0	0.0	0.9	0.3	0.3	0.0	C69	0.0	0.0
Brain, nervous system	16	0.0	0.7	1.4	0.6	1.0	0.6	1.8	1.2	1.7	1.7	2.9	4.3	4.4	2.4	6.4	8.0	2.1	1.6	0.0	C70-72	0.1	0.2
Thyroid	67	0.0	0.0	0.7	2.9	7.9	11.6	11.0	12.7	8.0	7.2	12.2	18.5	12.3	16.7	16.1	6.2	8.5	7.0	0.0	C73	0.5	0.7
Adrenal gland	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	C75	0.0	0.0
Hodgkin disease	6	0.0	0.0	0.7	1.7	2.5	0.0	0.6	0.0	0.0	0.0	0.6	1.4	0.9	0.0	3.2	0.9	0.7	0.7	0.0	C81	0.0	0.1
Non-Hodgkin lymphoma	48	0.0	0.0	0.0	1.7	2.5	0.6	1.2	4.6	2.3	8.3	9.3	9.3	12.3	27.5	24.1	21.3	6.0	4.4	0.0	C82-85,C96	0.3	0.5
Multiple myeloma	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.2	1.2	5.0	4.4	10.8	3.2	2.7	1.4	1.1	0.0	C90	0.1	0.1
Lymphoid leukemia	10	6.0	2.0	1.4	0.6	0.0	0.6	0.0	1.2	0.6	0.6	1.7	0.0	0.9	2.4	3.2	1.8	1.3	1.6	0.0	C91	0.1	0.1
Myeloid leukemia	17	1.3	0.0	0.0	1.7	1.0	0.6	2.5	1.2	1.1	1.7	3.5	6.4	6.2	3.6	1.6	5.3	2.2	1.7	0.0	C92-94	0.1	0.2
Leukemia unspecified	5	0.0	0.0	0.7	0.6	0.5	0.0	0.0	0.0	0.0	0.6	0.0	0.7	0.9	3.6	4.8	3.6	0.7	0.5	0.0	C95	0.0	0.1
Myelodysplastic disease	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	2.1	2.6	0.0	0.0	2.7	0.4	0.3	0.0	D45-D47	0.0	0.0
Other and unspecified	45	1.3	0.0	1.4	0.6	0.5	1.8	4.3	3.5	5.1	3.3	7.5	10.0	11.4	19.1	12.8	31.1	5.8	4.2	0.0	O&U	0.3	0.4
<b>All sites</b>	<b>1,286</b>	<b>16.1</b>	<b>6.1</b>	<b>9.5</b>	<b>15.4</b>	<b>19.2</b>	<b>33.4</b>	<b>66.2</b>	<b>96.6</b>	<b>143.3</b>	<b>209.3</b>	<b>267.8</b>	<b>350.7</b>	<b>391.4</b>	<b>497.6</b>	<b>463.9</b>	<b>603.9</b>	<b>163.2</b>	<b>119.3</b>	<b>ALL</b>	<b>8.1</b>	<b>12.9</b>	

**Table 4.14.3** Mean annual incidence, Songkhla, 2016-2018

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	
			(per 100,000)		(percent)			(per 100,000)		(percent)			
Lip	2	0.2	0.3	0.2	0.0	0.0	2	0.2	0.3	0.2	0.0	0.0	C00
Tongue	34	2.6	4.6	3.6	0.3	0.4	9	0.7	1.1	0.8	0.0	0.1	C01-02
Mouth	22	1.7	3.0	2.3	0.1	0.3	8	0.6	1.0	0.6	0.0	0.1	C03-06
Salivary glands	7	0.5	0.9	0.7	0.1	0.1	4	0.3	0.5	0.3	0.0	0.0	C07-08
Tonsil	12	0.9	1.7	1.3	0.1	0.2	1	0.1	0.1	0.0	0.0	0.0	C09
Other oropharynx	6	0.4	0.8	0.6	0.0	0.1	1	0.1	0.1	0.1	0.0	0.0	C10
Nasopharynx	20	1.5	2.7	2.3	0.2	0.2	6	0.5	0.8	0.6	0.0	0.1	C11
Hypopharynx	18	1.4	2.5	2.0	0.1	0.2	1	0.1	0.1	0.1	0.0	0.0	C12-13
Pharynx unspecified	1	0.1	0.1	0.1	0.0	0.0	1	0.1	0.1	0.0	0.0	0.0	C14
Oesophagus	57	4.4	7.7	6.2	0.4	0.7	7	0.5	0.9	0.6	0.1	0.1	C15
Stomach	27	2.1	3.7	2.9	0.2	0.3	13	1.0	1.7	1.1	0.1	0.1	C16
Small intestine	4	0.3	0.5	0.4	0.0	0.0	2	0.2	0.3	0.2	0.0	0.0	C17
Colon	105	8.1	14.2	11.2	0.5	1.4	91	7.1	11.5	7.6	0.5	0.8	C18
Rectum	74	5.7	10.0	7.9	0.4	1.0	49	3.8	6.3	4.2	0.2	0.5	C19-20
Anus	6	0.4	0.8	0.6	0.0	0.1	4	0.3	0.5	0.3	0.0	0.0	C21
Liver and bile duct	151	11.6	20.4	16.3	1.1	1.9	64	5.0	8.1	5.5	0.3	0.7	C22,C24
Gallbladder	2	0.2	0.3	0.2	0.0	0.0	5	0.4	0.6	0.4	0.0	0.1	C23
Pancreas	16	1.2	2.2	1.7	0.1	0.2	19	1.5	2.4	1.4	0.1	0.1	C25
Nose, sinuses etc.	4	0.3	0.5	0.4	0.0	0.0	2	0.2	0.3	0.2	0.0	0.0	C30-31
Larynx	33	2.5	4.4	3.5	0.2	0.4	1	0.1	0.1	0.1	0.0	0.0	C32
Trachea, Bronchus and lung	218	16.6	29.4	22.9	1.1	2.7	109	8.5	13.8	9.4	0.5	1.2	C33-34
Other thoracic organs	4	0.3	0.5	0.5	0.0	0.0	2	0.1	0.2	0.2	0.0	0.0	C37-38
Bone	7	0.5	0.9	0.9	0.0	0.1	5	0.4	0.6	0.7	0.0	0.0	C40-C41
Melanoma of skin	4	0.3	0.5	0.4	0.0	0.0	4	0.3	0.5	0.4	0.0	0.0	C43
Other skin	43	3.3	5.9	4.4	0.2	0.4	56	4.4	7.1	4.5	0.2	0.5	C44
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	9	0.7	1.3	1.1	0.1	0.1	10	0.8	1.2	0.9	0.1	0.1	C47,C49
Breast	2	0.2	0.3	0.2	0.0	0.0	342	26.6	43.4	32.6	2.6	3.5	C50
Vulva							4	0.3	0.5	0.3	0.0	0.0	C51
Vagina							1	0.1	0.2	0.1	0.0	0.0	C52
Cervix uteri							89	6.9	11.3	8.6	0.7	0.9	C53
Corpus uteri							55	4.3	7.0	5.3	0.4	0.7	C54
Uterus unspecified							8	0.6	1.1	0.8	0.1	0.1	C55
Ovary							57	4.5	7.3	5.6	0.4	0.6	C56
Other female genital organs							2	0.2	0.3	0.2	0.0	0.0	C57
Placenta							1	0.1	0.1	0.1	0.0	0.0	C58
Penis	15	1.1	2.0	1.5	0.0	0.1							C60
Prostate	105	8.0	14.1	10.5	0.2	1.1							C61
Testis	6	0.5	0.9	0.8	0.1	0.1							C62
Other male genital organs	2	0.1	0.2	0.2	0.0	0.0							C63
Kidney	19	1.5	2.6	2.1	0.1	0.2	8	0.6	1.0	0.8	0.0	0.1	C64
Renal pelvis	1	0.1	0.2	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C65
Ureter	0	0.0	0.0	0.0	0.0	0.0	1	0.1	0.1	0.0	0.0	0.0	C66
Bladder	52	4.0	7.0	5.3	0.2	0.6	10	0.8	1.3	0.8	0.1	0.1	C67
Other urinary organs	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C68
Eye	2	0.2	0.3	0.3	0.0	0.0	2	0.2	0.3	0.3	0.0	0.0	C69
Brain, nervous system	22	1.7	2.9	2.7	0.2	0.3	16	1.3	2.1	1.6	0.1	0.2	C70-72
Thyroid	15	1.1	2.0	1.6	0.1	0.2	67	5.2	8.5	7.0	0.5	0.7	C73
Adrenal gland	1	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C74
Other endocrine	1	0.1	0.1	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C75
Hodgkin disease	5	0.4	0.6	0.6	0.0	0.0	6	0.4	0.7	0.7	0.0	0.1	C81
Non-Hodgkin lymphoma	61	4.6	8.2	6.7	0.4	0.7	48	3.7	6.0	4.4	0.3	0.5	C82-85,C96
Multiple myeloma	13	1.0	1.8	1.4	0.1	0.1	11	0.9	1.4	1.1	0.1	0.1	C90
Lymphoid leukemia	13	1.0	1.7	1.8	0.1	0.1	10	0.8	1.3	1.6	0.1	0.1	C91
Myeloid leukemia	19	1.5	2.6	2.3	0.1	0.2	17	1.3	2.2	1.7	0.1	0.2	C92-94
Leukemia unspecified	7	0.5	0.9	0.9	0.0	0.1	5	0.4	0.7	0.5	0.0	0.1	C95
Myelodysplastic disease	5	0.4	0.7	0.5	0.0	0.0	3	0.3	0.4	0.3	0.0	0.0	D45-D47
Other and unspecified	56	4.3	7.6	5.9	0.3	0.7	45	3.5	5.8	4.2	0.3	0.4	O&U
<b>All sites</b>	<b>1,308</b>	<b>100.0</b>	<b>176.6</b>	<b>140.2</b>	<b>7.5</b>	<b>15.7</b>	<b>1,286</b>	<b>100.0</b>	<b>163.2</b>	<b>119.3</b>	<b>8.1</b>	<b>12.9</b>	<b>ALL</b>

**Table 4.14.4** Percentage of morphologically verified and death certificate only cases, Songkhla

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	195	92.3	2.6	67	95.5	1.5	C00-C08
Oropharynx	57	96.5	3.5	6	83.3	0.0	C09-C10,C14
Nasopharynx	60	93.3	1.7	18	94.4	0.0	C11
Hypopharynx	55	94.5	0.0	3	66.7	0.0	C12-C13
Esophagus	172	87.2	7.6	21	71.4	0.0	C15
Stomach	82	85.4	6.1	40	85.0	7.5	C16
Small intestine	11	90.9	9.1	7	100.0	0.0	C17
Colon and rectum	555	90.1	4.5	433	90.3	3.5	C18-C21
Liver and bile duct	454	17.6	10.6	192	24.0	6.8	C22,C24
Gallbladder	7	42.9	28.6	15	60.0	13.3	C23
pancrease	48	50.0	6.3	56	57.1	16.1	C25
Nose,sinuses etc	11	100.0	0.0	6	83.3	0.0	C30-C31
Larynx	98	94.9	0.0	2	50.0	0.0	C32
Trachea, bronchus and lung	653	69.1	8.0	327	72.2	4.9	C33-C34
Other thoracic organs	12	91.7	0.0	5	100.0	0.0	C37-C38
Bone	21	71.4	14.3	14	85.7	7.1	C40-C41
Melanoma of skin	11	100.0	0.0	13	100.0	0.0	C43
Other skin	130	96.2	1.5	168	98.2	0.0	C44
Mesothelioma	0	0.0	0.0	0	0.0	0.0	C45
Kaposi sarcoma	1	100.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	28	100.0	0.0	29	93.1	0.0	C47,C49
Breast	6	83.3	0.0	1,025	96.5	0.8	C50
Vulva				13	100.0	0.0	C51
Vagina				4	100.0	0.0	C52
Cervix uteri				268	95.5	0.4	C53
Corpus uteri				165	97.0	0.6	C54
Uterus unspecified				25	88.0	4.0	C55
Ovary				172	89.5	2.3	C56
Other female genital organs				6	66.7	0.0	C57
Placenta				3	100.0	0.0	C58
Penis	44	93.2	0.0				C60
Prostate	314	88.5	0.6				C61
Testis	19	89.5	0.0				C62
Other male genital organs	5	80.0	0.0				C63
Kidney	57	80.7	3.5	24	70.8	0.0	C64
Renal pelvis	4	50.0	0.0	2	100.0	0.0	C65
Ureter	0	0.0	0.0	2	100.0	0.0	C66
Bladder	156	89.1	0.0	31	90.3	0.0	C67
Other urinary organs	2	50.0	50.0	1	100.0	0.0	C68
Eye	6	100.0	0.0	6	83.3	0.0	C69
Brain, nervous system	65	72.3	7.7	49	55.1	14.3	C70-C72
Thyroid	45	95.6	0.0	200	97.5	0.5	C73
Adrenal gland	4	75.0	0.0	1	100.0	0.0	C74
Other endocrine	3	100.0	0.0	3	66.7	0.0	C75
Hodgkin disease	14	100.0	0.0	17	100.0	0.0	C81
Non-Hodgkin lymphoma	182	99.5	0.0	143	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	39	100.0	0.0	34	100.0	0.0	C90
Leukemia	115	99.1	0.0	97	100.0	0.0	C91-C95
Myelodysplastic	15	93.3	0.0	10	100.0	0.0	D45-D47
Other and unspecified	168	42.9	38.7	136	41.2	34.6	O&U
<b>All sites</b>	<b>3,924</b>	<b>76.3</b>	<b>6.0</b>	<b>3,859</b>	<b>86.2</b>	<b>3.4</b>	<b>All</b>
<b>All sites without liver</b>	<b>3,470</b>	<b>84.0</b>	<b>5.4</b>	<b>3,667</b>	<b>89.5</b>	<b>3.2</b>	<b>All</b>



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สถาบันมะเร็งแห่งชาติ





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