

# **Chapter II**

## **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 (Sriplung *et al.*, 2003) volumes were published in series.

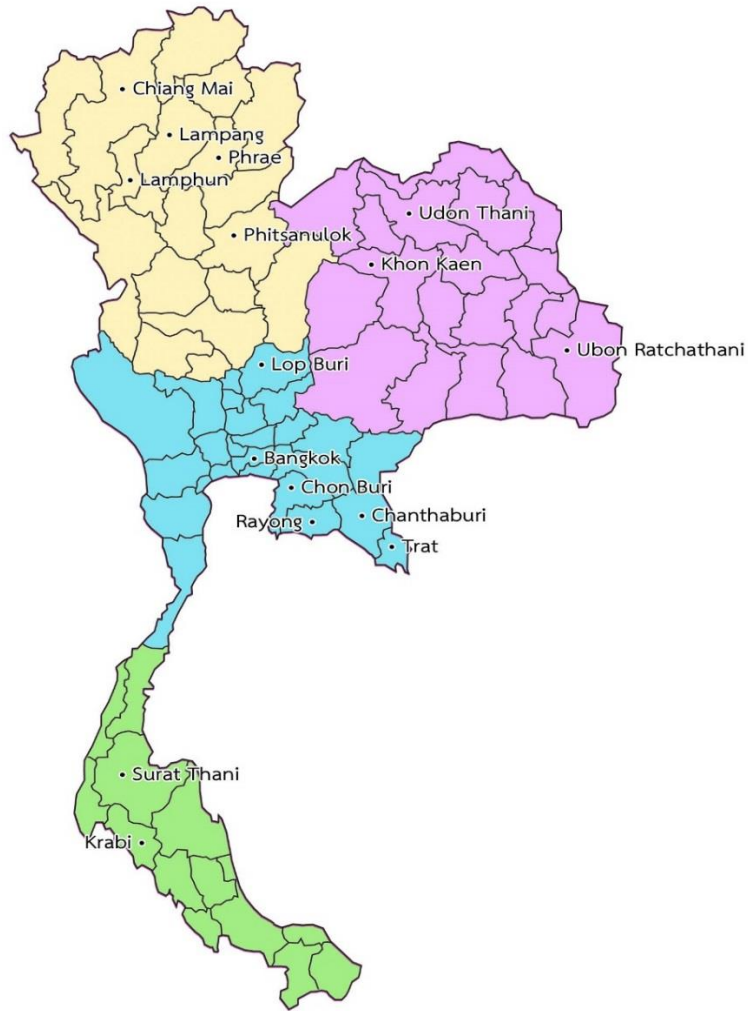
## Registration area

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 Burma, 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 Burma. 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 513,155 square kilometers. The climate of the country as a whole is tropical and characterized by monsoons. Thailand is divided into 77 provinces, within four geographical regions: the Northern, Northeastern, Southern and Central. The geographic area covered by the sixteen population based cancer registries are shown in Figure 2.1.1 and the estimated population in each province by sex is shown in Table 2.1.1

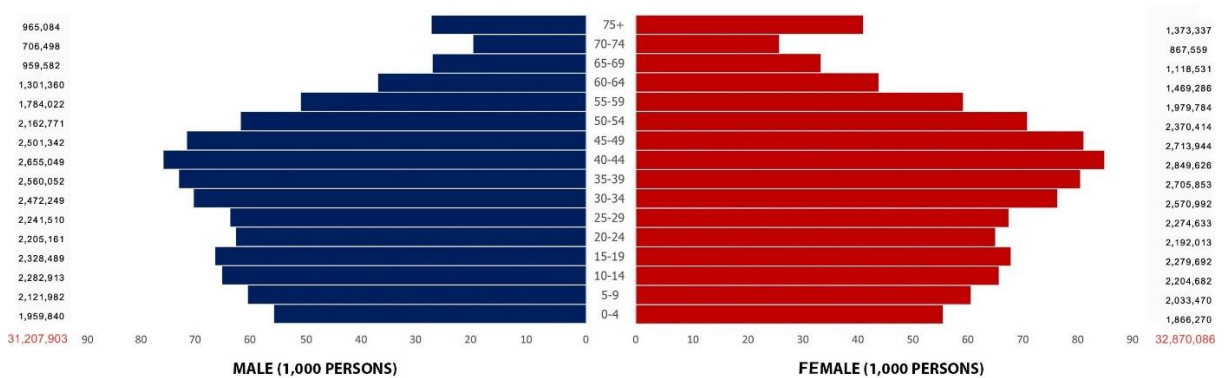
**Table 2.1.1** Land area and estimated population in 2011 (average 2010-2012)

Provinces	Population Density (person / km <sup>2</sup> )	Land area (km <sup>2</sup> )	Estimated population Male	Estimated population Female
Chiang Mai	83.74	20,107	822,233	861,433
Lamphun	90.40	4,505	197,667	209,567
Lampang	58.91	12,534	364,067	374,367
Phitsanulok	83.31	10,816	437,967	463,167
Udon Thani	108.84	11,730	623,367	653,300
Khon Kaen	158.57	10,886	836,267	889,900
Ubon Ratchatani	109.88	15,745	851,667	878,400
Lop Buri	122.76	6,200	379,833	381,267
Bangkok	4,950.79	1,569	3,741,502	4,026,285
Chon Buri	330.96	4,363	691,267	752,733
Rayong	221.45	3,552	396,267	390,333
Chanthaburi	74.63	6,338	231,267	241,733
Trat	77.95	2,819	110,867	108,867
Surat Thani	74.63	12,891	469,100	492,900
Krabi	76.78	4,708	179,867	181,600
<b>Thailand</b>	<b>124.87</b>	<b>513,155</b>	<b>31,207,903</b>	<b>32,870,086</b>

**Figure 2.1.1** Thailand regions and area covered by the cancer registries.



Population pyramid, Thailand, 2011  
estimated population in 2011(average 2010-2012)

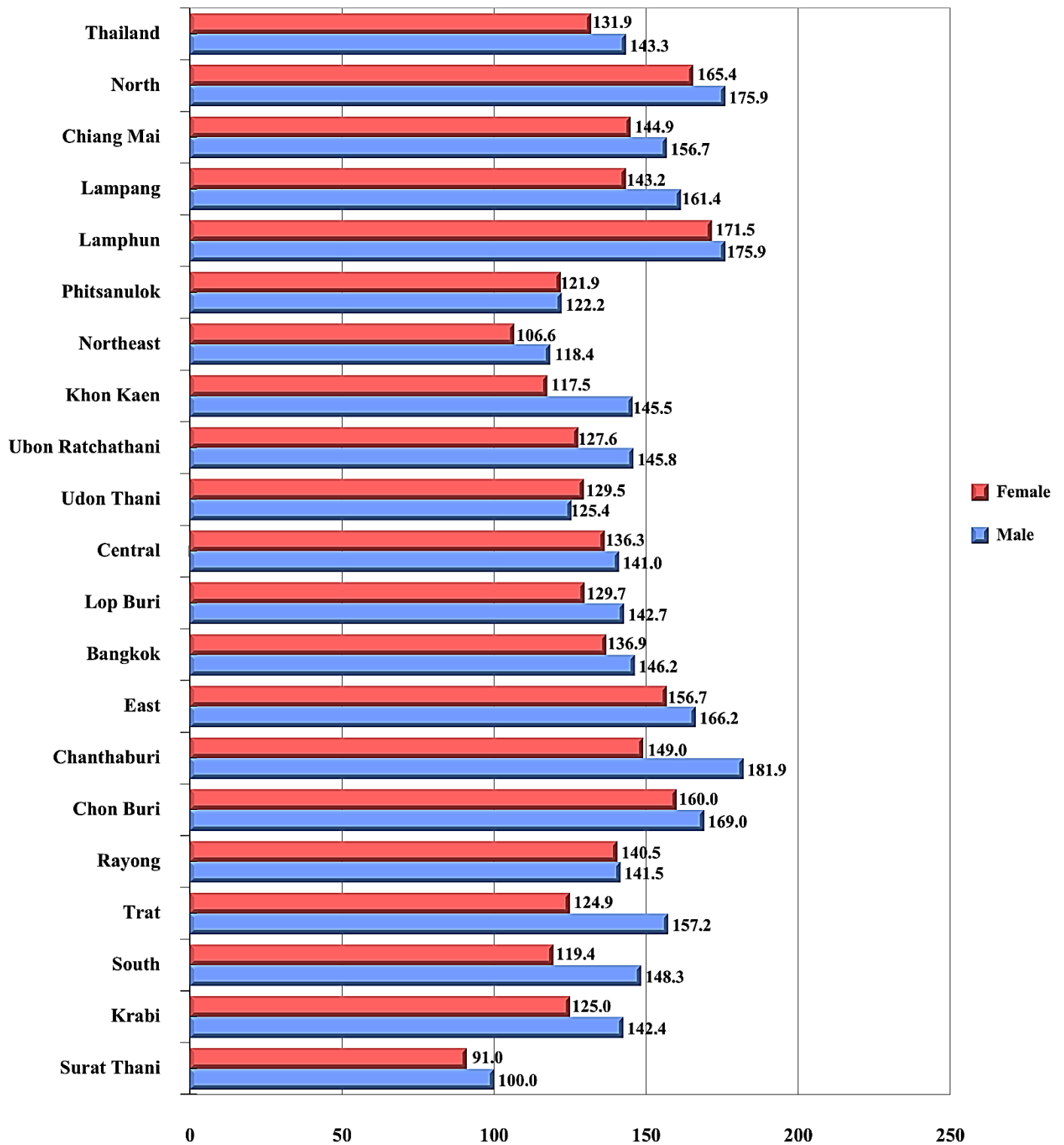


**Table 2.1.2** Mean annual age-standardized incidence rate (ASR per 100,000), all sites, 2010-2012

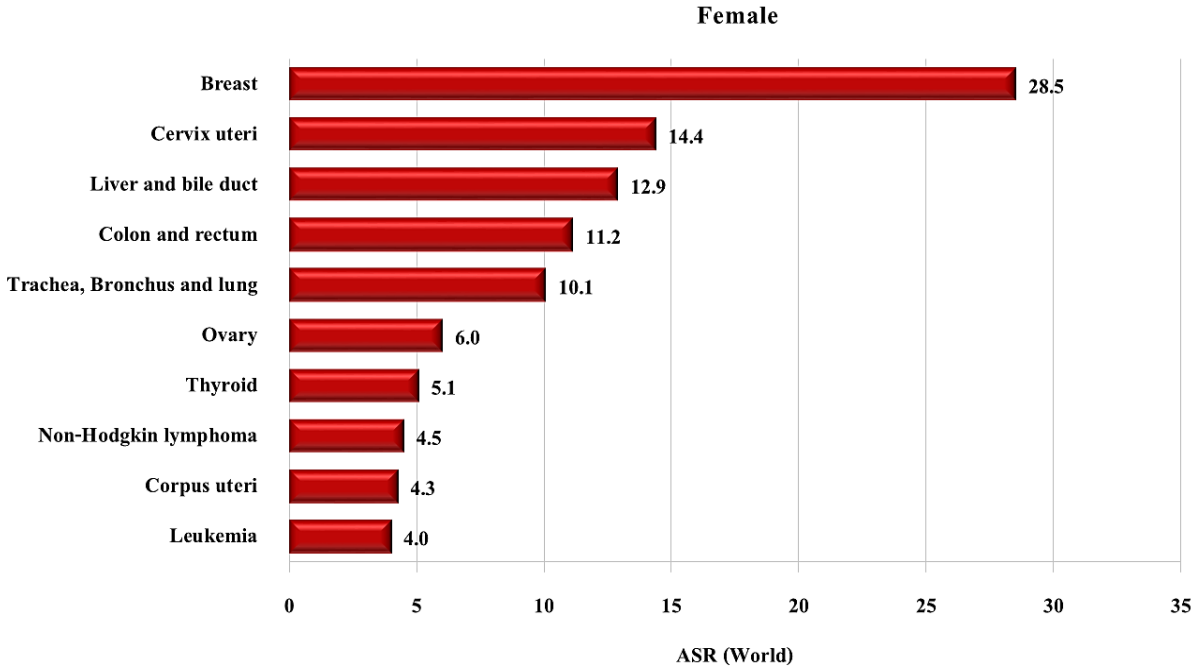
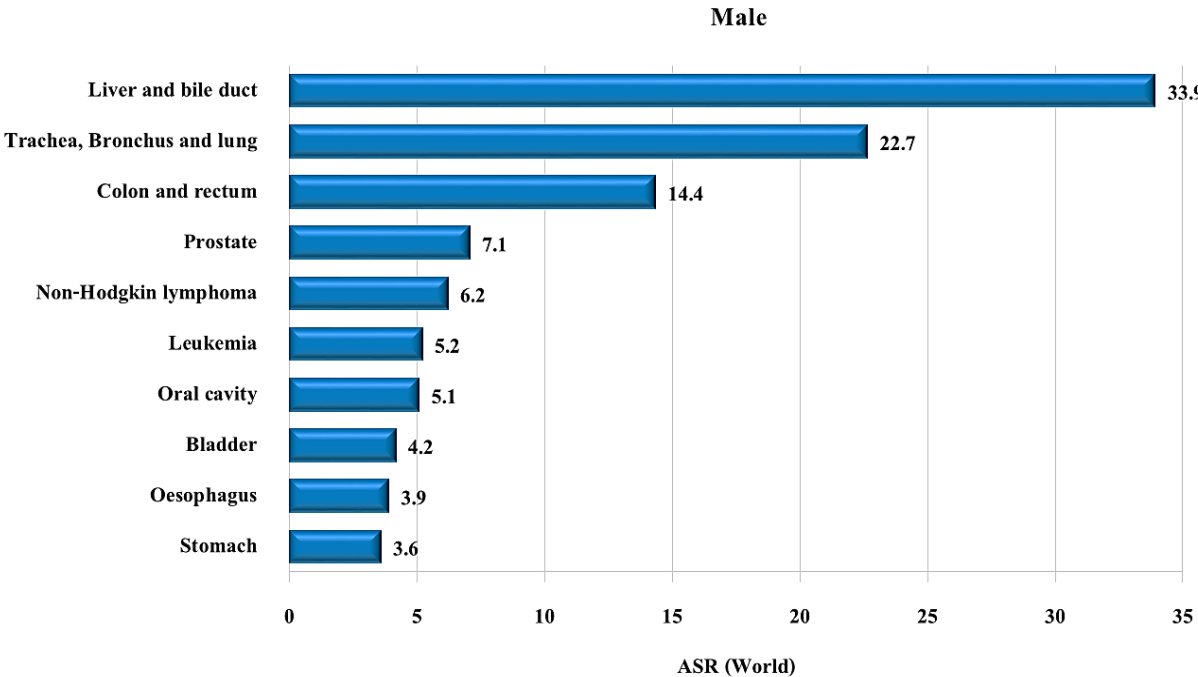
Area	Male		Female	
	Cases	ASR (per 100,000)	Cases	ASR (per 100,000)
<b>Thailand</b>	<b>54,586</b>	<b>143.3</b>	<b>57,806</b>	<b>131.9</b>
Chiang Mai	1,738	156.7	1,781	144.9
Lamphun	513	175.9	551	171.5
Lampang	969	161.4	907	143.2
Phitsanulok	729	122.2	802	121.9
Udon Thani	929	125.4	1,086	129.5
Khon Kaen	1,583	145.5	1,458	117.5
Ubon Ratchatani	1,533	145.8	1,471	127.6
Lop Buri	725	142.7	723	129.7
Bangkok	5,498	146.2	6,644	136.9
Chon Buri	1,057	169.0	1,292	160.0
Rayong	542	141.5	647	140.5
Chanthaburi	550	181.9	514	149.0
Trat	225	157.2	189	124.9
Surat Thani	520	100.0	572	91.0
Krabi	257	142.4	252	125.0

The age-standardized incidence rates (ASR) of cancer at all sites ranged from 110.7 (Males) in Surat Thani and 91.0 (Females) in Surat Thani to 181.9 (Males) in Chanthaburi and 171.5 (Females) in Lampang (Table 2.1.2, Figure 2.1.2).

**Figure 2.1.2** Mean annual age-standardized incidence rate (ASR per 100,000), all sites, 2010-2012



**Figure 2.1.3** Leading cancer in Thailand (mean annual ASR 2010-2012)



**Table 2.2.1** Thailand (2011), Mean annual ASR per 100,000 (2010-2012) by Age Group – Male

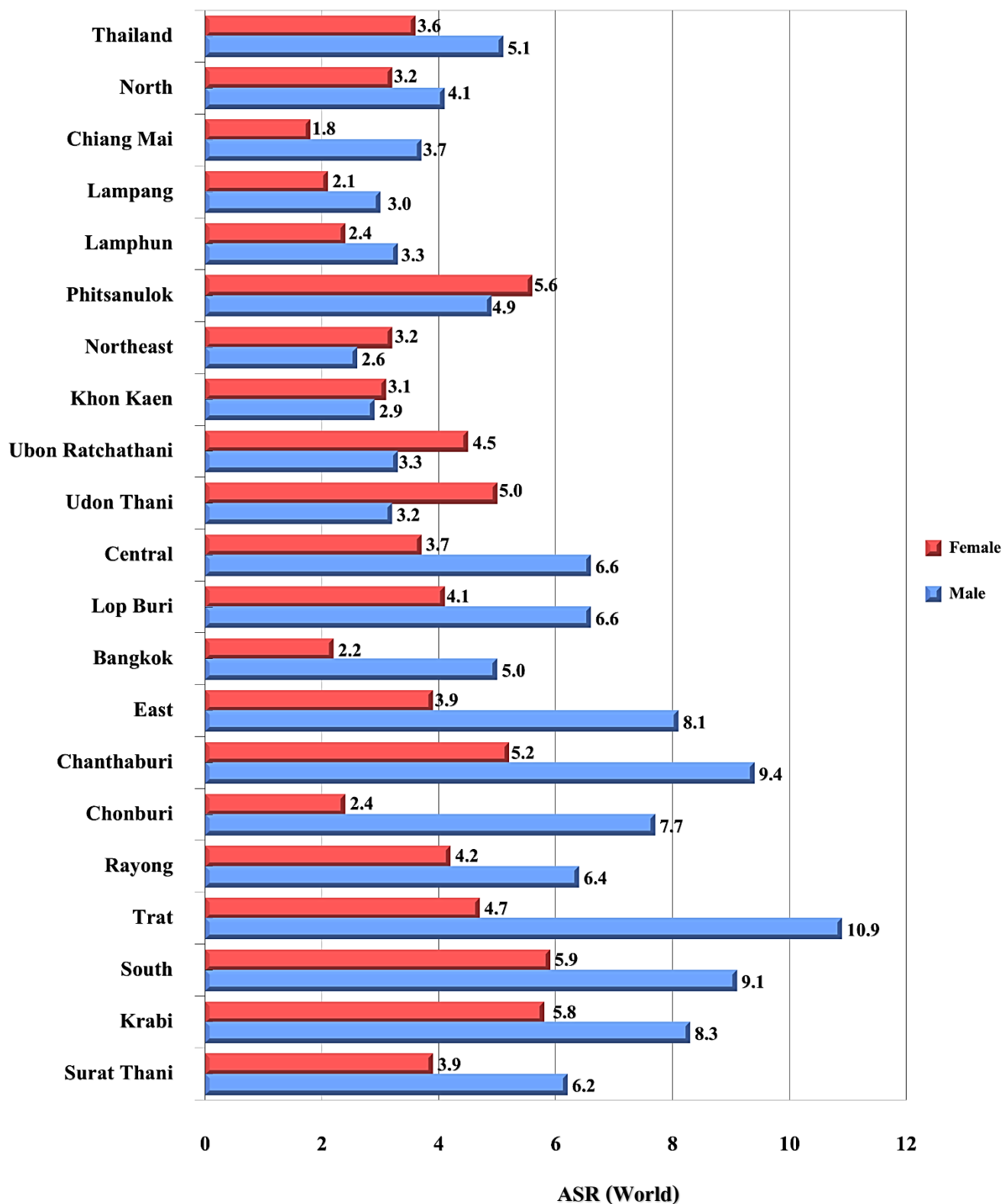
Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10
Lip	73	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.2	0.4	0.7	1.7	1.6	0.1	0.2	C00
Tongue	854	0.3	0.5	0.0	0.1	0.0	0.2	0.3	2.1	2.1	3.8	5.7	7.0	7.9	9.0	12.9	9.2	0.9	2.2	C01-02
Mouth	865	0.2	0.0	0.1	0.0	0.2	0.1	0.2	1.0	1.1	2.8	6.2	6.4	7.6	9.8	15.7	17.7	0.9	2.2	C03-06
Salivary glands	197	0.1	0.1	0.2	0.2	0.1	0.1	0.5	0.2	0.4	0.9	0.8	1.0	1.9	3.3	2.9	1.6	0.2	0.5	C07-08
Tonsil	421	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.7	1.1	2.4	4.5	2.6	2.6	4.5	5.0	4.8	0.5	1.1	C09
Other oropharynx	136	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.9	0.6	1.5	1.6	1.0	1.5	2.5	0.1	0.3	C10
Nasopharynx	1,080	0.0	0.0	0.4	0.4	0.4	0.7	1.0	2.0	3.0	6.6	8.2	11.3	9.4	10.7	9.8	5.0	1.2	2.8	C11
Hypopharynx	589	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	1.2	3.2	4.9	6.1	5.8	5.4	6.7	7.2	0.6	1.5	C12-13
Pharynx unspecified	62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	0.6	0.5	1.0	0.6	0.7	0.1	0.2	C14
Oesophagus	1,531	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.7	8.2	9.8	14.1	17.4	21.9	24.0	19.5	1.6	3.9	C15
Stomach	1,409	0.0	0.0	0.0	0.1	0.1	0.2	0.8	1.5	2.4	5.7	7.1	11.1	15.9	19.0	25.2	22.5	1.5	3.6	C16
Small intestine	153	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.5	0.2	0.5	0.4	1.3	2.3	1.3	1.8	3.0	0.2	0.4	C17
Colon	3,117	0.1	0.0	0.1	0.2	0.4	1.2	2.1	4.2	5.0	7.9	15.9	24.8	31.3	42.5	67.1	53.0	3.3	8.0	C18
Rectum	2,333	0.0	0.0	0.0	0.1	0.1	0.6	1.8	3.2	4.2	5.9	12.3	19.2	27.4	31.7	45.3	35.5	2.5	6.0	C19-20
Anus	127	0.1	0.0	0.0	0.0	0.0	0.1	0.7	0.3	0.5	0.2	0.7	0.9	0.3	1.4	2.0	1.8	0.1	0.3	C21
Liver and bile duct	13,152	0.7	0.1	0.6	0.4	0.4	2.8	7.4	15.5	26.6	55.9	85.2	123.2	144.8	176.9	226.6	117.2	14.0	33.9	C22,C24
Gallbladder	309	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.2	0.5	1.2	2.4	3.3	5.6	9.9	4.5	0.3	0.8	C23
Pancreas	709	0.0	0.0	0.0	0.0	0.0	0.5	0.7	0.3	1.1	3.0	3.3	5.2	6.5	10.7	13.1	12.9	0.8	1.8	C25
Nose, sinuses etc.	181	0.1	0.0	0.3	0.0	0.0	0.1	0.1	0.2	0.8	0.8	1.0	1.4	1.4	1.8	3.1	1.9	0.2	0.5	C30-31
Larynx	1,040	0.3	0.1	0.0	0.0	0.0	0.1	0.1	1.1	1.3	3.5	5.3	7.8	13.0	15.4	18.8	18.1	1.1	2.7	C32
Trachea, Bronchus and lung	8,724	0.3	0.0	0.0	0.2	0.5	1.1	3.1	6.3	8.6	19.6	33.8	61.3	92.4	145.9	220.3	180.1	9.3	22.7	C33-34
Other thoracic organs	137	0.0	0.1	0.1	0.4	0.3	0.1	0.0	0.6	0.2	0.3	0.8	1.5	0.8	0.9	1.2	1.1	0.1	0.4	C37-38
Bone	340	0.3	0.5	0.8	2.3	0.7	0.2	0.3	0.4	0.9	1.0	1.3	1.9	2.6	1.5	3.6	3.2	0.4	1.0	C40-C41
Melanoma of skin	189	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.2	0.5	1.7	0.9	0.7	1.9	1.9	3.3	2.6	0.2	0.5	C43
Other skin	1,372	0.3	0.1	0.0	0.2	0.1	0.8	1.9	1.6	1.7	2.6	3.5	8.5	11.5	16.5	27.6	42.2	1.5	3.5	C44
Mesothelioma	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.2	0.0	0.0	C45
Kaposi's sarcoma	29	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.1	0.3	0.0	0.0	1.1	0.0	0.2	0.0	0.1	C46
Connective tissue	410	1.0	0.6	0.2	0.3	0.4	0.3	0.8	0.9	0.8	2.1	2.0	3.1	1.8	5.1	2.4	4.6	0.4	1.2	C47,C49
Breast	189	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.3	0.5	0.7	0.5	1.3	1.8	2.3	3.9	3.6	0.2	0.5	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	480	0.1	0.1	0.1	0.0	0.0	0.1	0.4	0.9	1.4	2.2	2.1	3.5	4.4	4.8	8.8	7.7	0.5	1.2	C60
Prostate	2,762	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.6	0.3	1.1	4.0	10.4	24.0	48.1	93.5	103.5	2.9	7.1	C61
Testis	217	0.9	0.1	0.2	0.6	0.6	1.1	1.5	1.0	0.4	0.8	0.8	0.5	0.3	0.5	0.3	1.3	0.2	0.7	C62
Other male genital organs	60	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.1	0.4	0.2	0.4	0.3	0.5	0.1	0.2	C63
Kidney	592	0.9	0.6	0.2	0.0	0.0	0.2	0.7	0.7	0.6	2.0	2.5	5.1	7.2	8.1	11.4	5.6	0.6	1.6	C64
Renal pelvis	41	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.5	0.6	0.6	0.7	1.0	0.0	0.1	C65
Ureter	28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.4	0.4	0.4	0.9	0.0	0.1	C66
Bladder	1,651	0.0	0.2	0.0	0.1	0.1	0.1	0.2	1.5	1.1	2.9	5.0	10.5	18.1	19.2	42.0	50.1	1.8	4.2	C67
Other urinary organs	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.7	0.1	0.2	0.4	0.0	0.1	C68
Eye	97	1.6	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.3	0.4	0.7	0.2	1.1	1.5	0.1	0.4	C69
Brain, nervous system	958	2.4	3.2	1.0	0.8	1.3	1.3	2.6	2.0	2.2	3.1	4.3	4.3	8.2	6.8	11.3	7.7	1.0	2.9	C70-72
Thyroid	560	0.1	0.0	0.2	0.7	0.4	1.6	1.1	1.6	1.7	2.6	3.3	2.8	4.3	4.4	7.4	4.2	0.6	1.5	C73
Adrenal gland	40	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.0	0.2	0.2	0.0	0.2	C74
Other endocrine	41	0.0	0.2	0.4	0.5	0.0	0.1	0.1	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	C75
Hodgkin disease	115	0.1	0.4	0.3	0.2	0.4	0.2	0.3	0.3	0.5	0.3	0.4	0.6	0.5	0.7	0.8	0.8	0.1	0.3	C81
Non-Hodgkin lymphoma	2,300	1.2	3.1	1.1	1.2	1.1	2.3	1.9	4.1	5.3	8.5	10.0	17.8	20.9	27.7	35.1	26.5	2.5	6.2	C82-85,C96
Multiple myeloma	388	0.2	0.0	0.0	0.1	0.0	0.5	0.1	0.3	0.9	0.8	2.1	3.8	3.9	4.9	8.5	4.9	0.4	1.0	C90
Lymphoid leukemia	418	5.1	3.2	2.3	0.9	0.3	0.8	0.4	0.3	0.4	1.0	0.4	0.9	1.3	2.0	3.1	1.9	0.4	1.7	C91
Myeloid leukemia	760	1.2	1.0	0.7	0.7	0.8	1.4	3.3	1.7	1.5	2.1	2.9	4.0	5.9	8.5	7.7	7.3	0.8	2.2	C92-94
Leukemia unspecified	440	2.3	1.4	0.5	0.5	0.2	0.5	0.8	0.7	0.7	1.2	1.4	2.0	3.6	3.5	5.5	5.3	0.5	1.4	C95
Myelodysplastic disease	359	0.2	0.1	0.0	0.2	0.3	0.3	0.4	0.4	0.6	0.9	1.8	2.3	3.1	5.1	5.6	7.4	0.4	0.9	D45-D47
Other and unspecified	2,517	0.6	0.2	0.2	0.3	0.7	1.4	3.0	2.5	5.4	6.6	11.6	18.2	27.6	34.8	52.5	36.9	2.7	6.6	O&U
All sites	54,586	21.7	16.6	10.2	12.0	10.9	21.3	39.6	65.2	89.7	178.3	270.9	414.9	550.3	729.4	1052.3	853.4	58.3	143.3	ALL

**Table 2.2.2** Thailand (2011), Mean annual ASR per 100,000 (2010-2012) by Age Group – Female

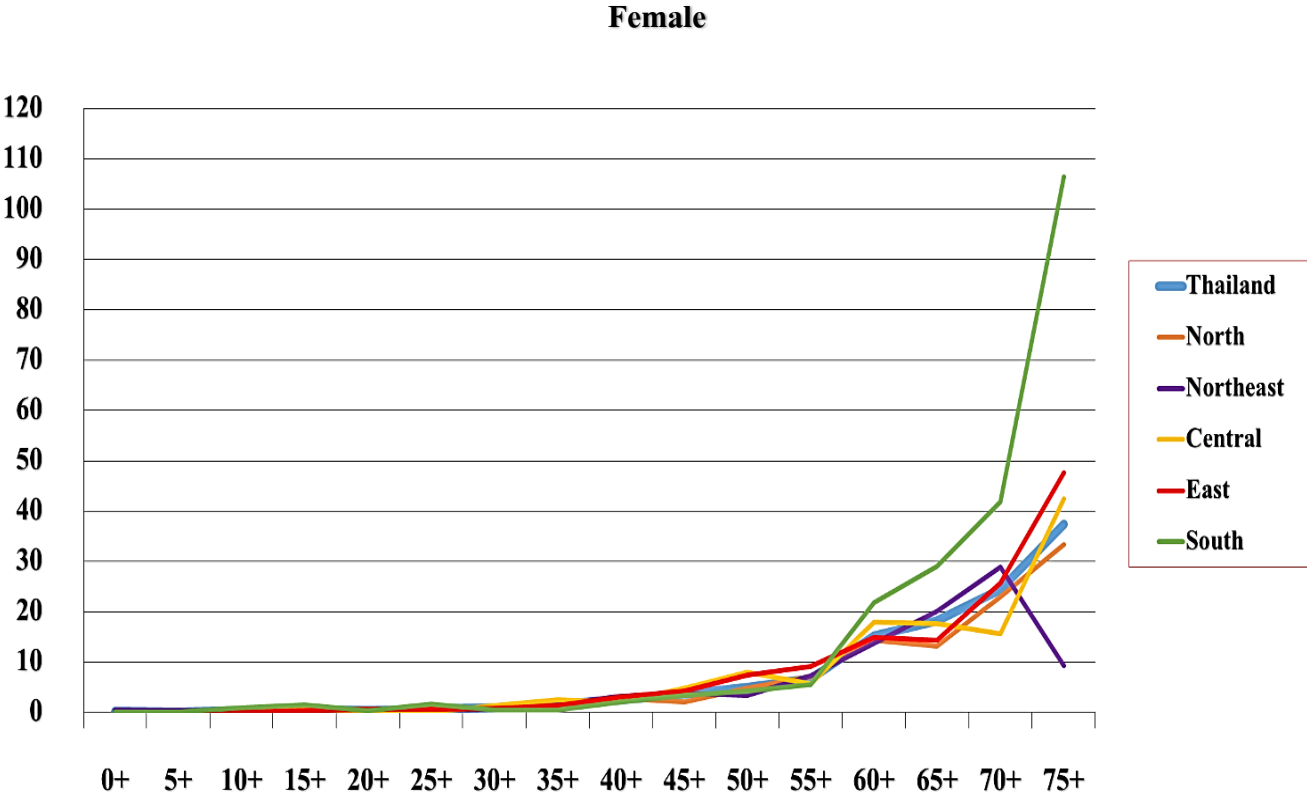
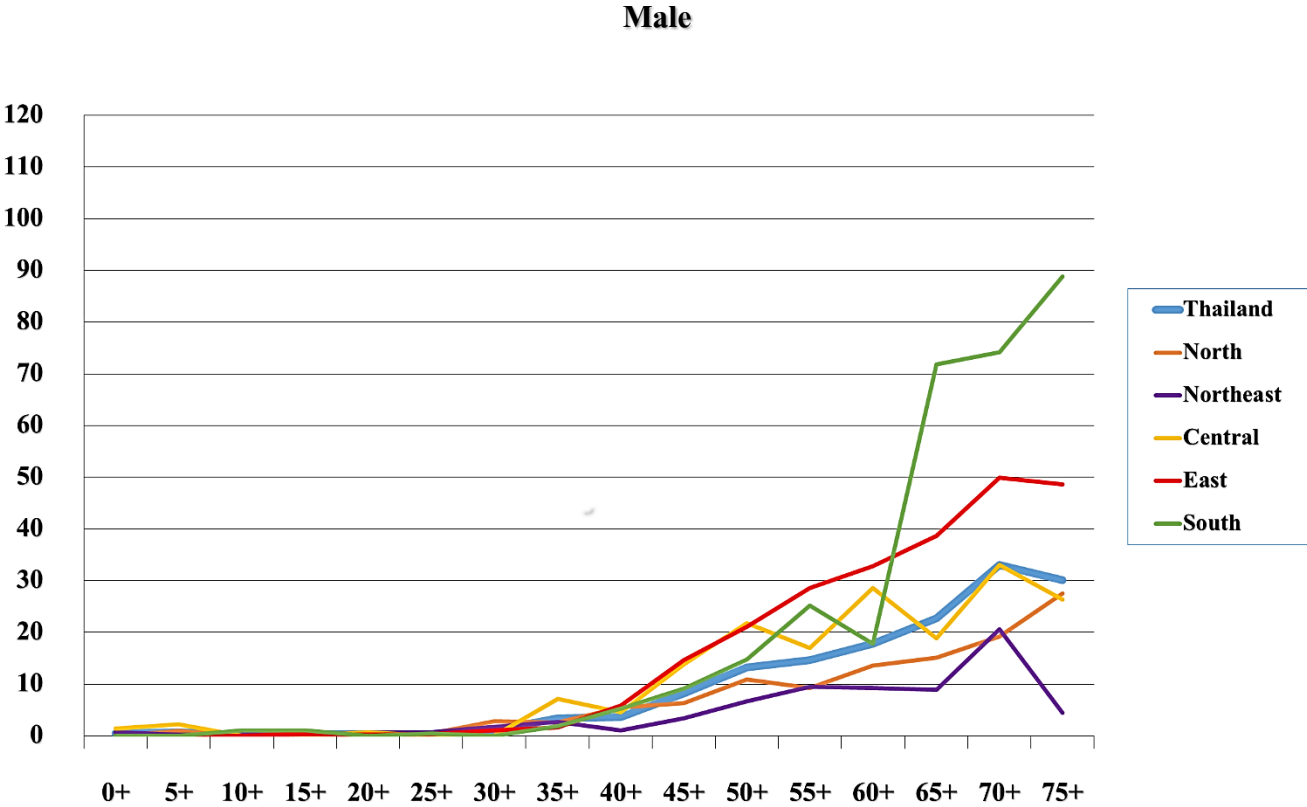
Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10
Lip	341	0.0	0.0	0.0	0.4	0.0	0.1	0.0	0.0	0.4	0.3	0.1	1.1	2.7	4.4	6.8	9.8	0.3	0.7	C00
Tongue	432	0.1	0.0	0.0	0.1	0.1	0.1	0.5	0.4	0.8	1.9	2.1	2.3	4.0	4.5	4.8	5.9	0.4	1.0	C01-02
Mouth	728	0.1	0.0	0.3	0.0	0.0	0.1	0.2	0.6	0.6	1.0	1.9	2.6	7.8	7.2	10.7	19.5	0.7	1.5	C03-06
Salivary glands	189	0.1	0.1	0.0	0.2	0.1	0.3	0.2	0.5	0.7	0.5	0.9	0.7	0.8	2.1	2.1	2.1	0.2	0.4	C07-08
Tonsil	114	0.1	0.0	0.0	0.1	1.0	0.1	0.0	0.2	0.4	0.5	0.2	0.5	0.5	0.5	1.1	1.3	0.1	0.3	C09
Other oropharynx	27	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.4	0.0	0.0	0.5	0.0	0.1	C10
Nasopharynx	393	0.0	0.0	0.1	0.1	0.2	0.7	0.9	0.9	1.1	1.5	3.0	2.4	4.3	2.6	2.1	1.6	0.4	0.9	C11
Hypopharynx	62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.3	1.3	0.3	0.5	0.6	0.6	0.1	0.1	C12-13
Pharynx unspecified	28	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.1	0.5	0.2	0.0	0.1	0.1	0.0	0.1	C14
Oesophagus	303	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	1.2	2.3	2.1	4.7	5.3	6.1	0.3	0.6	C15
Stomach	1,134	0.0	0.0	0.0	0.0	0.0	0.6	1.0	1.6	2.6	4.5	4.8	6.6	7.0	12.9	17.6	14.8	1.2	2.5	C16
Small intestine	141	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.7	0.3	1.2	2.2	1.5	1.3	1.8	0.1	0.3	C17
Colon	3,038	0.1	0.0	0.0	0.4	0.5	0.6	1.2	2.7	5.1	7.2	12.7	19.7	29.0	35.3	51.1	43.8	3.1	6.6	C18
Rectum	1,901	0.0	0.0	0.0	0.0	0.2	1.5	1.1	1.6	3.1	6.0	9.3	11.9	20.3	23.2	27.1	20.9	1.9	4.3	C19-20
Anus	108	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.2	0.2	0.5	0.6	1.5	0.9	1.1	1.2	0.1	0.2	C21
Liver and bile duct	5,765	0.5	0.0	0.2	0.1	0.1	0.7	2.1	3.9	7.7	12.9	22.9	42.2	60.4	84.6	107.0	63.1	5.8	12.9	C22,C24
Gallbladder	475	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	1.3	1.3	3.0	6.3	4.7	9.9	7.6	0.5	1.0	C23
Pancreas	624	0.0	0.2	0.0	0.1	0.1	0.1	0.2	0.6	0.9	2.0	1.6	3.5	6.5	8.0	10.5	9.3	0.6	1.4	C25
Nose, sinuses etc.	133	0.0	0.0	0.1	0.0	0.1	0.1	0.4	0.2	0.5	0.5	0.5	1.2	0.5	0.5	1.3	1.8	0.1	0.3	C30-31
Larynx	97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.5	0.7	0.7	1.0	2.1	1.7	0.1	0.2	C32
Trachea, Bronchus and lung	4,624	0.1	0.0	0.0	0.1	0.3	1.3	1.5	3.7	5.6	10.4	17.7	28.5	46.7	56.9	80.0	73.0	4.7	10.1	C33-34
Other thoracic organs	90	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.5	0.1	0.2	0.3	0.4	0.6	1.2	0.7	1.1	0.1	0.2	C37-38
Bone	328	0.0	0.6	0.8	1.3	1.3	0.9	0.6	0.3	0.6	1.2	1.1	1.0	1.7	3.1	2.2	1.4	0.3	0.9	C40-C41
Melanoma of skin	240	0.1	0.0	0.0	0.2	0.9	1.2	0.1	0.3	0.5	0.5	0.6	1.2	2.0	2.9	1.7	2.7	0.2	0.6	C43
Other skin	1,554	0.1	0.1	0.1	0.5	1.2	0.5	0.9	0.9	1.2	3.4	5.3	6.5	12.3	15.1	23.8	37.3	1.6	3.3	C44
Mesothelioma	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	0.1	0.0	0.0	0.0	0.0	0.0	C45
Kaposi's sarcoma	4	0.0	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	0.1	0.0	0.0	C46
Connective tissue	412	0.5	0.2	0.4	0.7	0.5	0.7	1.0	0.7	0.9	1.4	2.0	2.6	2.0	2.1	4.3	3.6	0.4	1.0	C47,C49
Breast	12,613	0.0	0.0	0.1	0.2	5.1	11.9	18.3	32.9	53.0	84.9	82.4	87.5	95.1	70.8	74.4	38.6	12.8	28.5	C50
Vulva	148	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.5	0.2	0.5	0.7	1.5	0.8	1.5	1.2	1.8	0.2	0.3	C51
Vagina	89	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.1	0.2	0.3	0.5	0.4	0.8	0.8	1.7	0.1	0.2	C52
Cervix uteri	6,426	0.0	0.0	0.1	0.1	3.1	4.0	9.4	19.9	29.6	39.5	38.2	41.6	41.5	37.3	49.9	27.4	6.5	14.4	C53
Corpus uteri	1,904	0.0	0.0	0.0	0.1	0.2	0.8	0.7	1.7	4.1	8.8	15.9	19.6	21.0	14.9	13.8	7.2	1.9	4.3	C54
Uterus unspecified	146	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.2	0.9	0.3	0.9	1.1	1.6	1.2	0.7	0.6	0.1	0.3	C55
Ovary	2,593	0.0	0.5	1.1	1.6	2.1	3.3	3.9	6.2	9.2	14.3	15.5	15.3	17.9	20.0	17.2	12.9	2.6	6.0	C56
Other female genital organs	50	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.3	0.3	0.3	1.0	0.1	0.3	0.1	0.1	0.1	C57
Placenta	48	0.0	0.0	0.0	0.1	0.2	0.8	0.3	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.2	0.0	0.0	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	309	0.5	0.1	0.0	0.1	0.9	0.1	0.2	0.4	0.3	0.6	1.3	1.8	2.6	3.0	5.5	3.2	0.3	0.8	C64
Renal pelvis	38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.6	0.5	1.2	0.0	0.1	C65
Ureter	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.8	0.0	0.0	C66
Bladder	493	0.3	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.5	0.8	1.6	2.2	3.5	5.4	8.2	13.0	0.5	1.0	C67
Other urinary organs	36	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.4	0.0	0.1	C68
Eye	96	1.2	0.0	0.1	0.0	0.0	0.6	0.1	0.3	0.0	0.4	0.3	0.3	0.4	0.6	0.4	0.7	0.1	0.3	C69
Brain, nervous system	1,065	1.5	3.2	1.5	0.9	1.8	1.8	2.5	2.1	3.9	5.7	3.6	4.5	5.7	5.1	7.7	5.1	1.1	2.9	C70-72
Thyroid	2,105	0.0	0.1	0.3	2.5	4.0	7.4	6.3	7.7	7.7	9.2	10.6	9.3	10.9	9.0	16.0	8.0	2.1	5.1	C73
Adrenal gland	52	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.4	0.2	0.2	0.0	0.1	0.1	0.2	C74
Other endocrine	19	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.1	C75
Hodgkin disease	80	0.1	0.0	0.3	0.1	0.3	1.0	0.2	0.2	0.1	0.2	0.3	0.2	0.1	0.2	0.1	0.2	0.1	0.2	C81
Non-Hodgkin lymphoma	1,920	0.9	0.4	0.6	1.1	2.0	3.9	4.2	2.7	4.4	6.3	7.8	12.9	12.2	17.9	19.8	18.7	1.9	4.5	C82-85,C96
Multiple myeloma	379	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.4	0.8	1.7	3.1	3.5	5.6	6.7	4.8	0.4	0.8	C90
Lymphoid leukemia	309	3.3	2.8	1.3	0.7	0.1	0.4	0.2	0.3	0.5	0.4	0.7	0.8	0.5	1.9	1.3	1.8	0.3	1.2	C91
Myeloid leukemia	637	1.4	0.6	0.8	1.4	0.6	0.6	0.8	1.3	1.6	2.0	2.5	4.1	5.3	3.2	5.6	4.7	0.6	1.7	C92-94
Leukemia unspecified	455	1.1	0.9	0.3	0.7	0.5	0.4	0.8	0.8	1.0	1.4	1.7	1.8	2.3	3.5	4.4	5.4	0.5	1.2	C95
Myelodysplastic disease	436	0.2	0.0	0.3	0.3	0.3	0.2	0.4	0.4	0.4	0.8	1.3	1.8	3.3	4.2	8.1	8.6	0.4	1.0	D45-D47
Other and unspecified	2,047	0.7	0.1	0.4	0.3	1.3	1.9	1.5	3.3	3.7	5.0	8.6	11.4	17.7	20.7	36.4	24.8	2.1	4.7	O&U
<b>All sites</b>	<b>57,806</b>	<b>14.1</b>	<b>10.5</b>	<b>9.4</b>	<b>14.6</b>	<b>30.3</b>	<b>49.8</b>	<b>63.2</b>	<b>101.8</b>	<b>155.9</b>	<b>241.3</b>	<b>288.8</b>	<b>367.3</b>	<b>470.9</b>	<b>508.5</b>	<b>655.3</b>	<b>525.0</b>	<b>58.6</b>	<b>131.9</b>	<b>ALL</b>

# Oral cavity

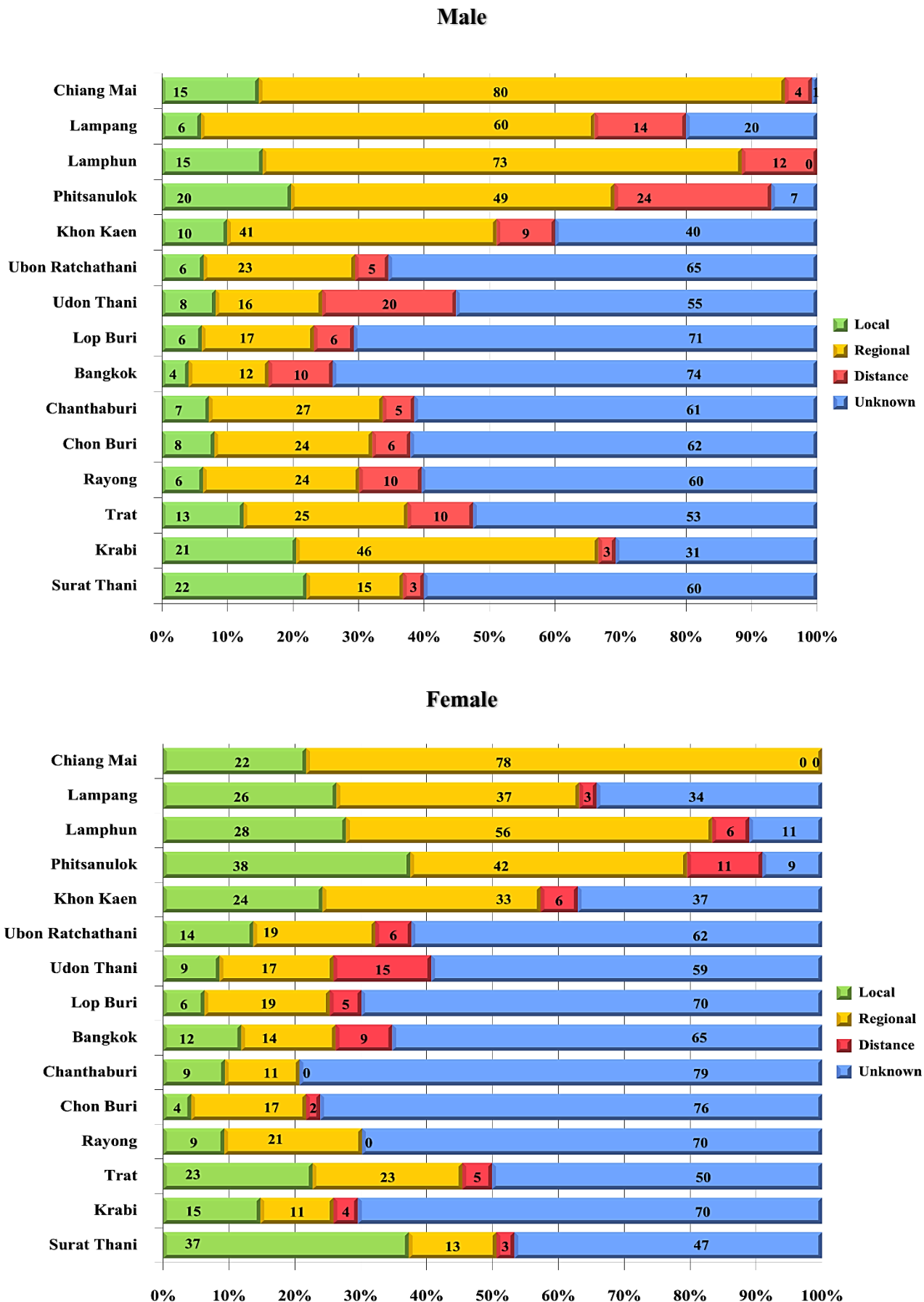
**Figure 2.2.1** Oral cavity cancer in different regions, mean annual ASR per 100,000 (2010-2012)



**Figure 2.2.2** Age - specific incidence rates of oral cavity cancer, mean annual rate per 100,000 (2010-2012)

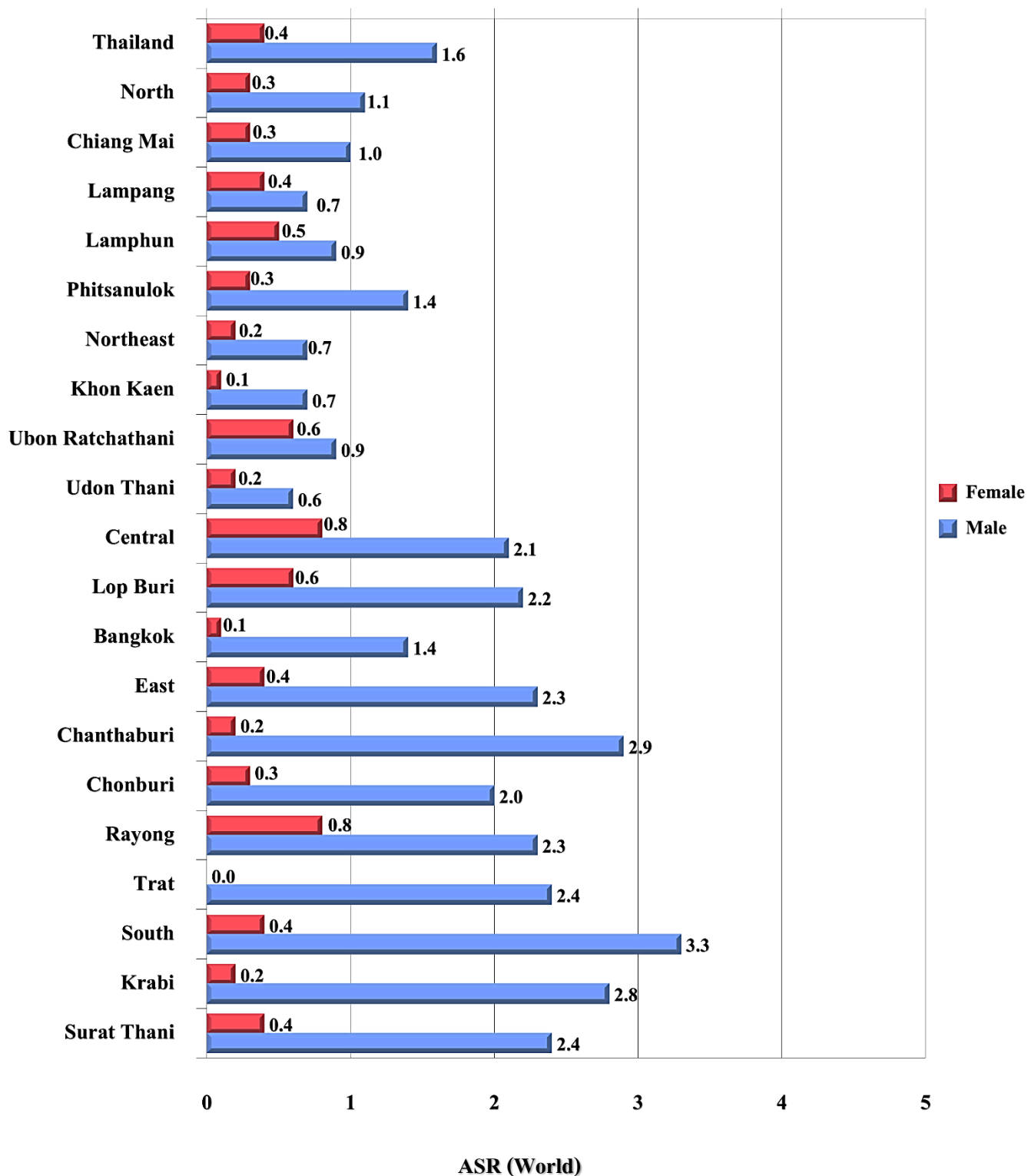


**Figure 2.2.3** Stage distribution of oral cavity cancer (2010-2012)



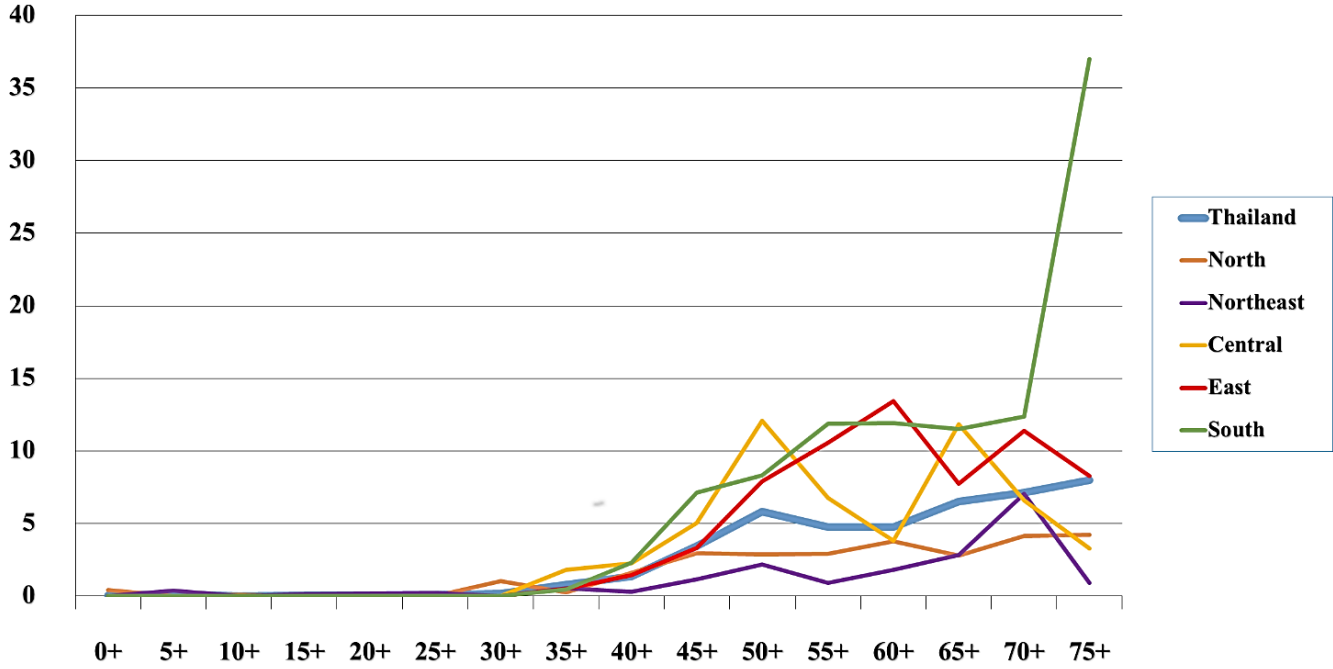
# Oropharynx

**Figure 2.3.1** Oropharynx cancer in different regions, mean annual ASR per 100,000 (2010-2012)

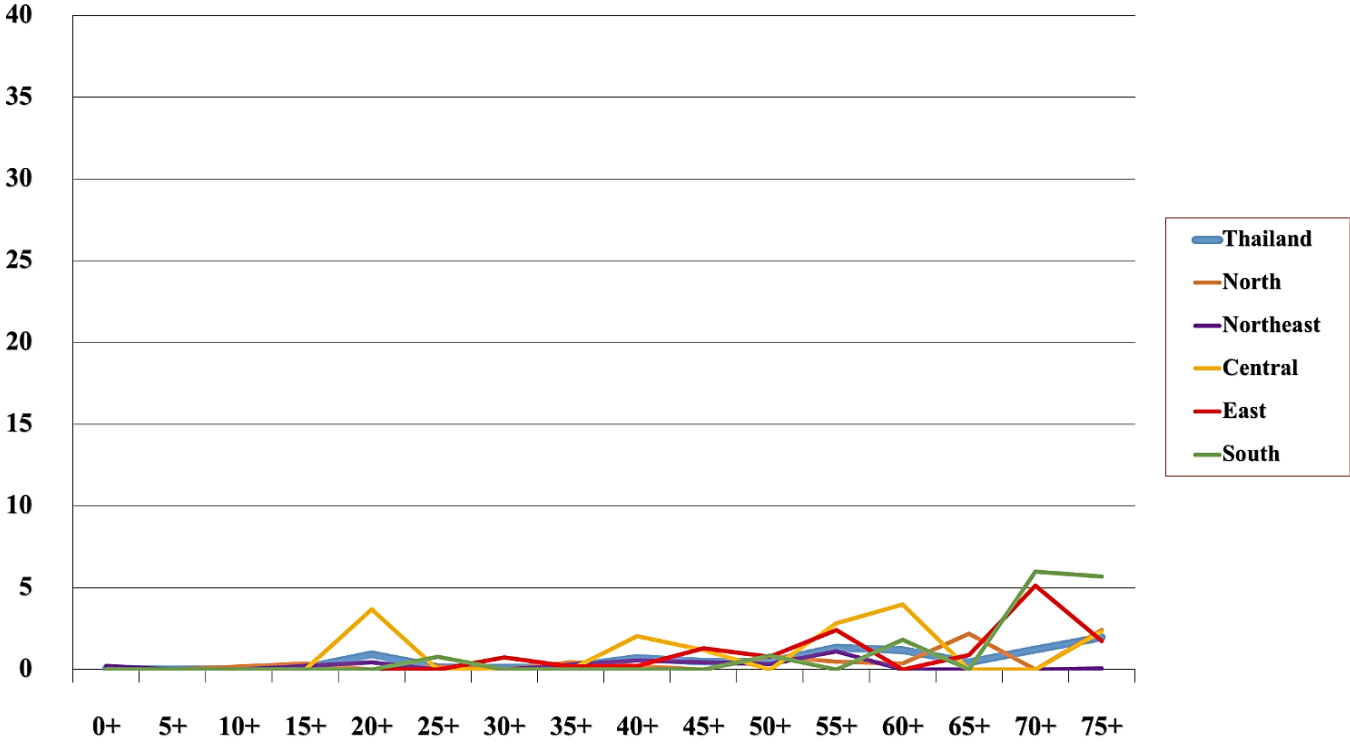


**Figure 2.3.2** Age - specific incidence rates of oropharynx cancer, mean annual rate per 100,000 (2010-2012)

**Male**

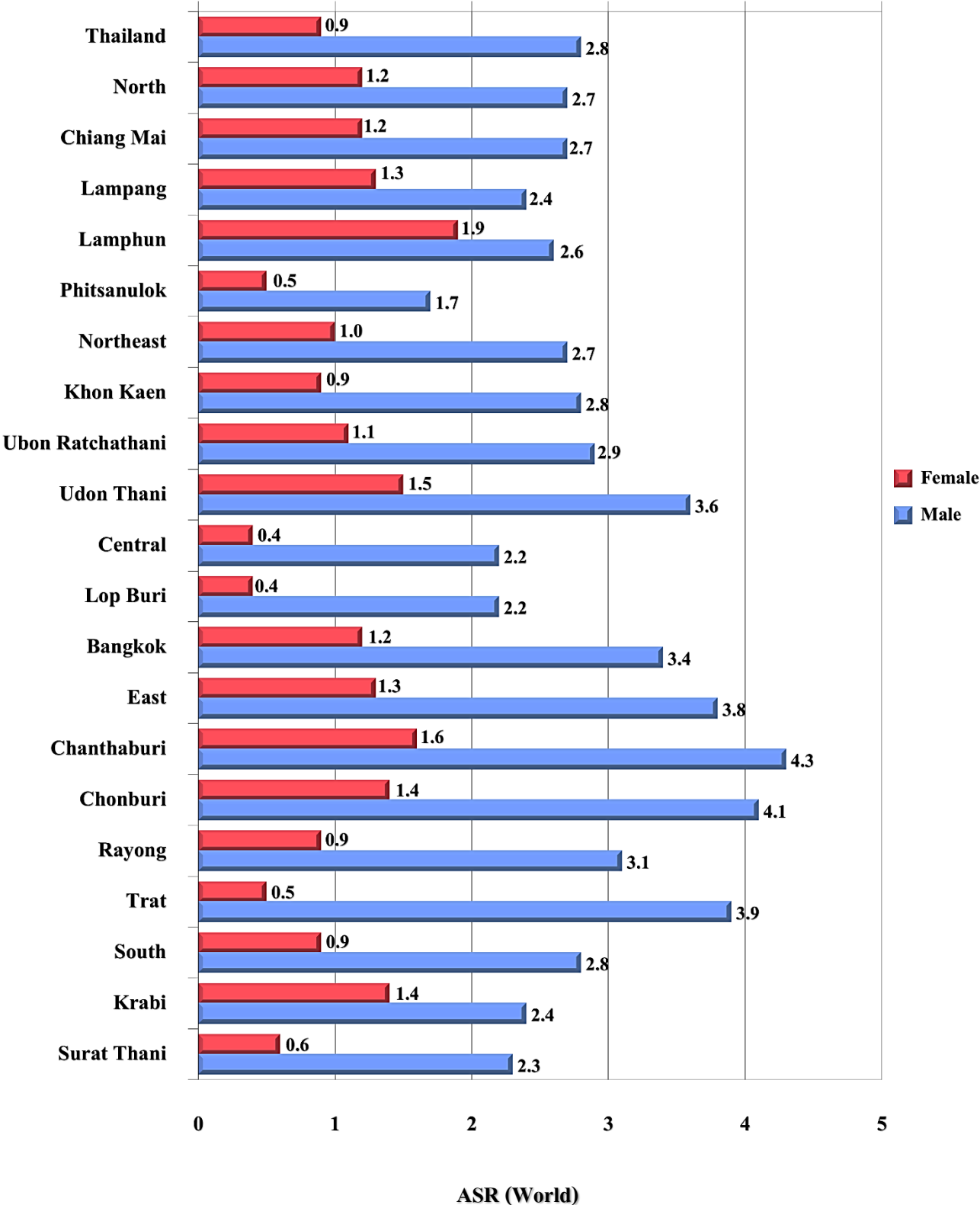


**Female**

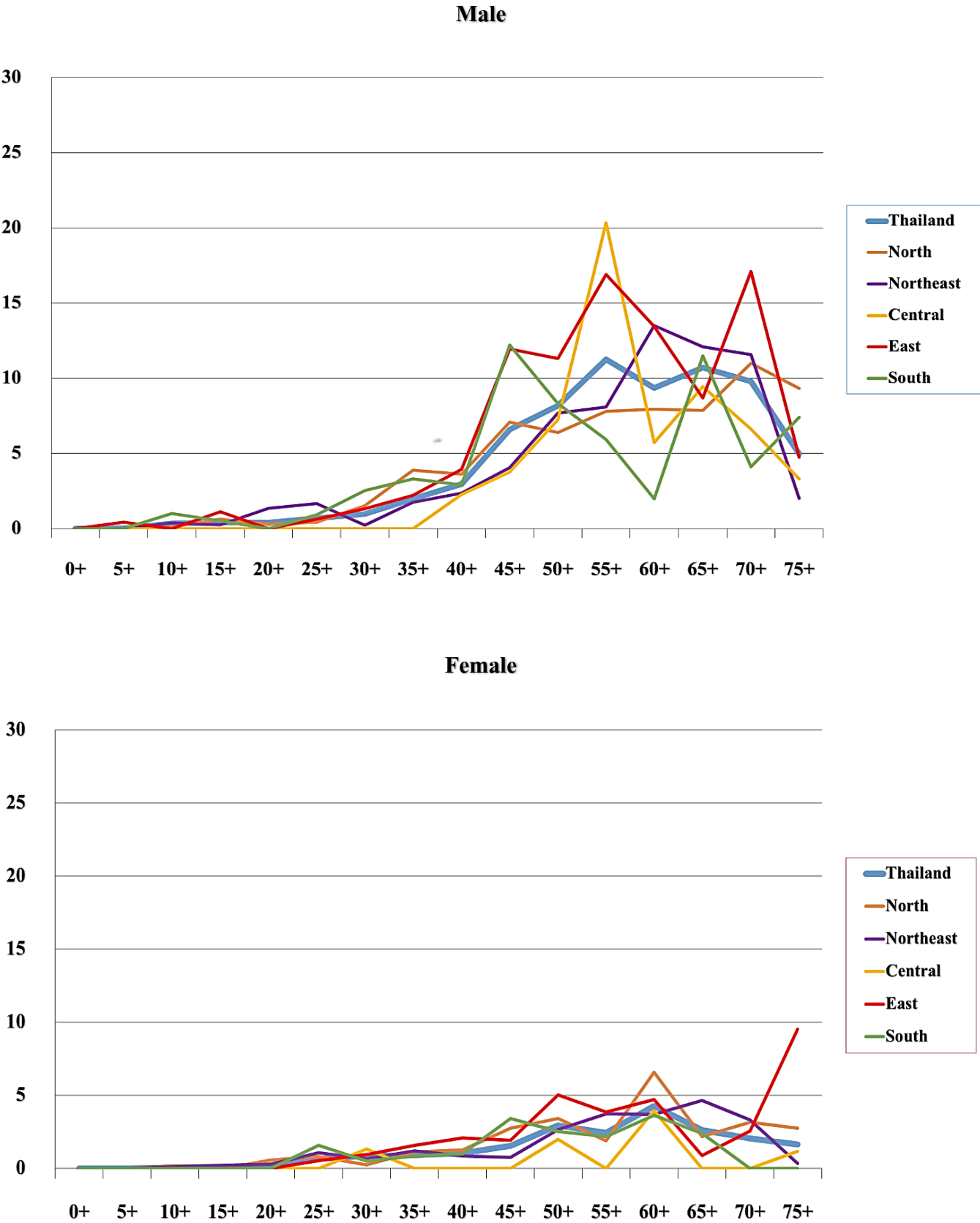


# Nasopharynx

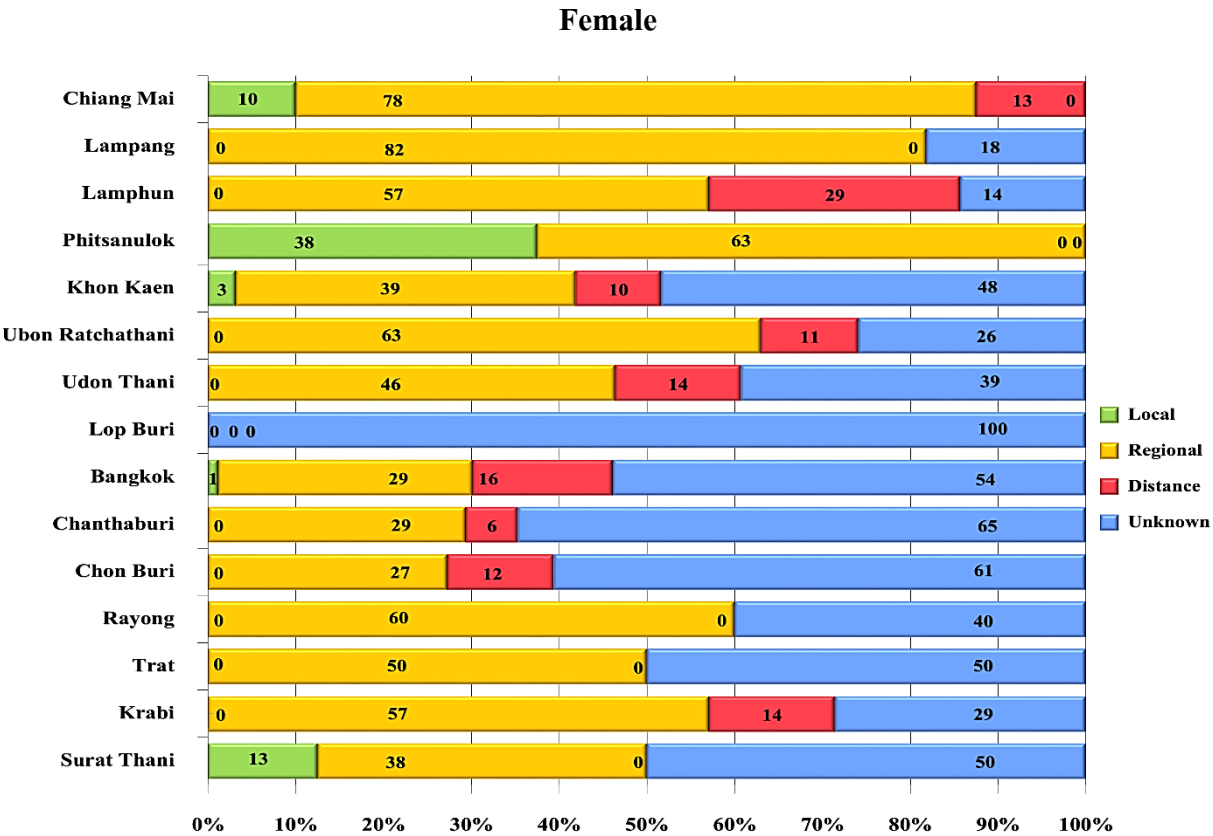
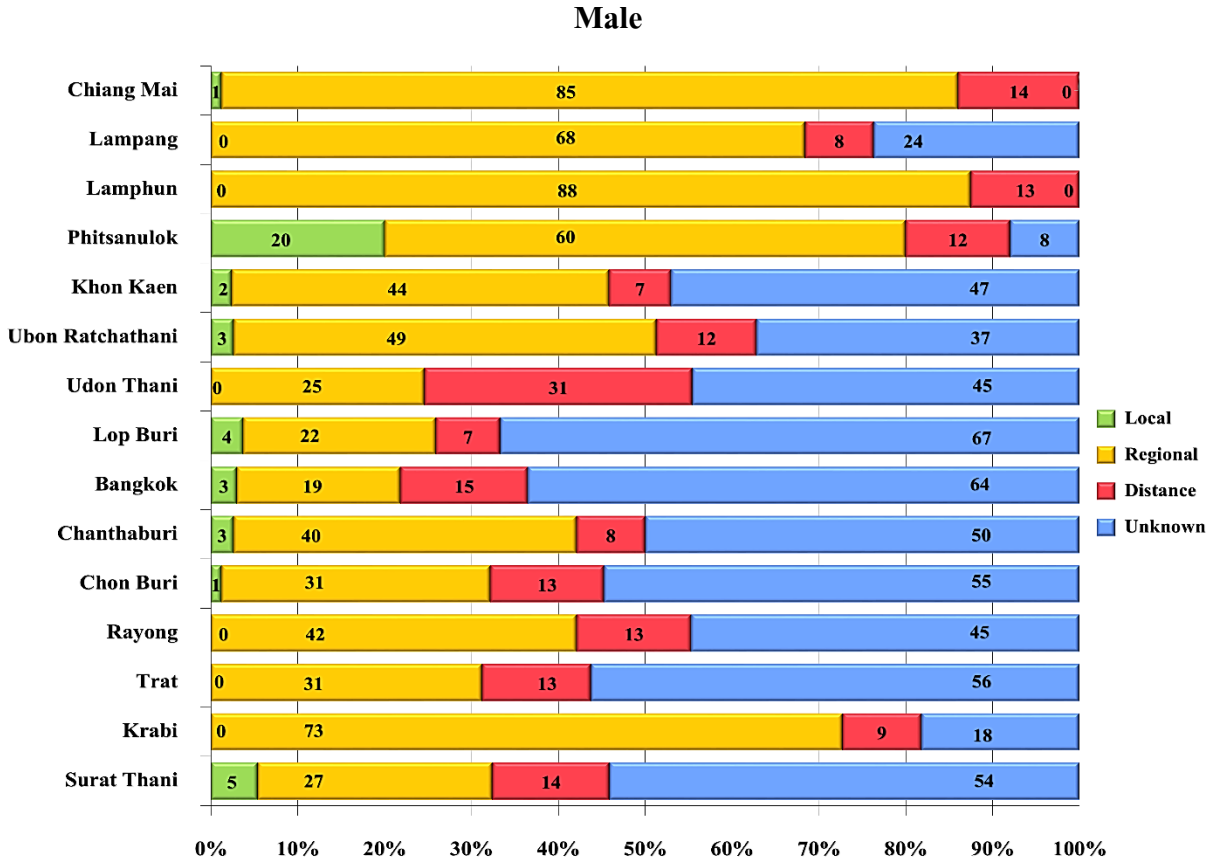
Figure 2.4.1 Nasopharynx cancer in different regions, mean annual ASR per 100,000 (2010-2012)



**Figure 2.4.2** Age - specific incidence rates of nasopharynx cancer, mean annual rate per 100,000 (2010-2012)

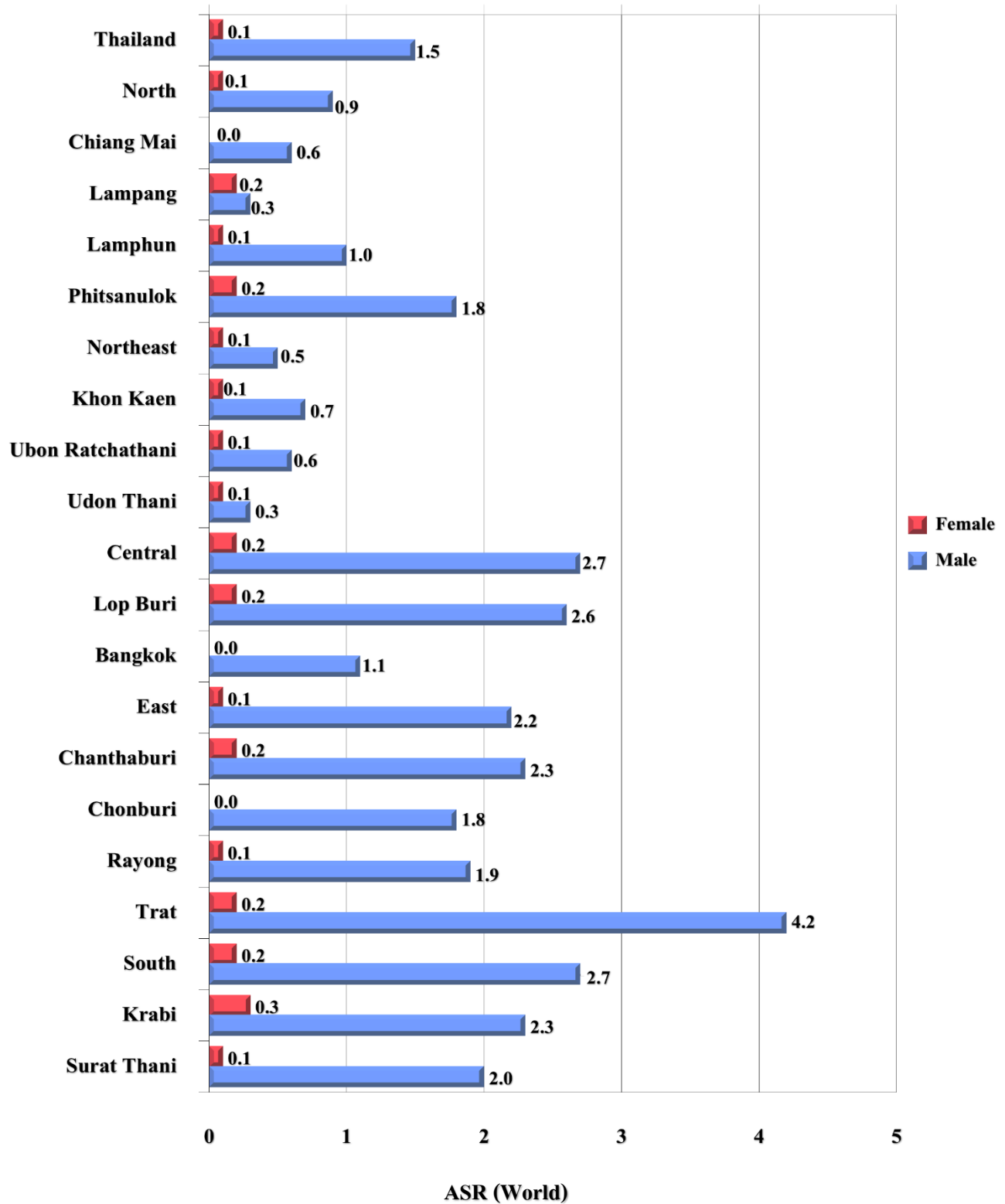


**Figure 2.4.3** Stage distribution of nasopharynx cancer (2010-2012)

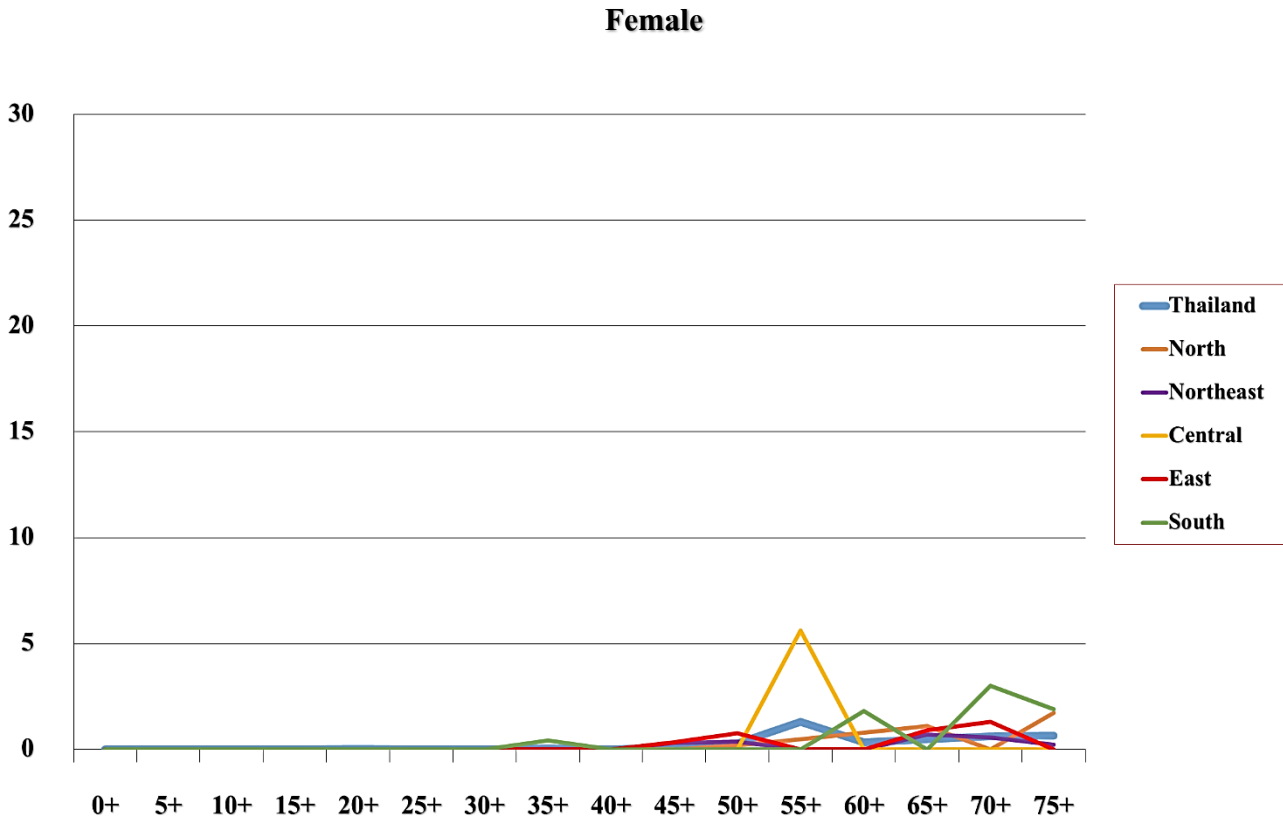
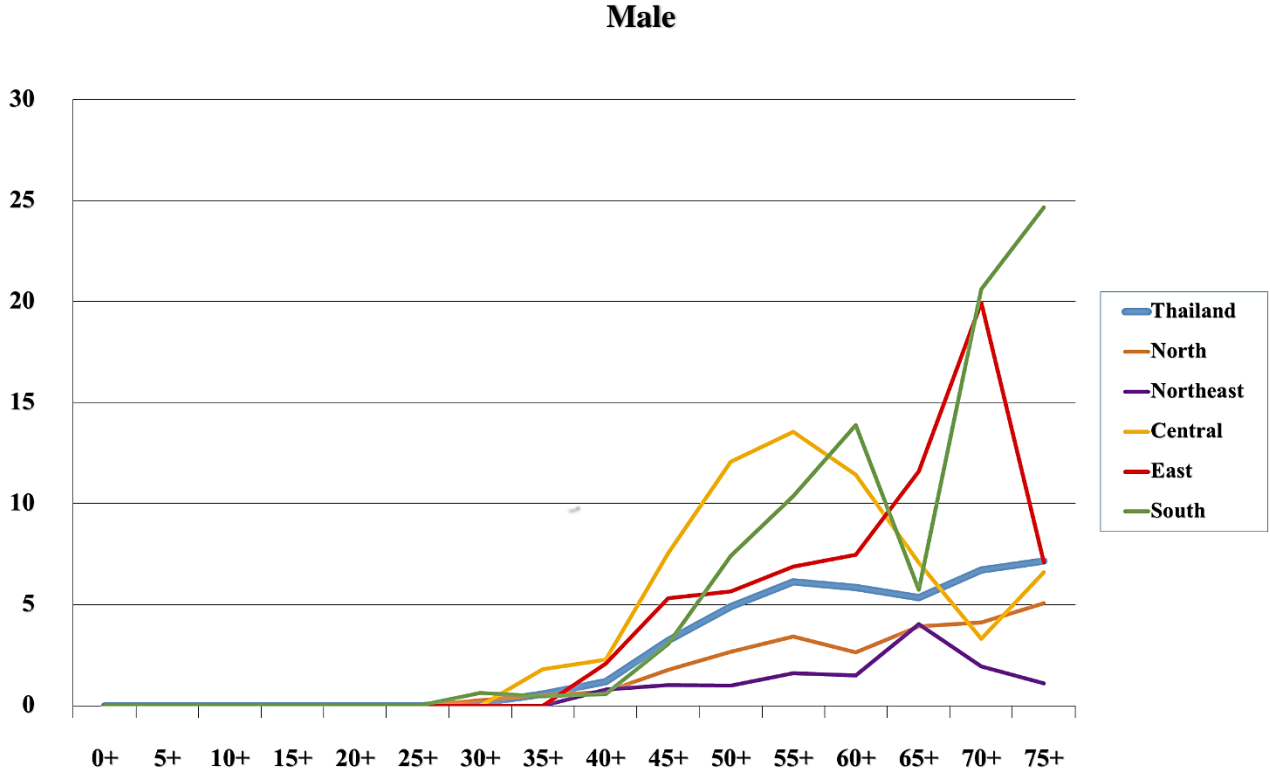


# Hypopharynx

Figure 2.5.1 Hypopharynx cancer in different regions, mean annual ASR per 100,000 (2010-2012)

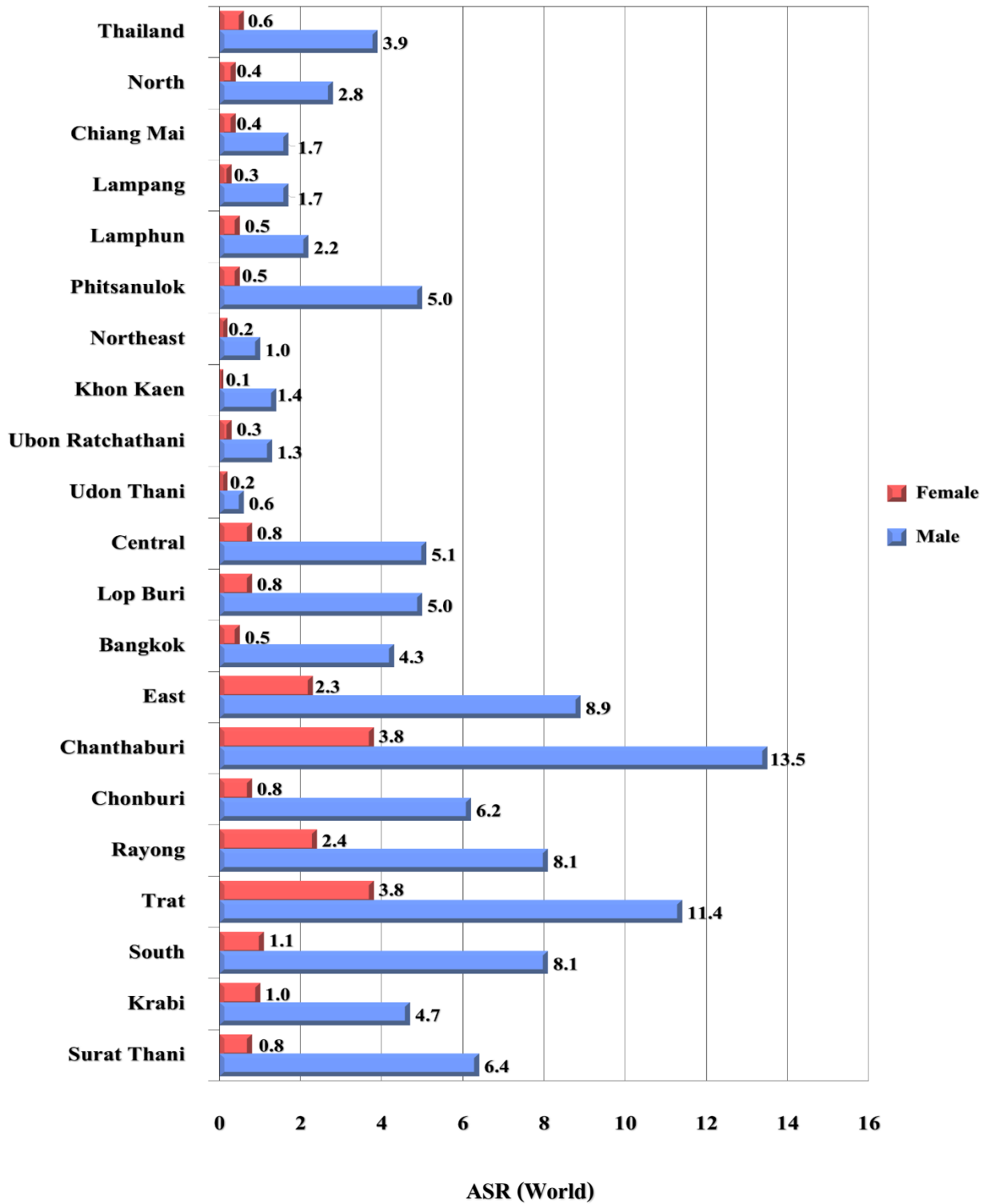


**Figure 2.5.2** Age - specific incidence rates of hypopharynx cancer, mean annual rate per 100,000 (2010-2012)

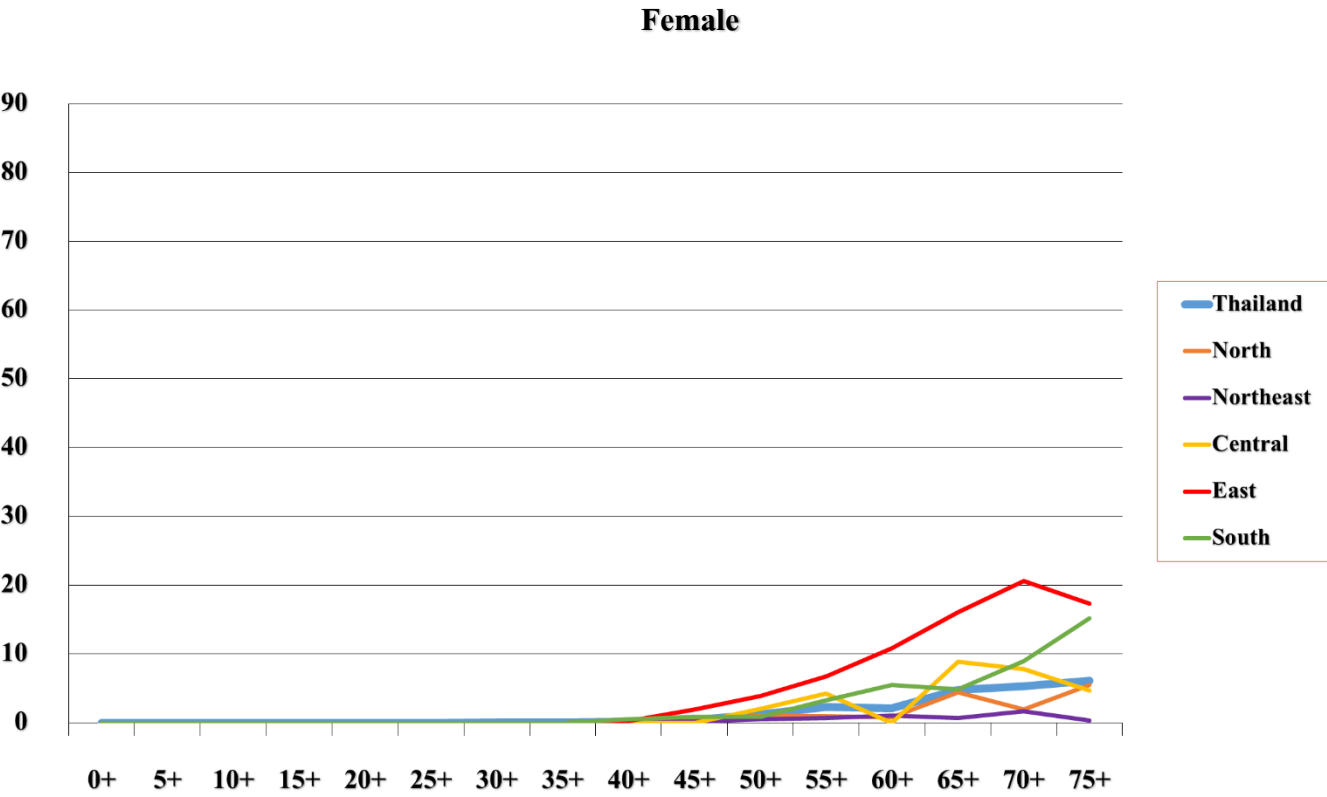
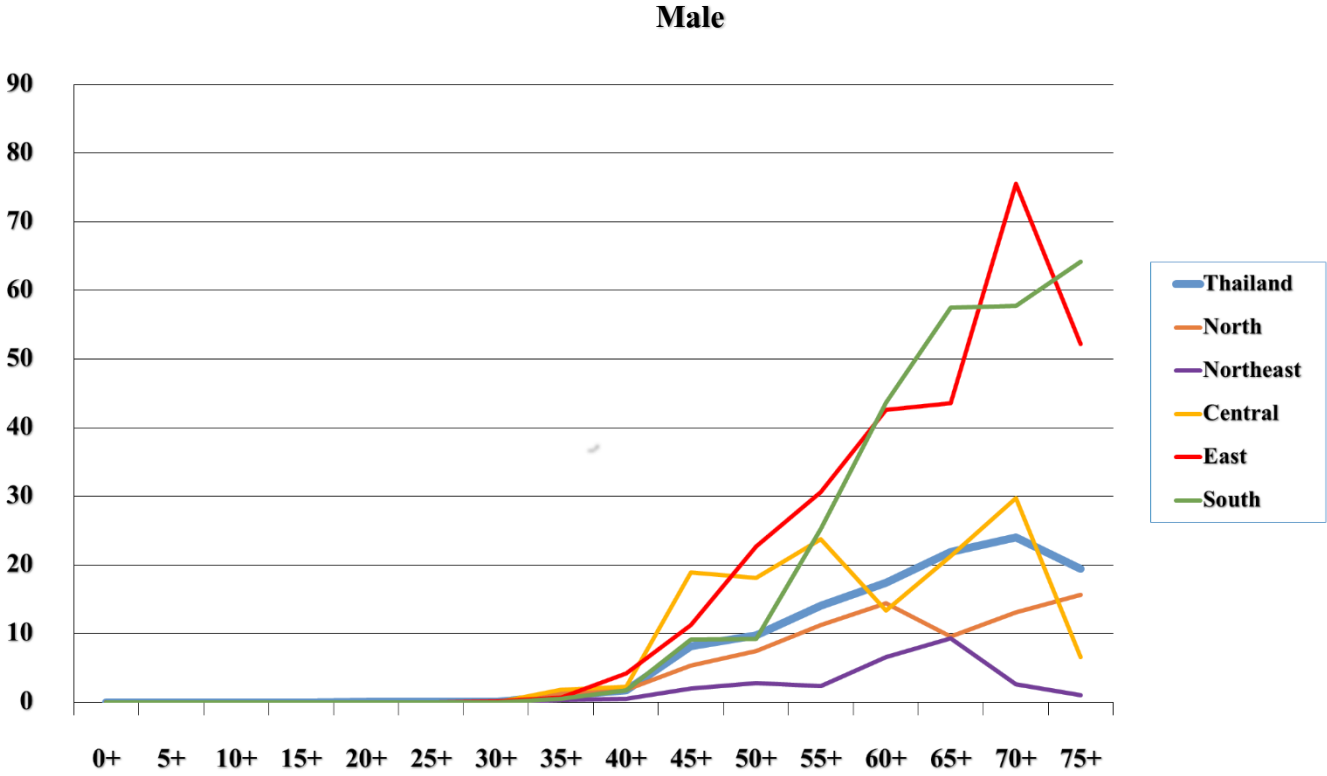


# Esophagus

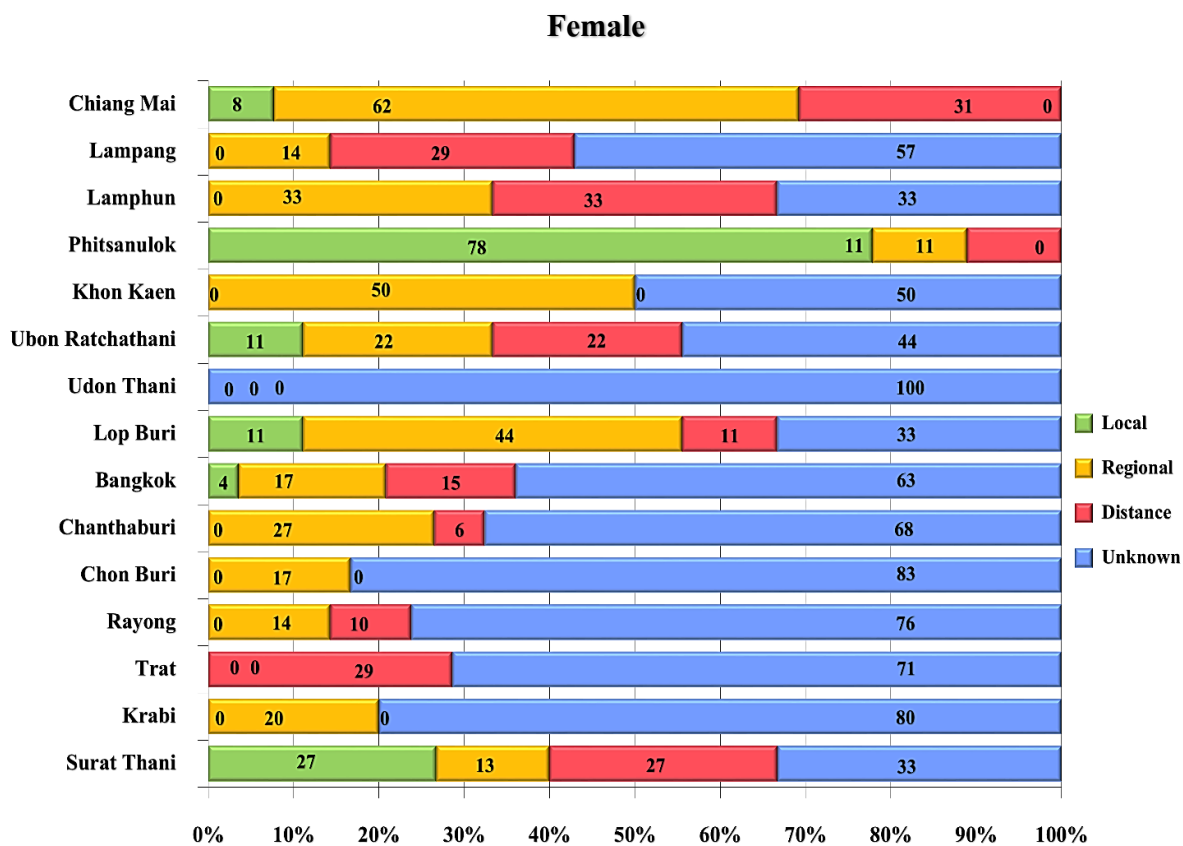
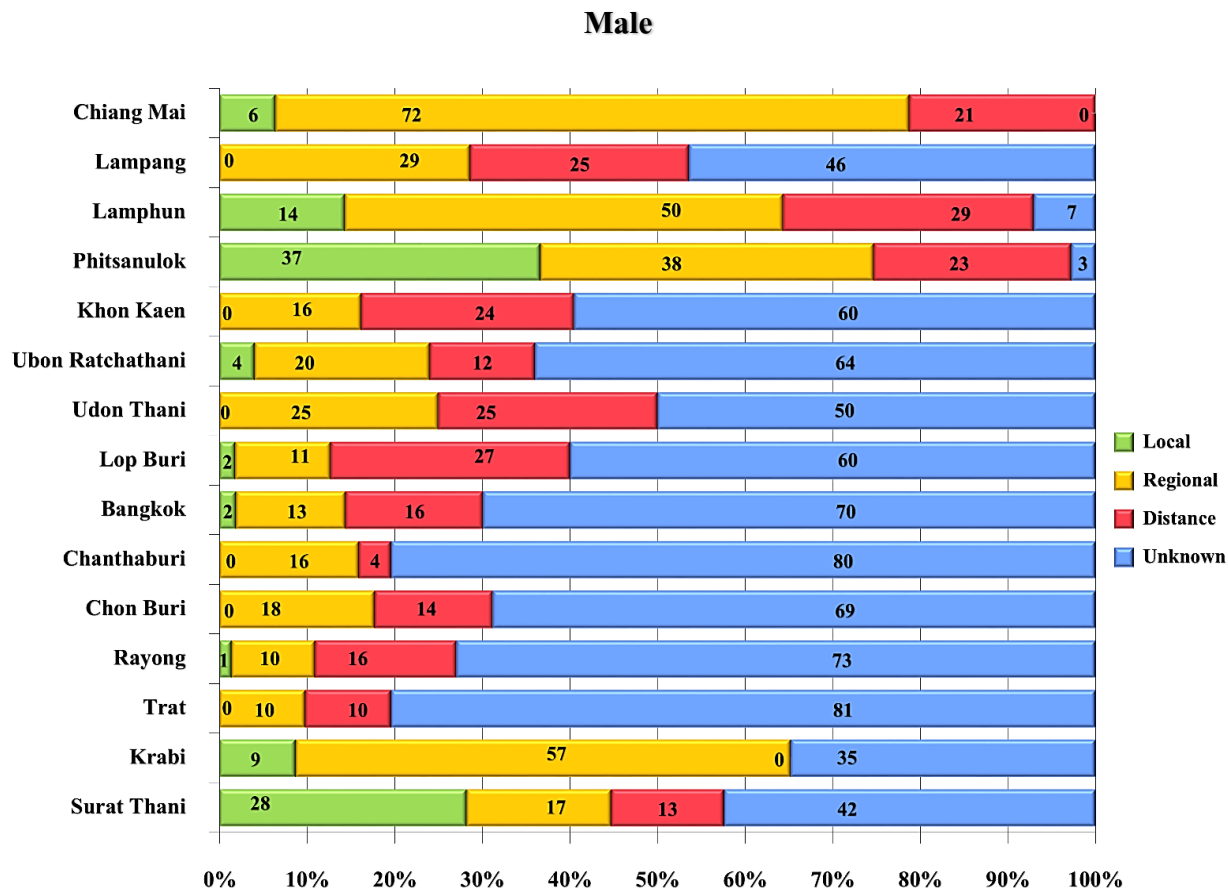
Figure 2.6.1 Esophagus cancer in different regions, mean annual ASR per 100,000 (2010-2012)



**Figure 2.6.2** Age - specific incidence rates of esophagus cancer, mean annual rate per 100,000 (2010-2012)

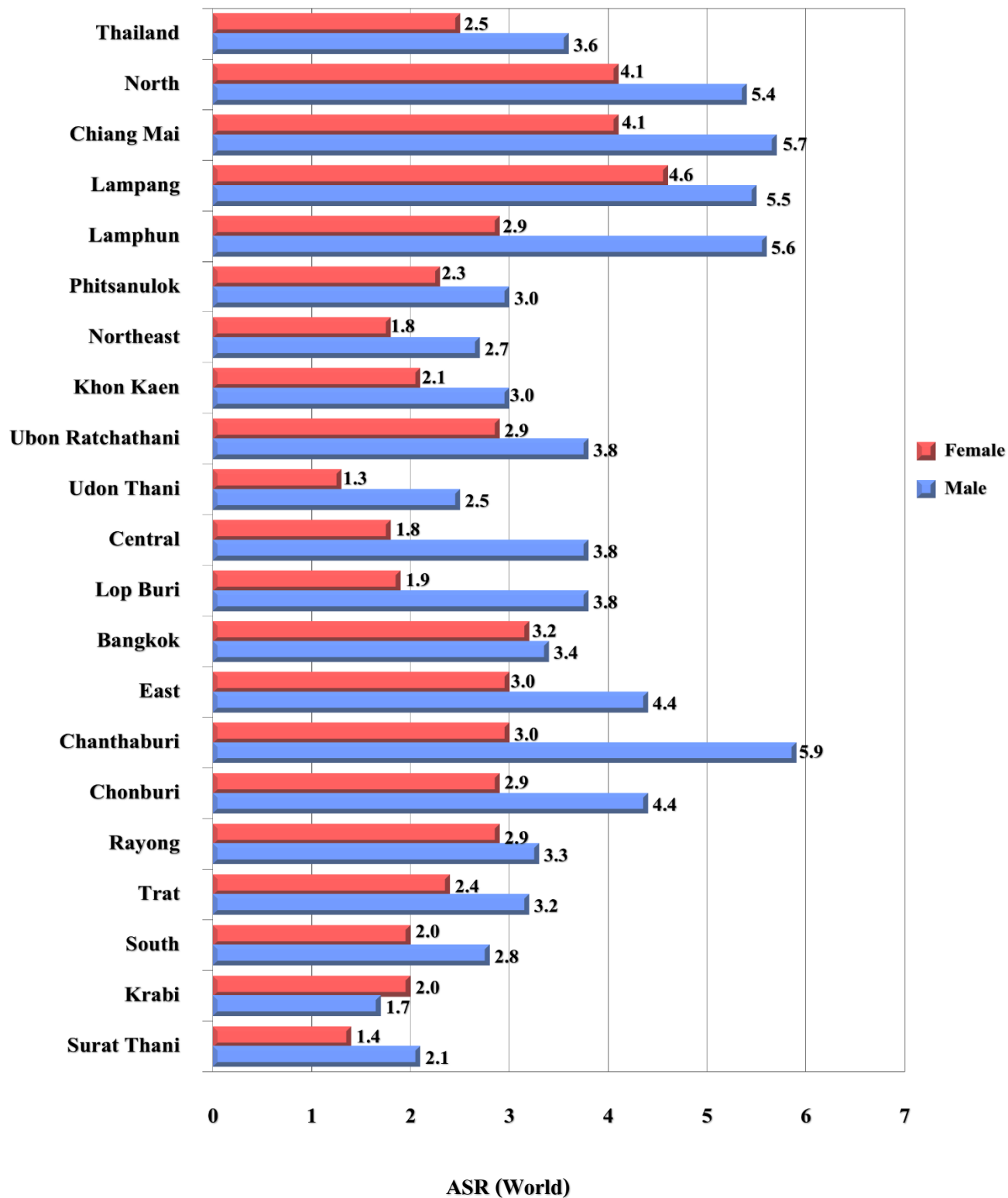


**Figure 2.6.3** Stage distribution of esophagus cancer (2010-2012)



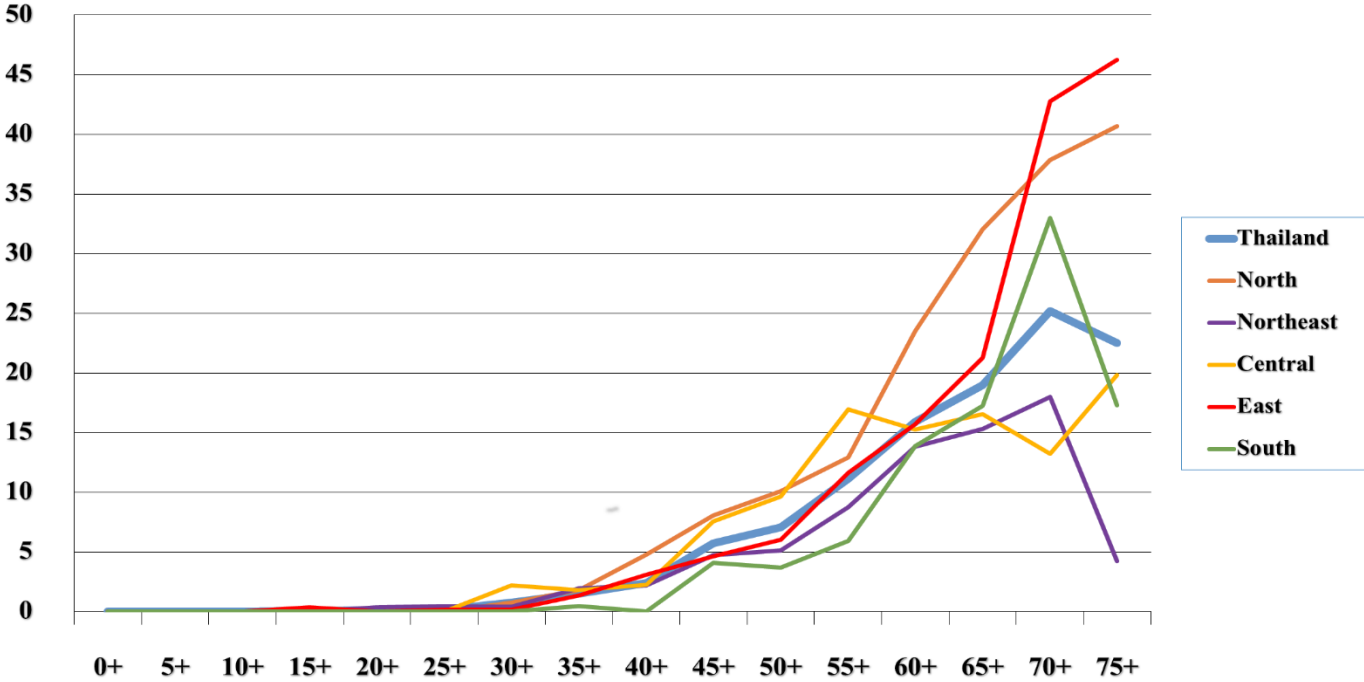
# Stomach

**Figure 2.7.1** Stomach cancer in different regions, mean annual ASR per 100,000 (2010-2012)

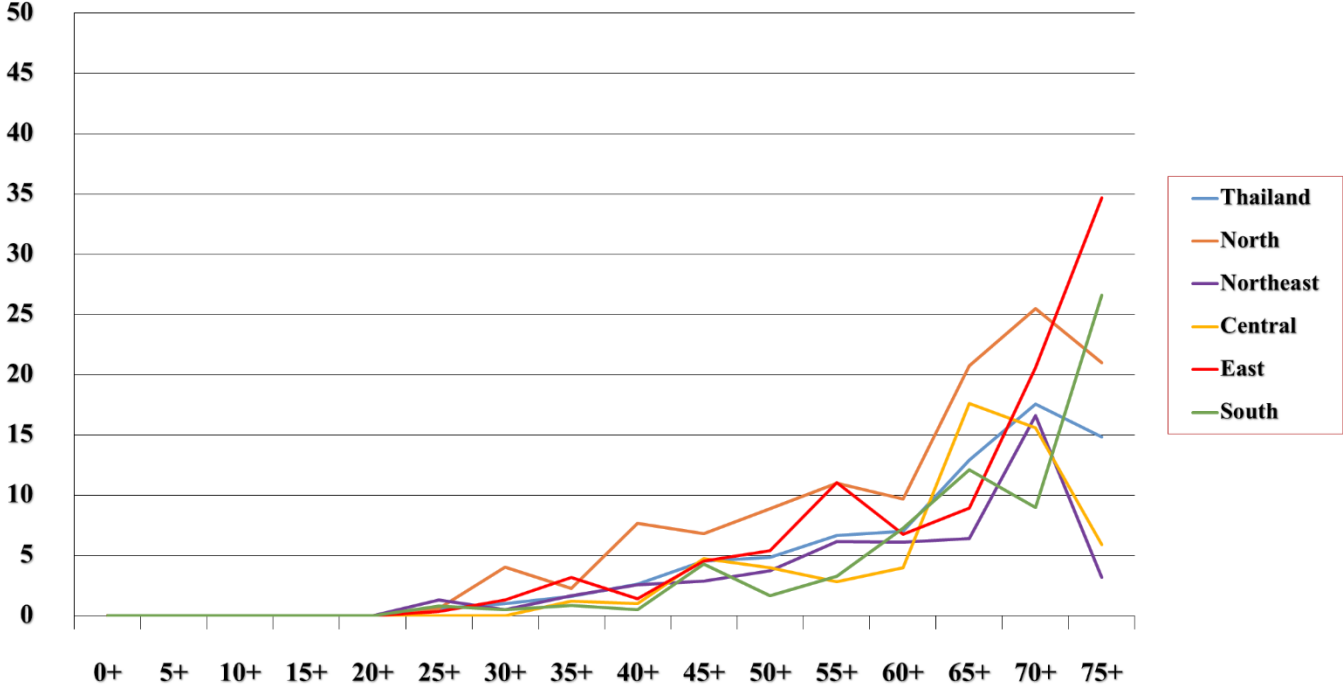


**Figure 2.7.2** Age - specific incidence rates of stomach cancer, mean annual rate per 100,000 (2010-2012)

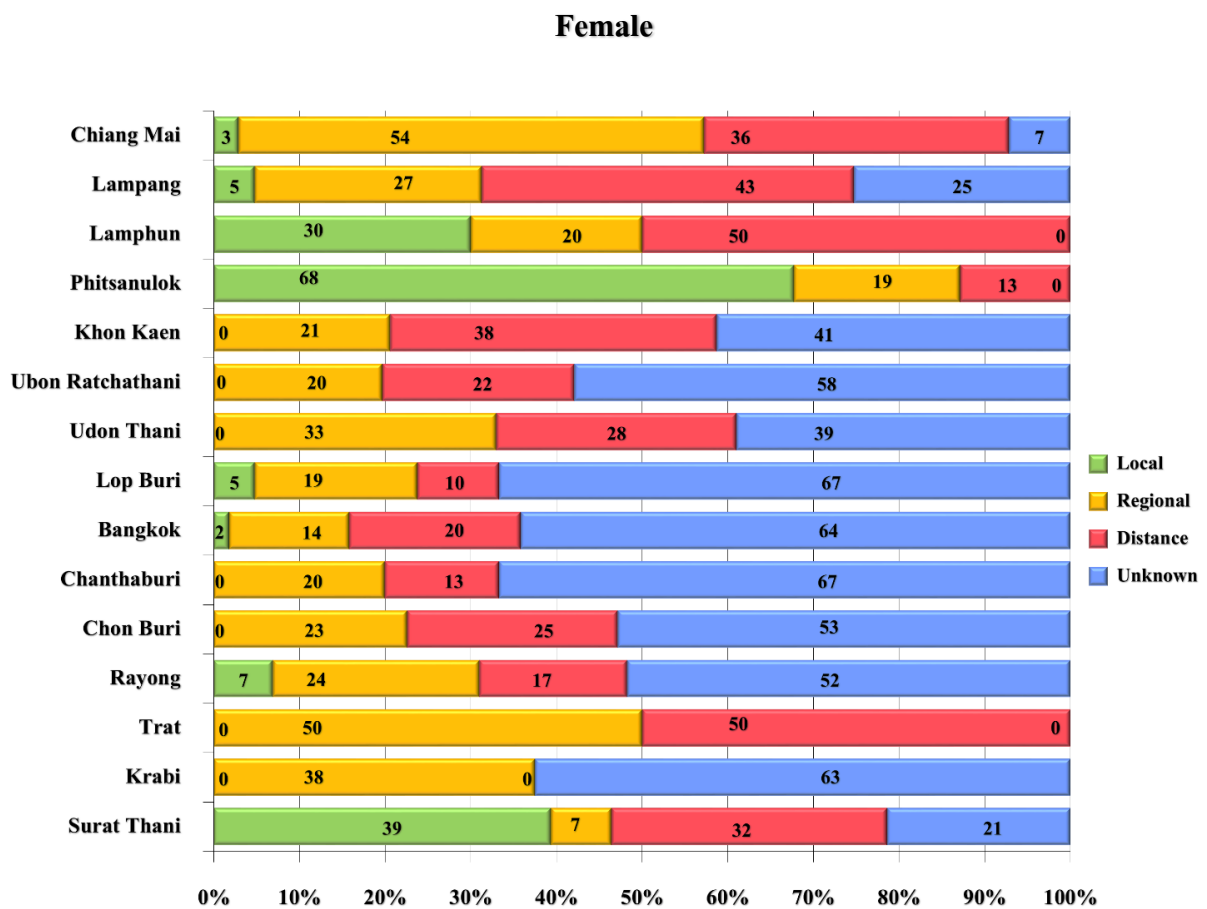
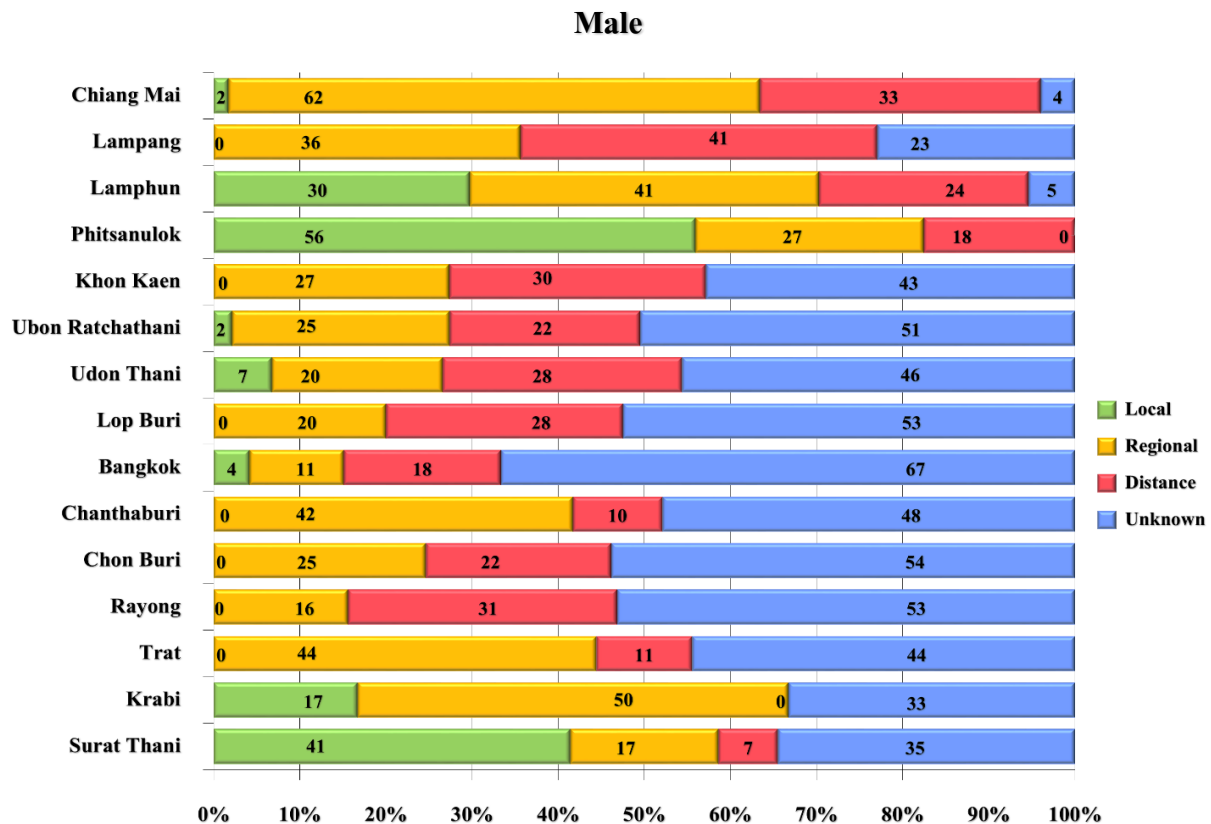
**Male**



**Female**

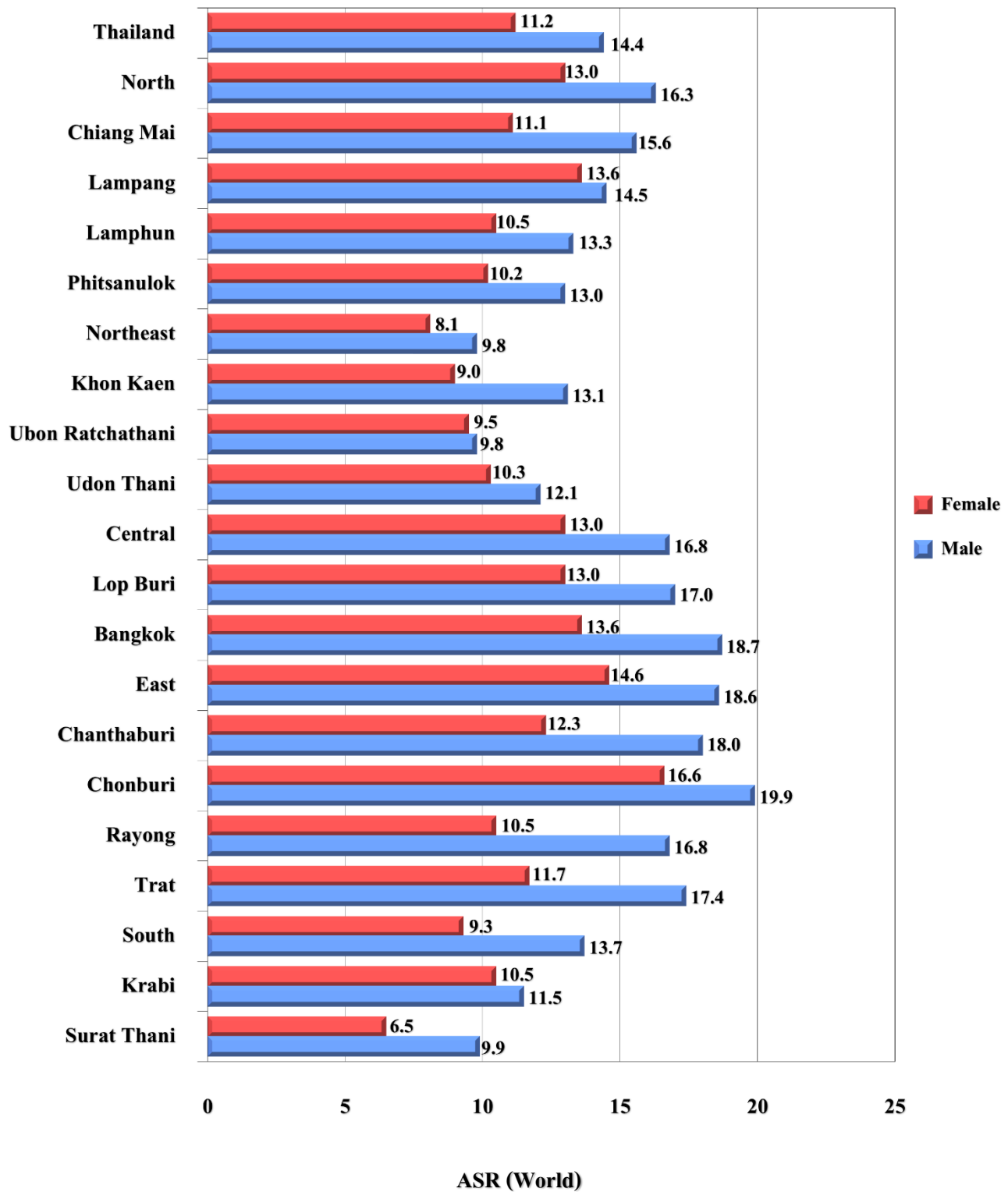


**Figure 2.7.3** Stage distribution of stomach cancer (2010-2012)



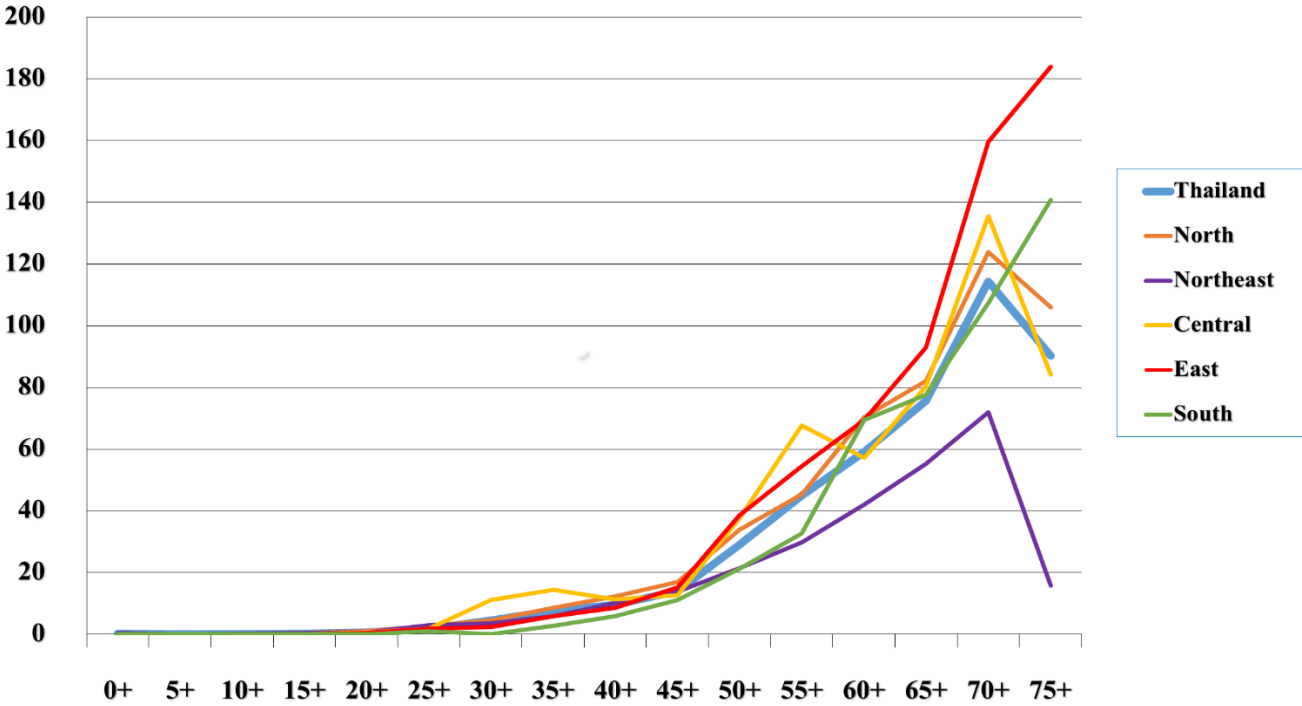
# Colon and Rectum

**Figure 2.8.1** Colon and rectum cancer in different regions, mean annual ASR per 100,000 (2010-2012)

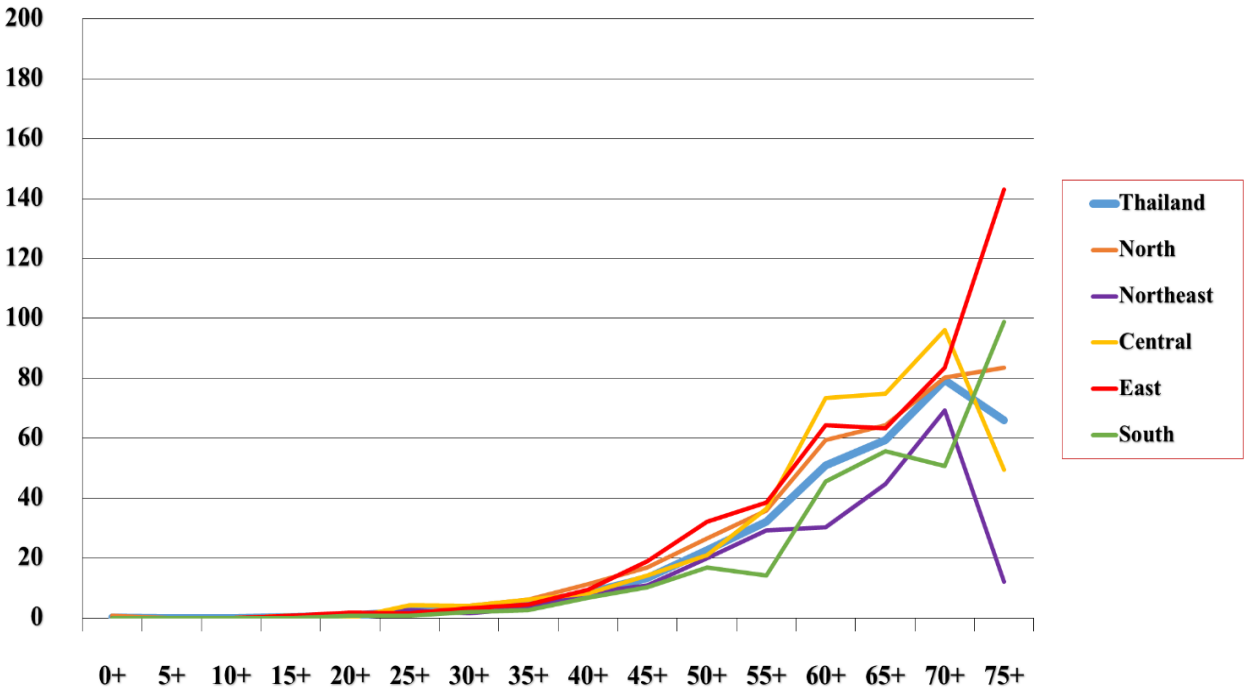


**Figure 2.8.2** Age - specific incidence rates of colon and rectum cancer, mean annual rate per 100,000 (2010-2012)

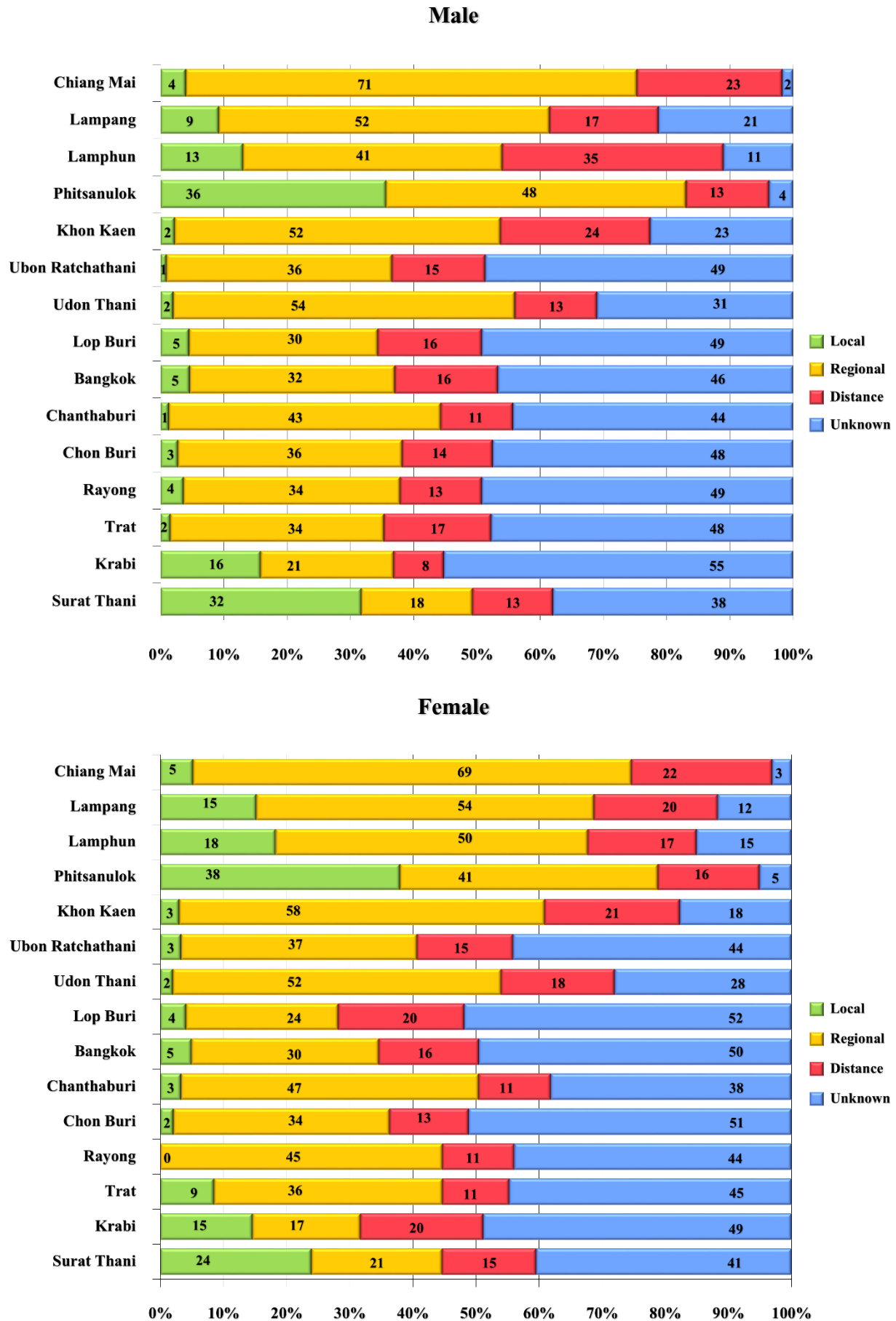
**Male**



**Female**

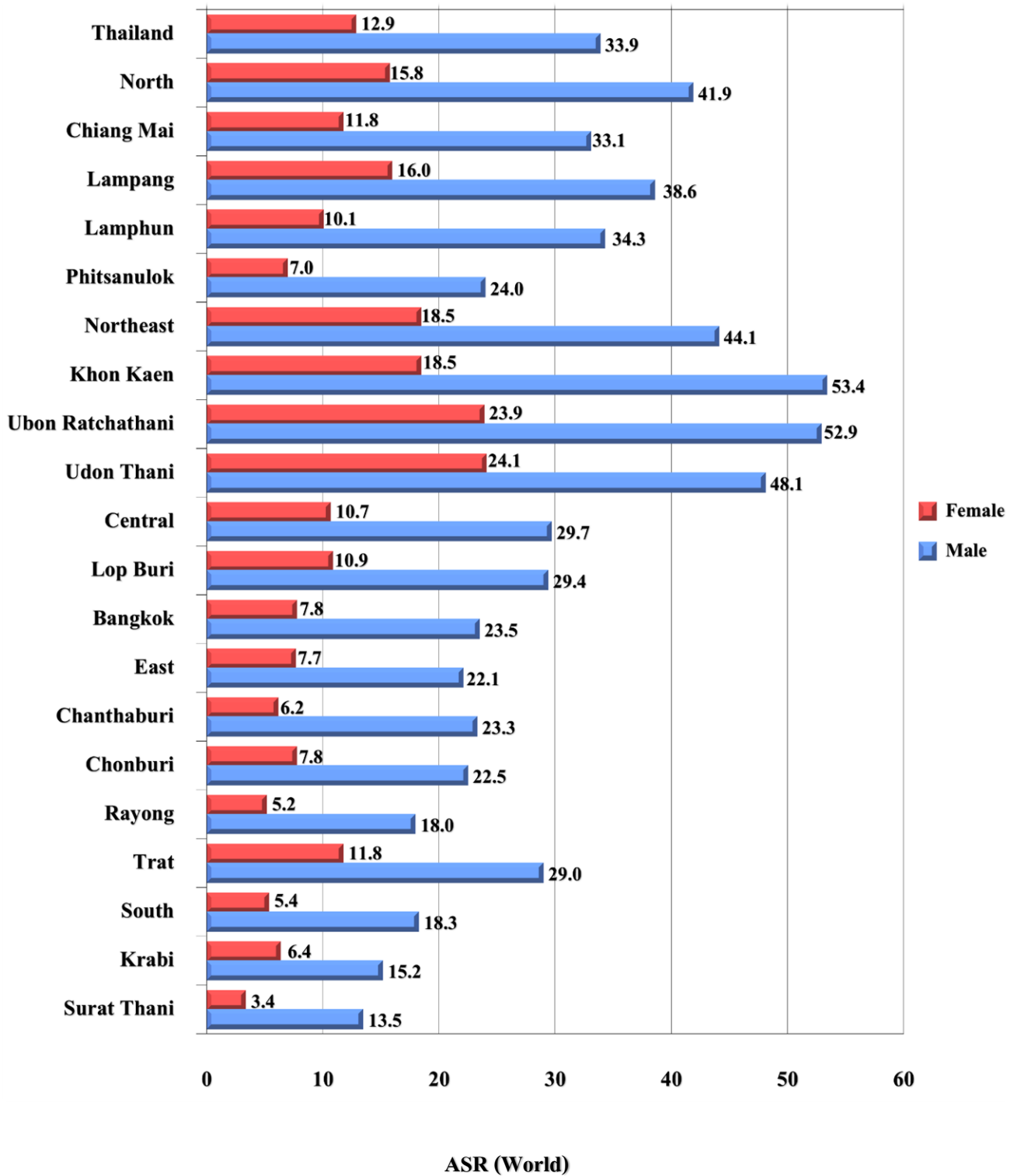


**Figure 2.8.3** Stage distribution of colon and rectum cancer (2010-2012)



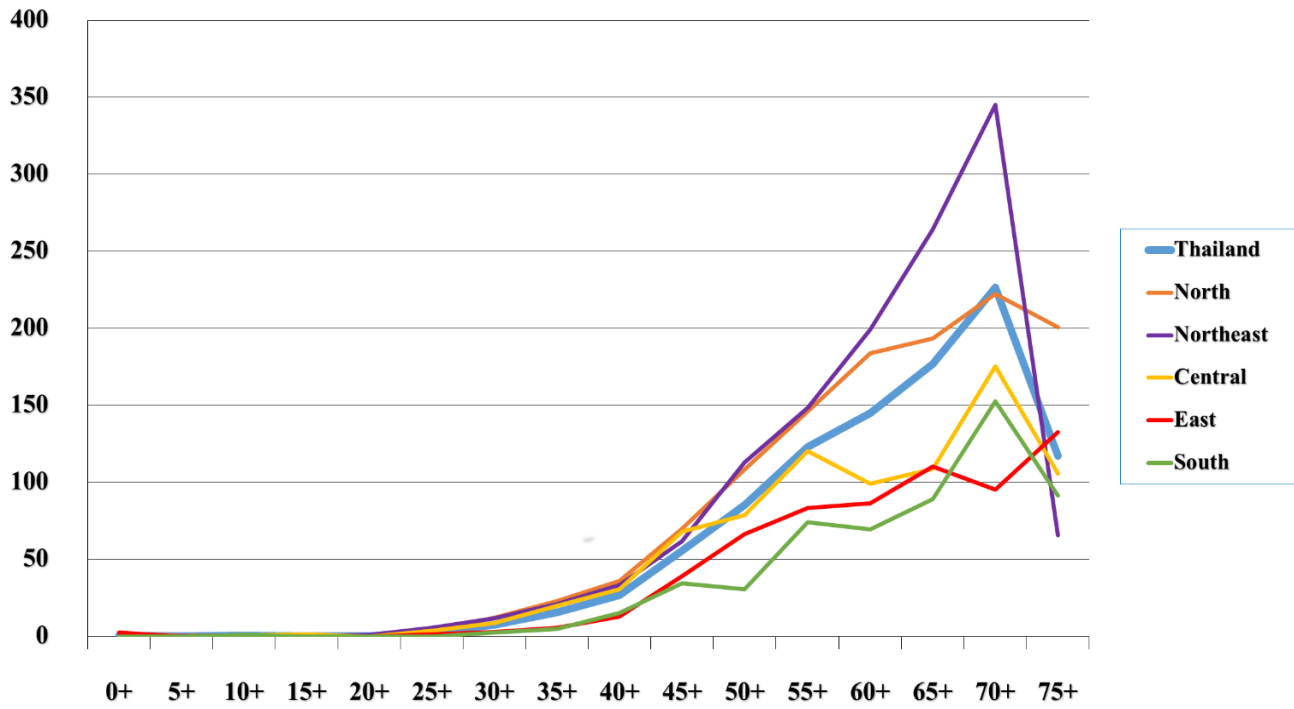
# Liver and bile duct

Figure 2.9.1 Liver and bile duct cancer in different regions, mean annual ASR per 100,000 (2010-2012)

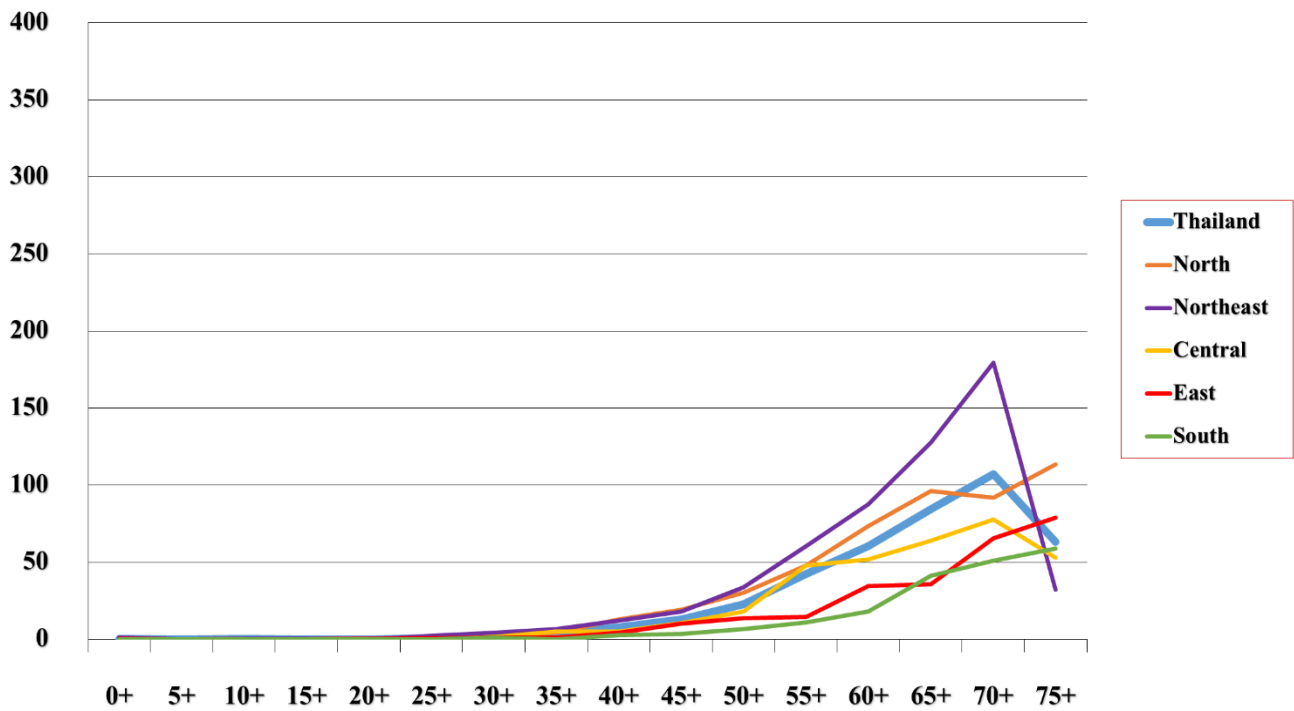


**Figure 2.9.2** Age - specific incidence rates of liver and bile duct cancer, mean annual rate per 100,000 (2010-2012)

**Male**

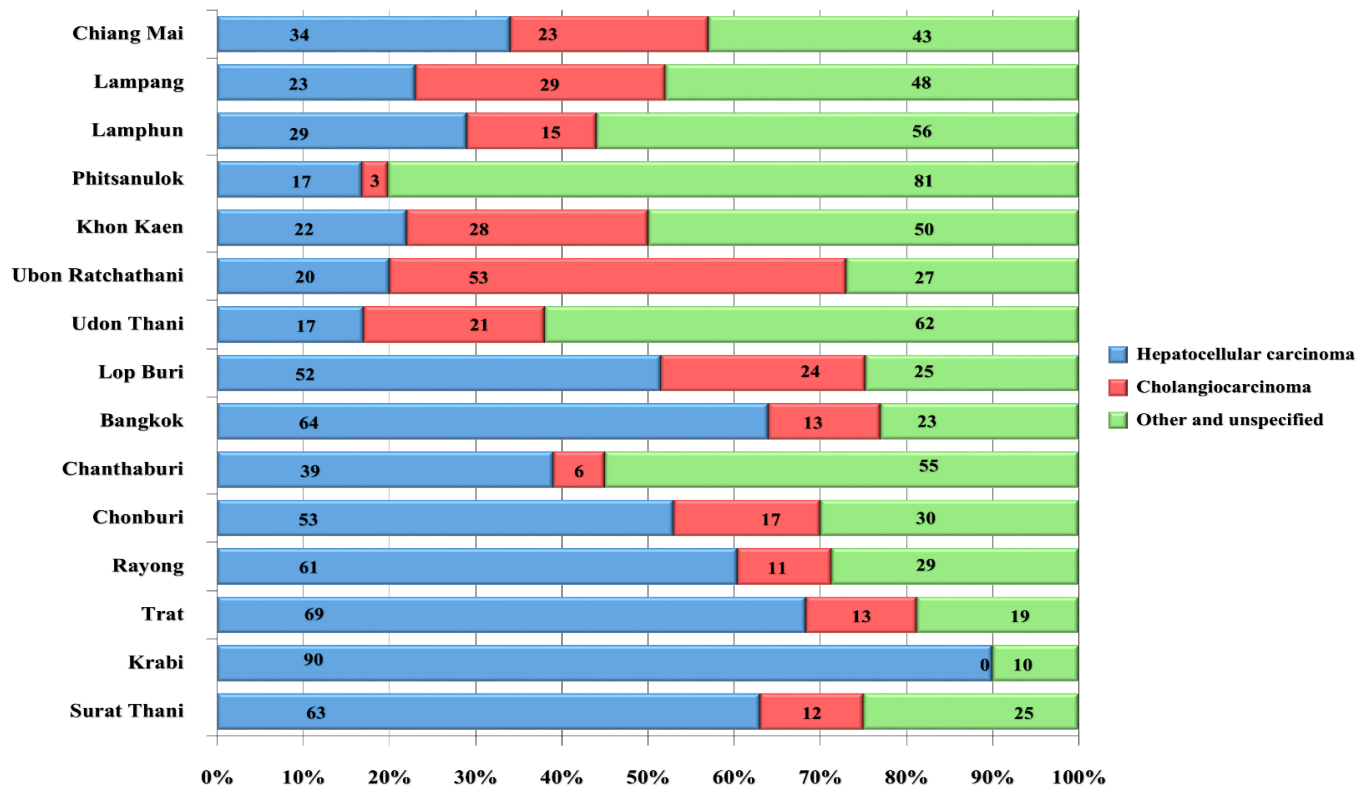


**Female**

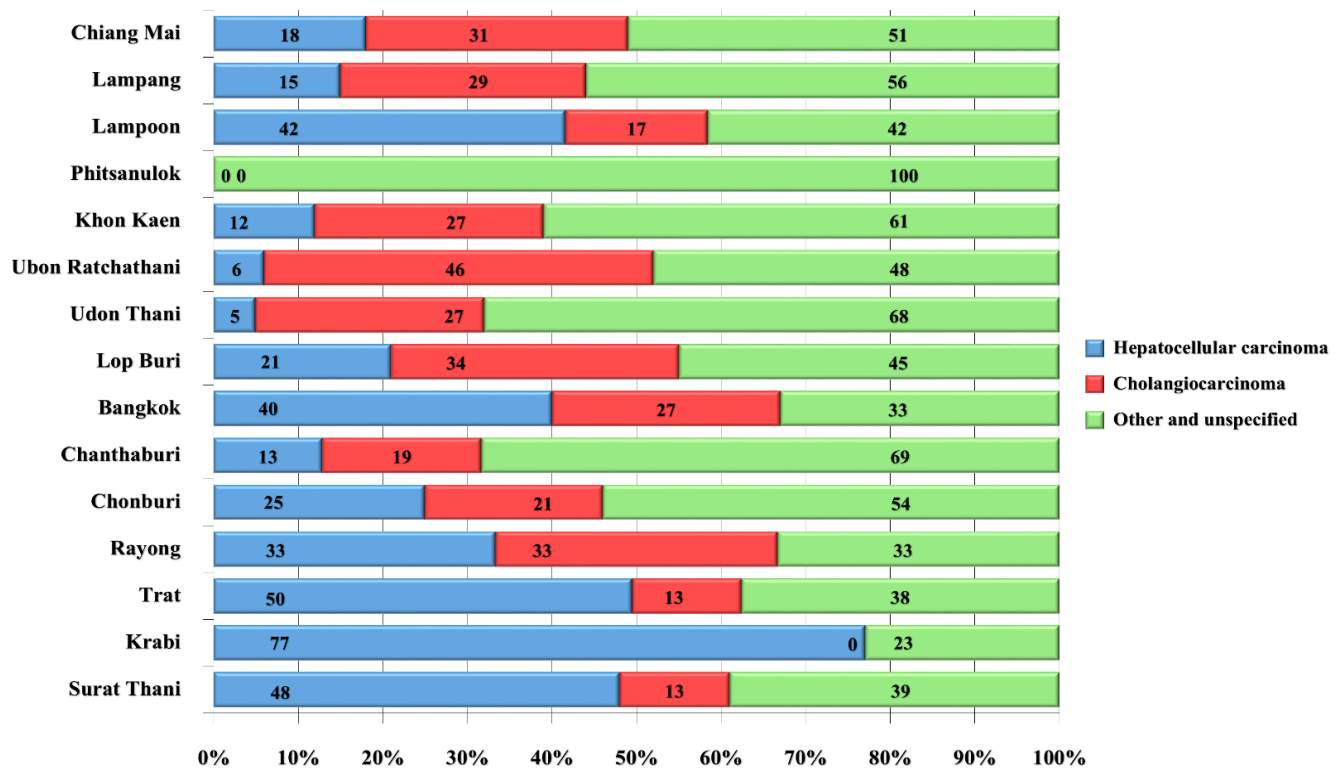


**Figure 2.9.3** Histological types of liver and bile duct cancer (2010-2012)

**Male**

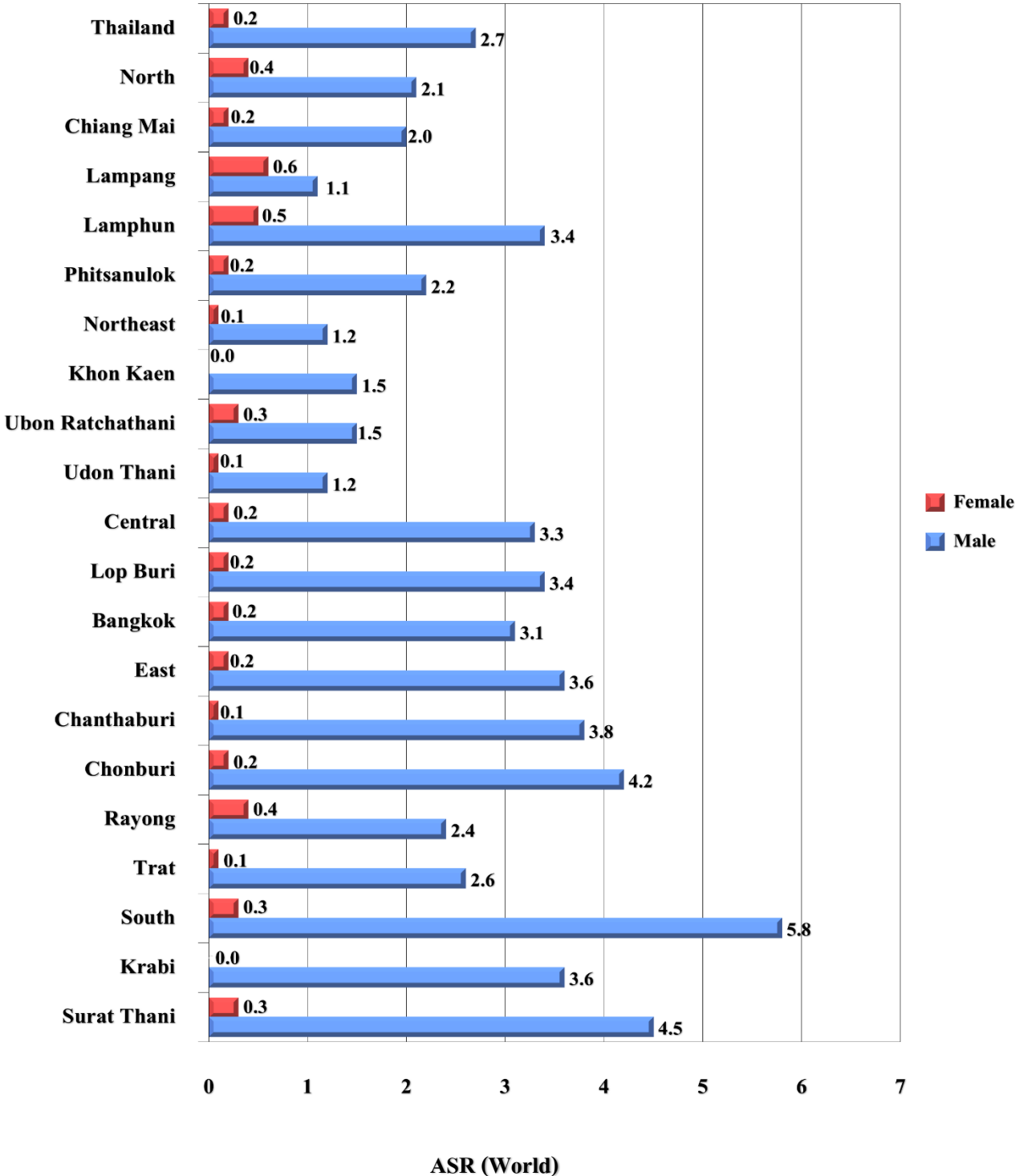


**Female**

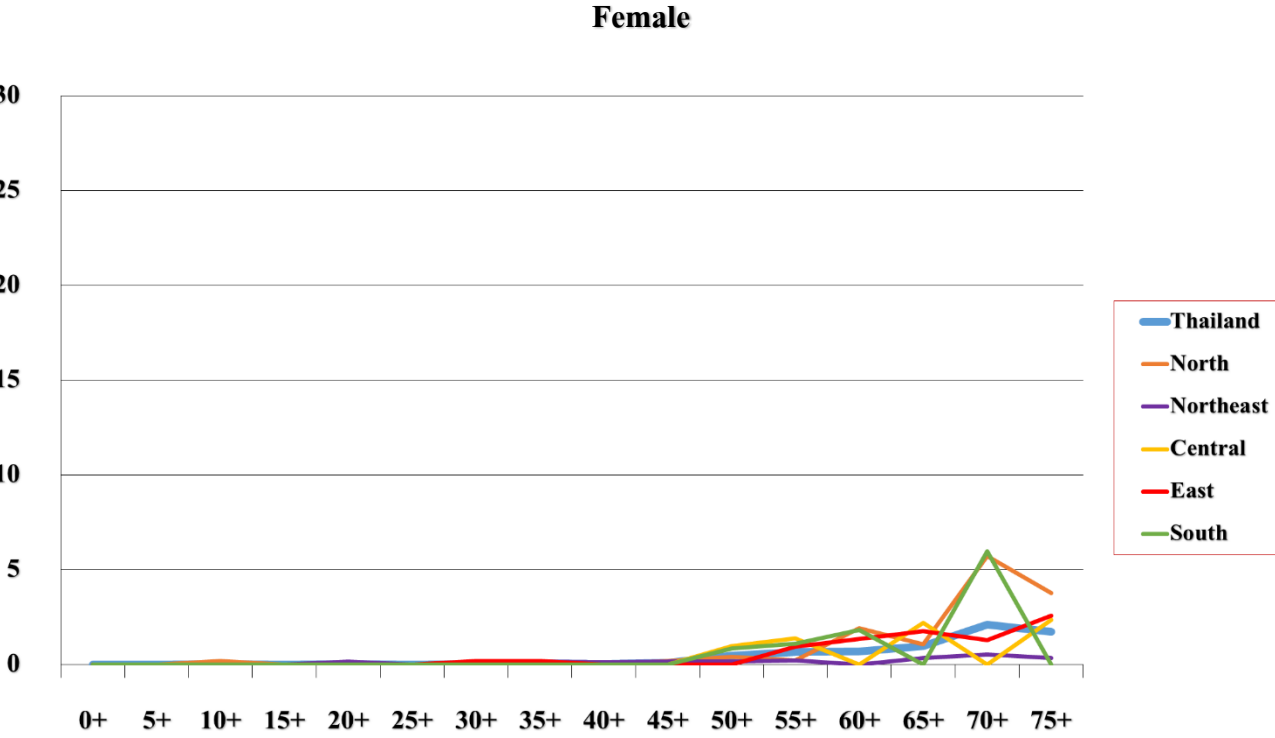
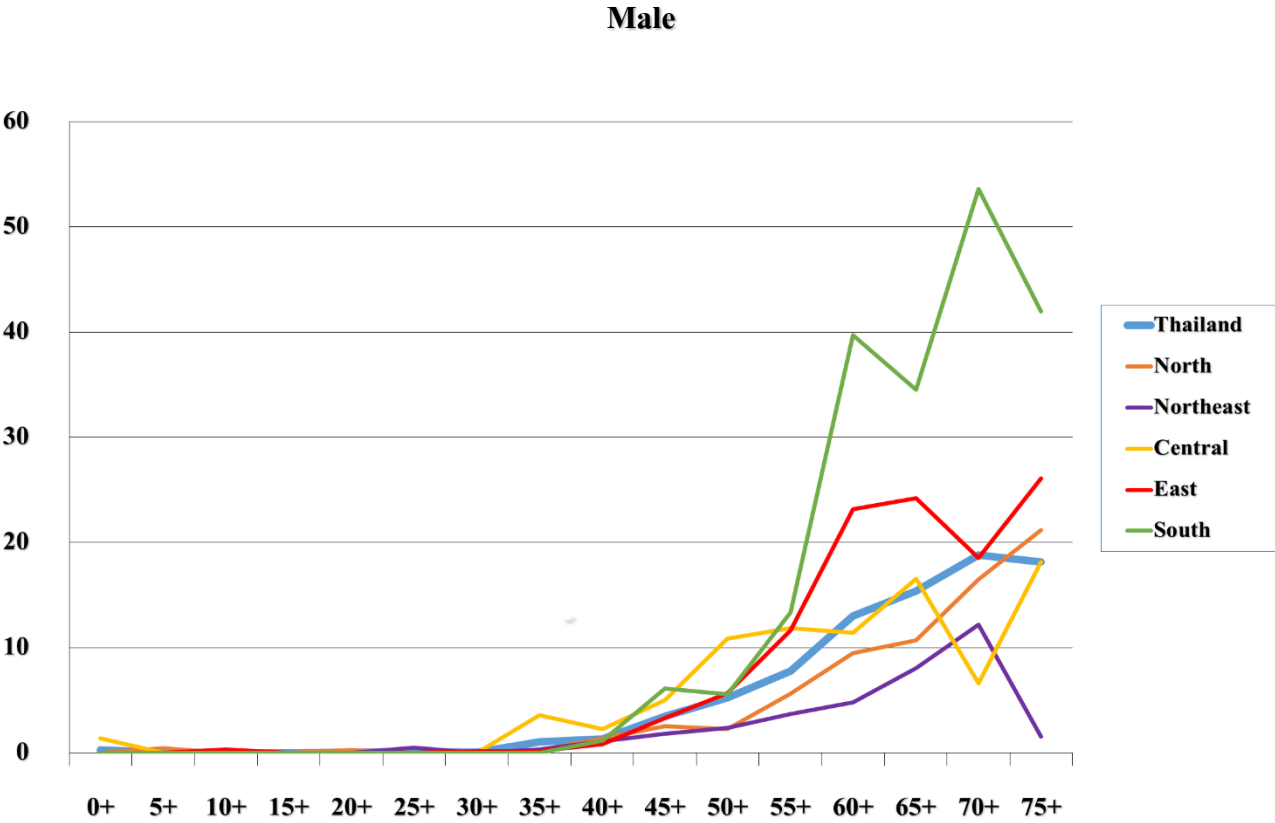


# Larynx

Figure 2.10.1 Larynx cancer in different regions, mean annual ASR per 100,000 (2010-2012)

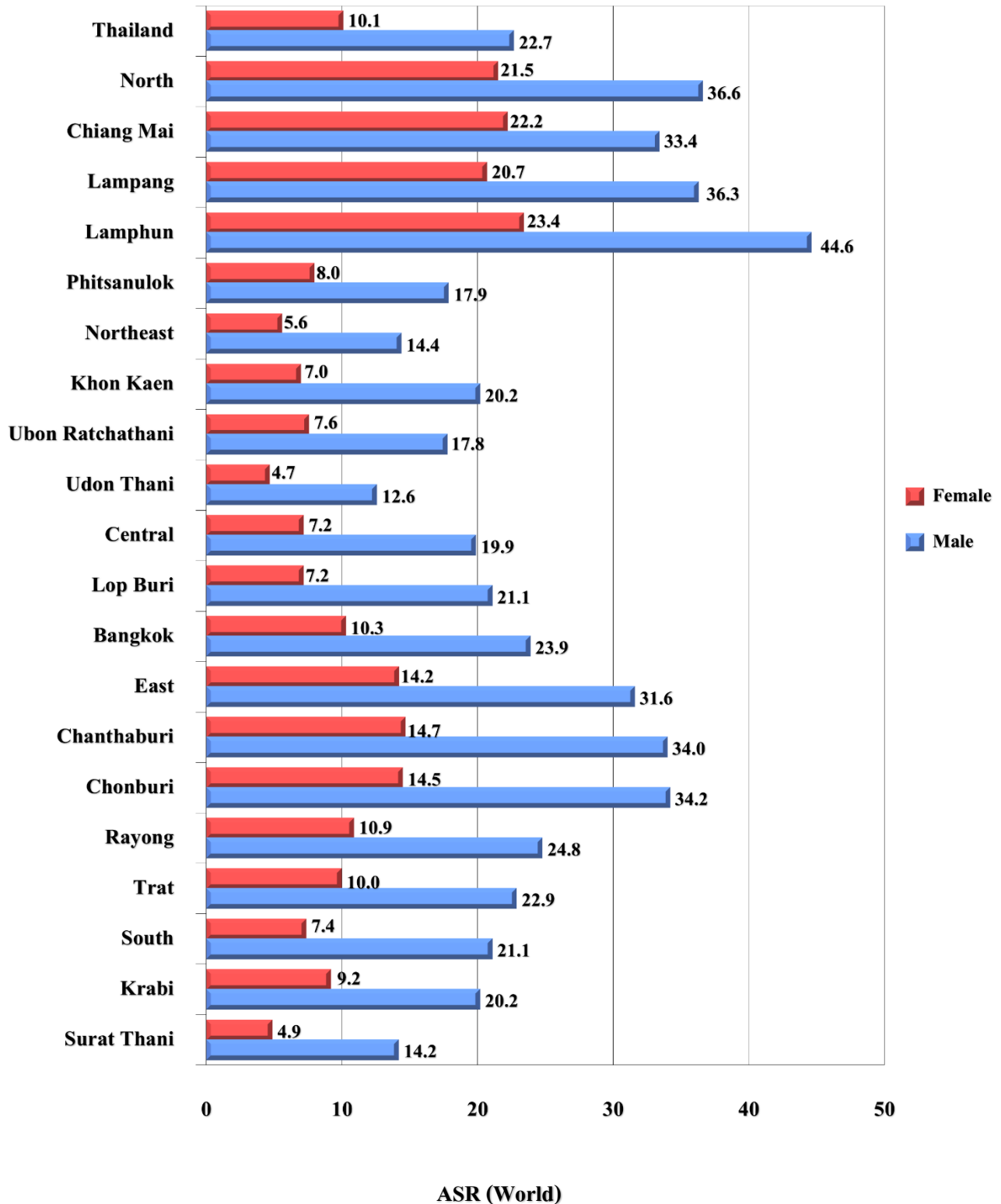


**Figure 2.10.2** Age - specific incidence rates of larynx cancer, mean annual rate per 100,000 (2010-2012)



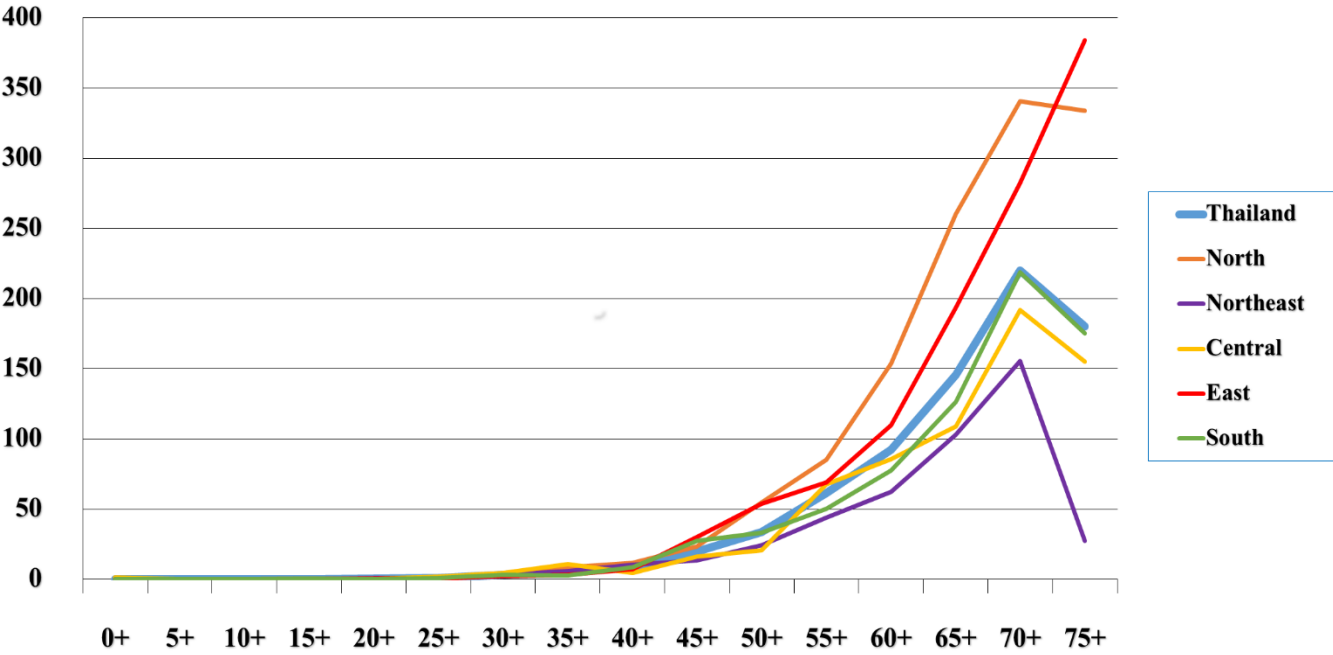
# Trachea, bronchus and lung

**Figure 2.11.1** Trachea, bronchus and lung cancer in different regions, mean annual ASR per 100,000 (2010-2012)

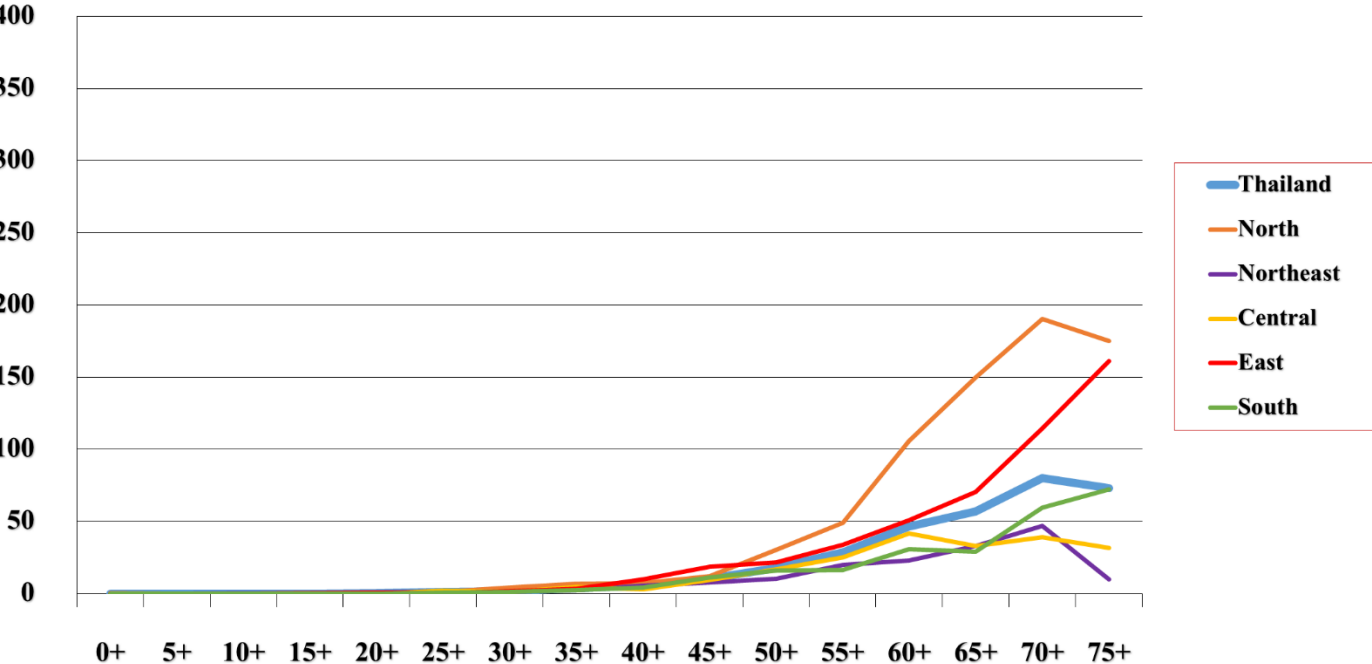


**Figure 2.11.2** Age - specific incidence rates of trachea, bronchus and lung cancer, mean annual rate per 100,000 (2010-2012)

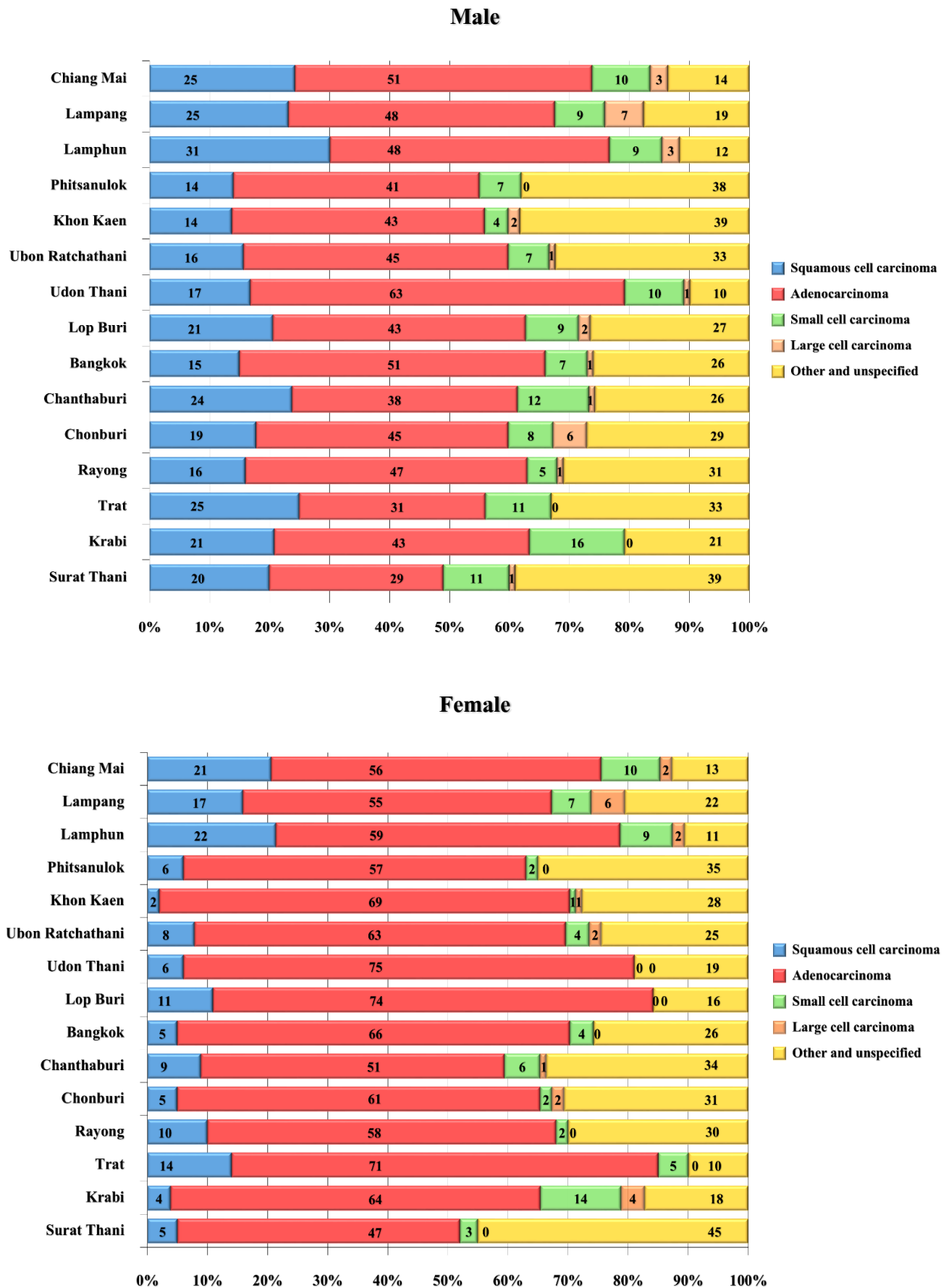
**Male**



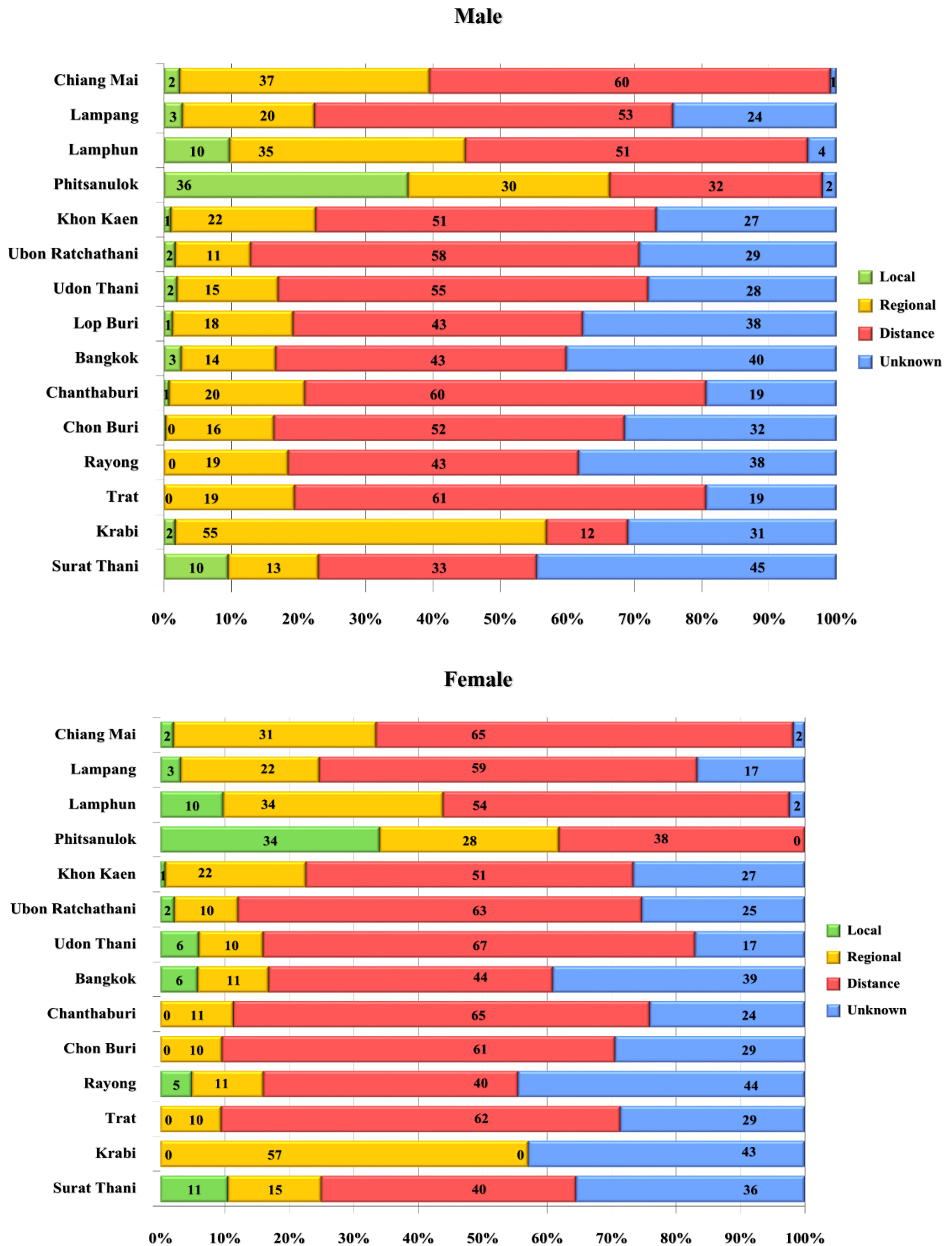
**Female**



**Figure 2.11.3** Histological types of trachea, bronchus and lung cancer (2010-2012)

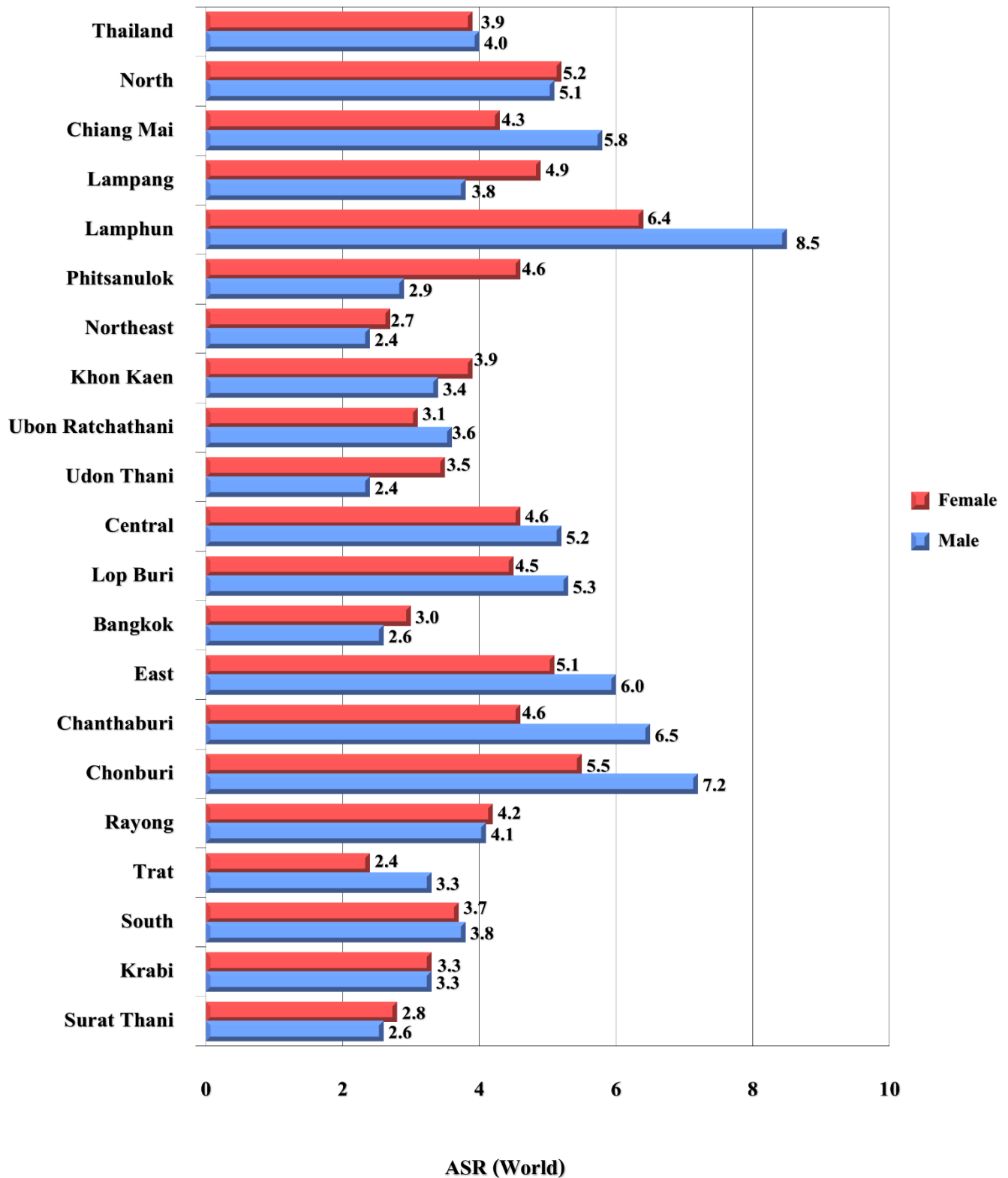


**Figure 2.11.4** Stage distribution of trachea, bronchus and lung cancer (2010-2012)



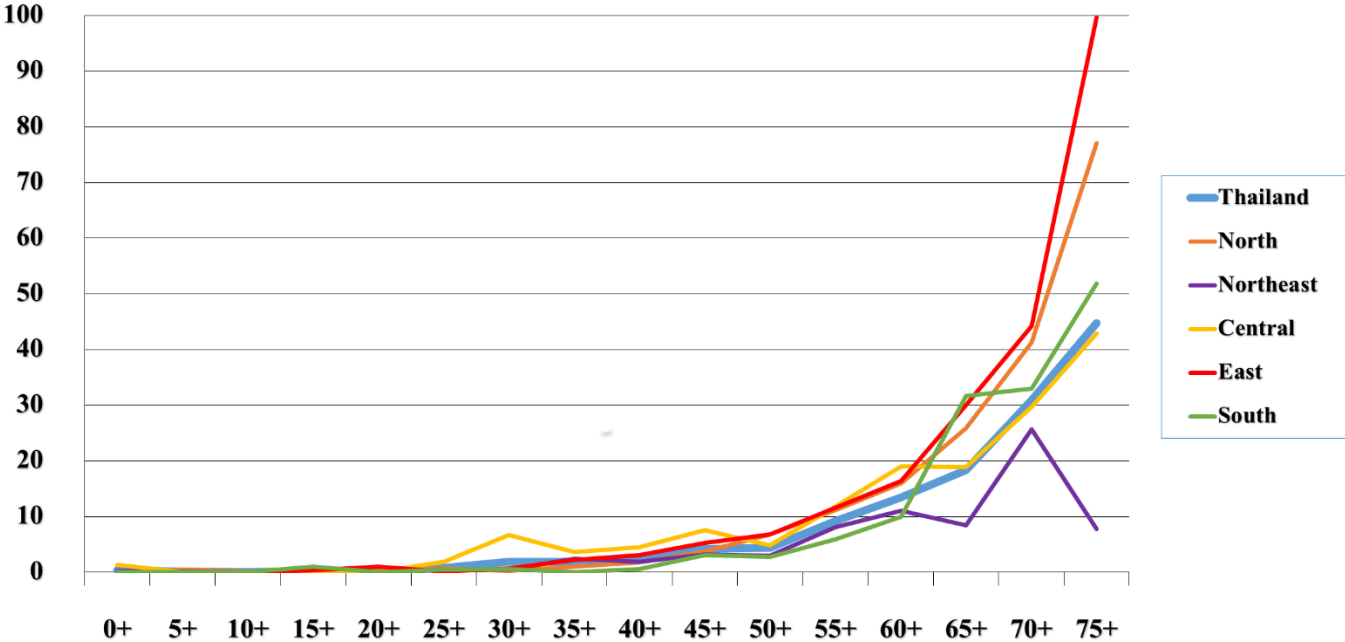
# Skin

**Figure 2.12.1** Skin cancer in different regions, mean annual ASR per 100,000 (2010-2012)

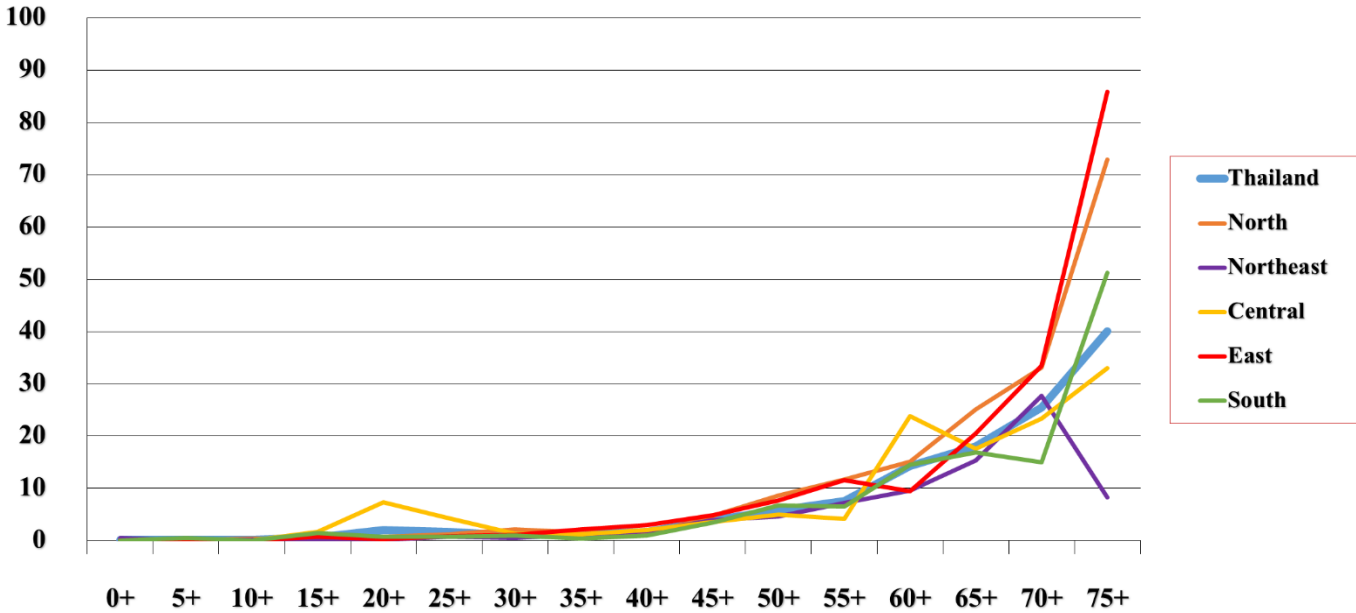


**Figure 2.12.2** Age - specific incidence rates of skin cancer, mean annual rate per 100,000 (2010-2012)

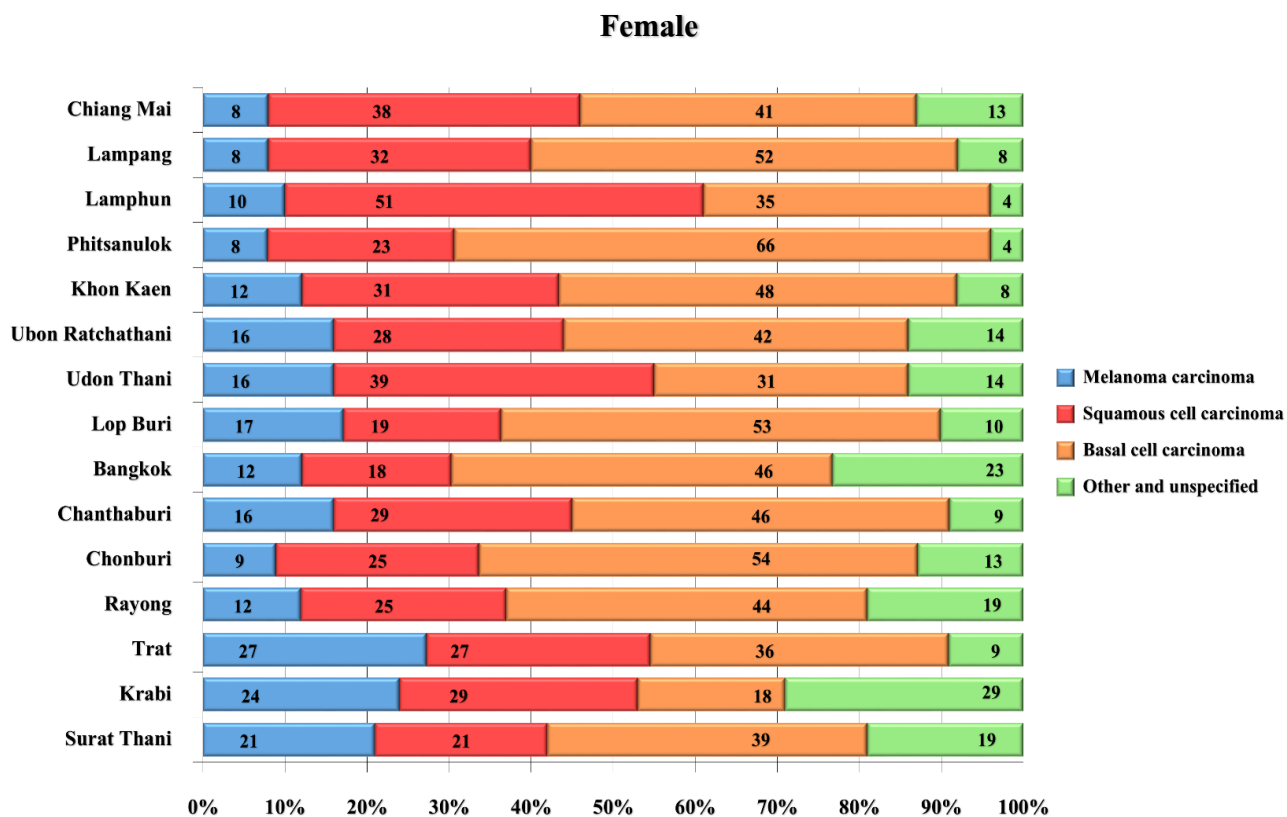
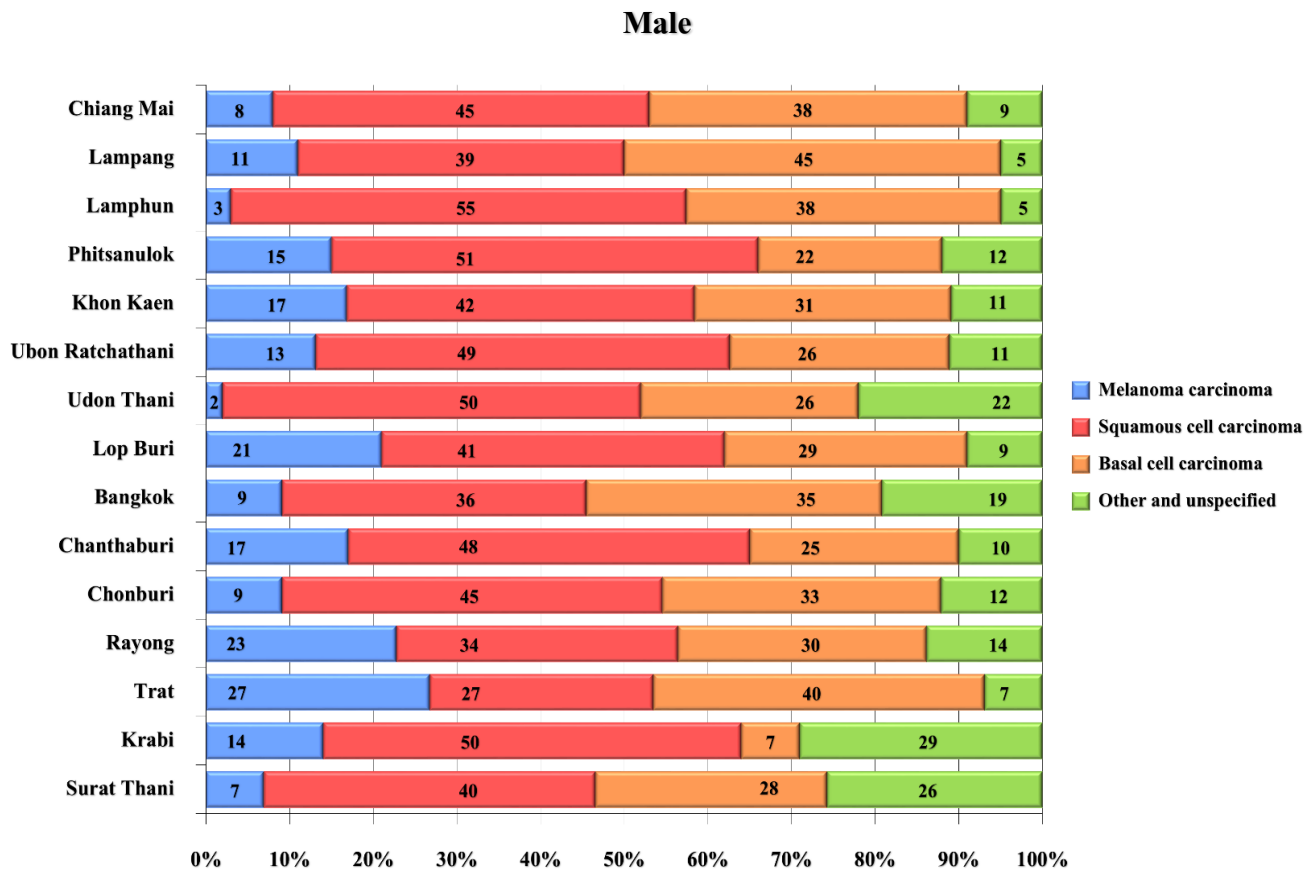
**Male**



**Female**

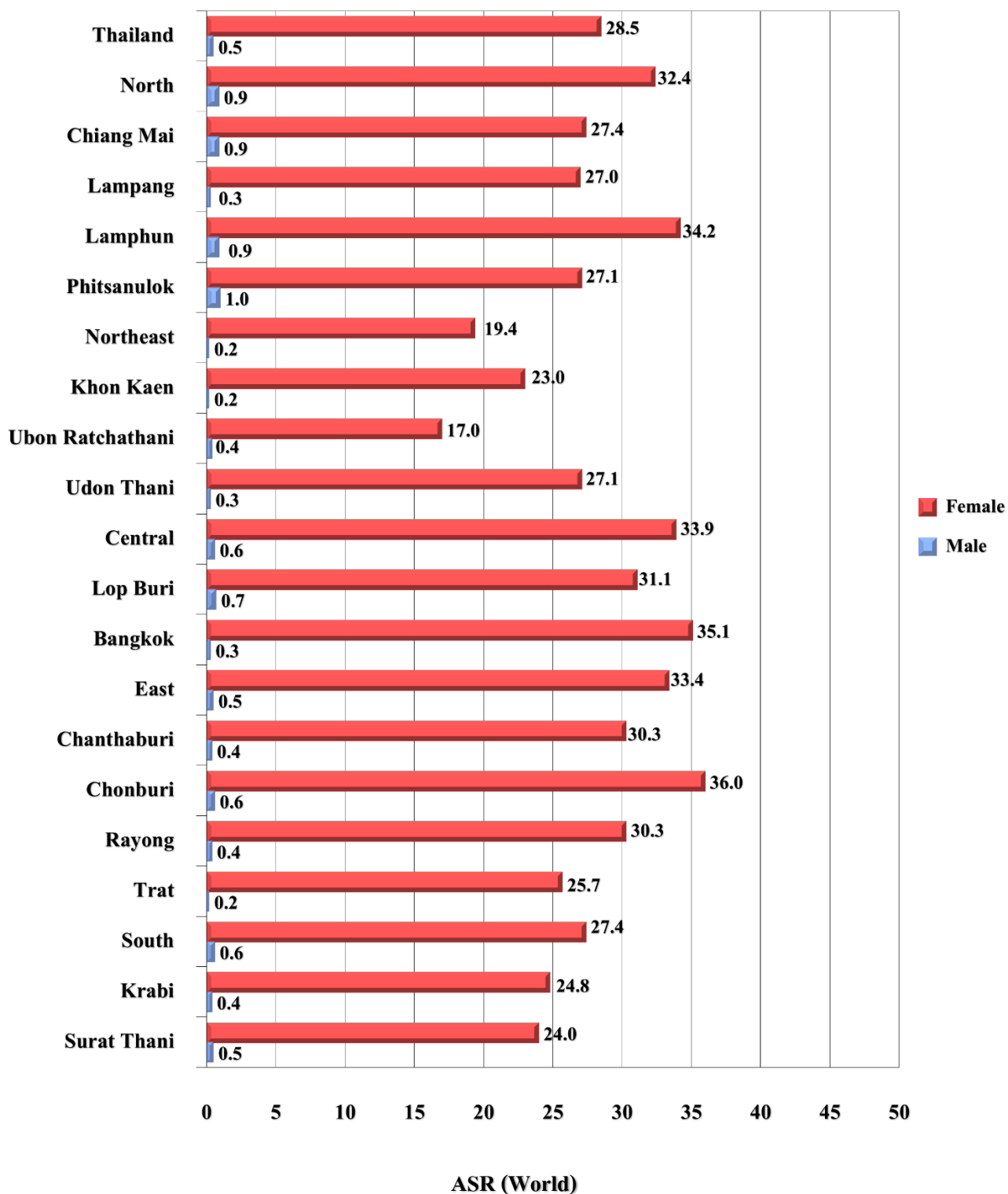


**Figure 2.12.3** Histological types of skin cancer (2010-2012)



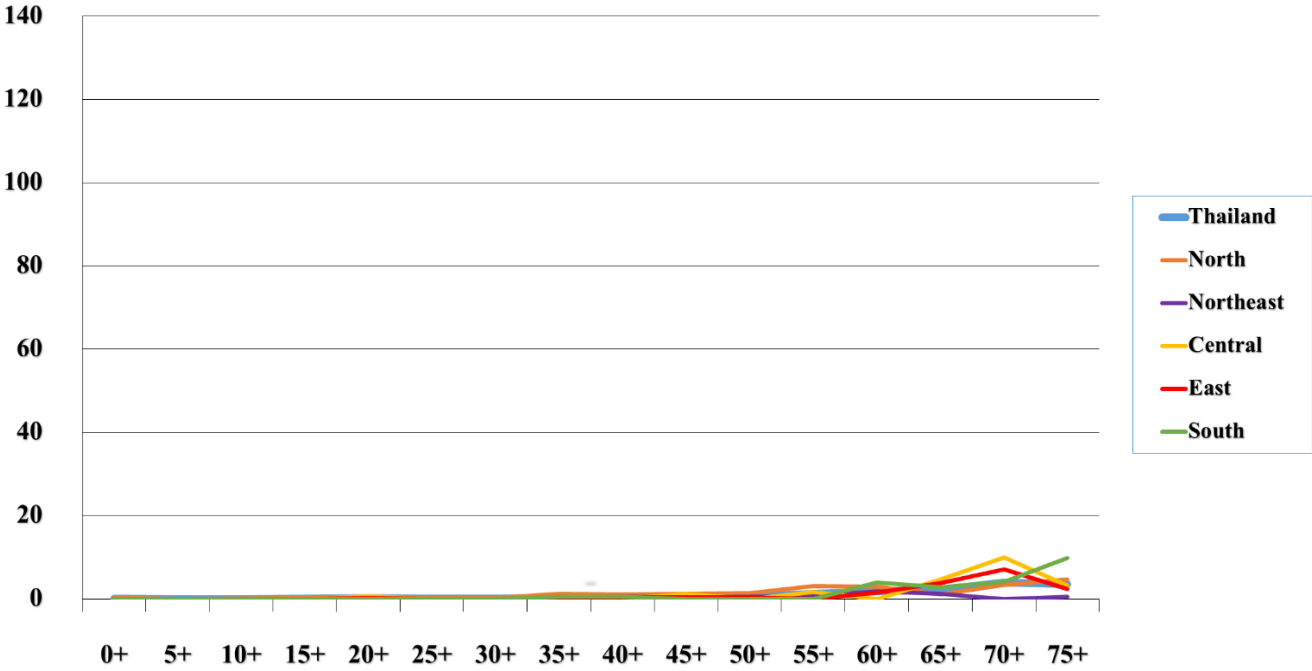
# Breast

**Figure 2.13.1** Breast cancer in different regions, mean annual ASR per 100,000 (2010-2012)

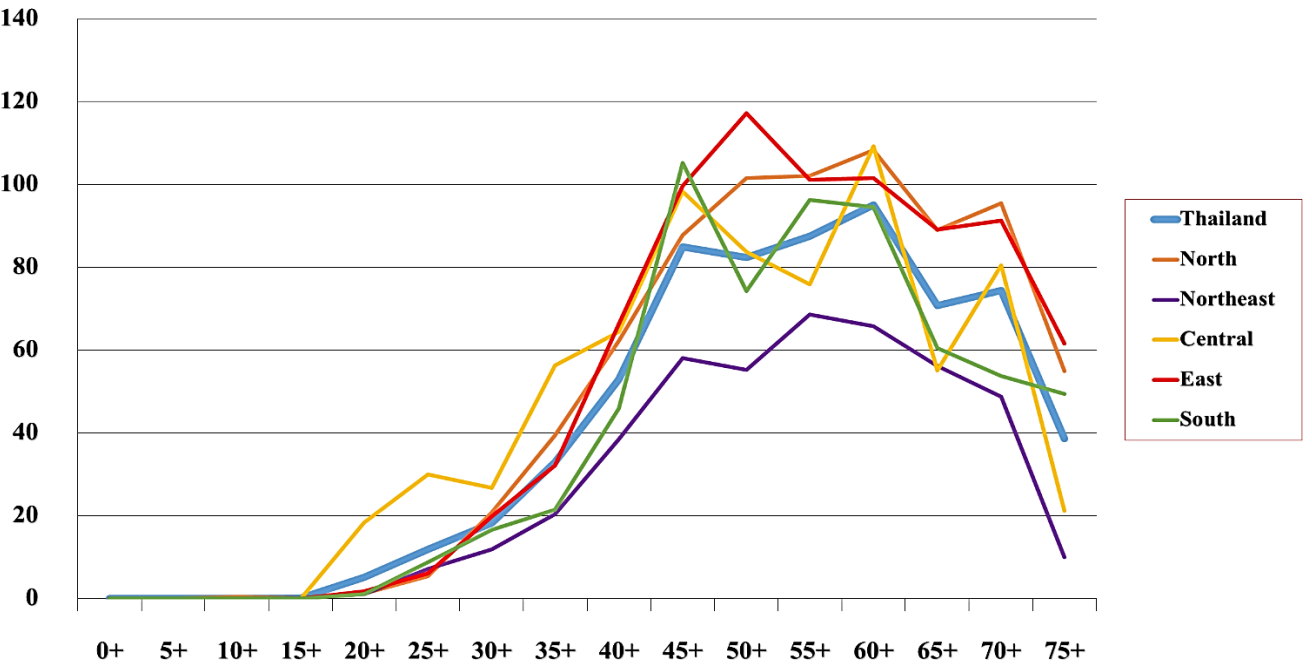


**Figure 2.13.2** Age - specific incidence rates of breast cancer, mean annual rate per 100,000 (2010-2012)

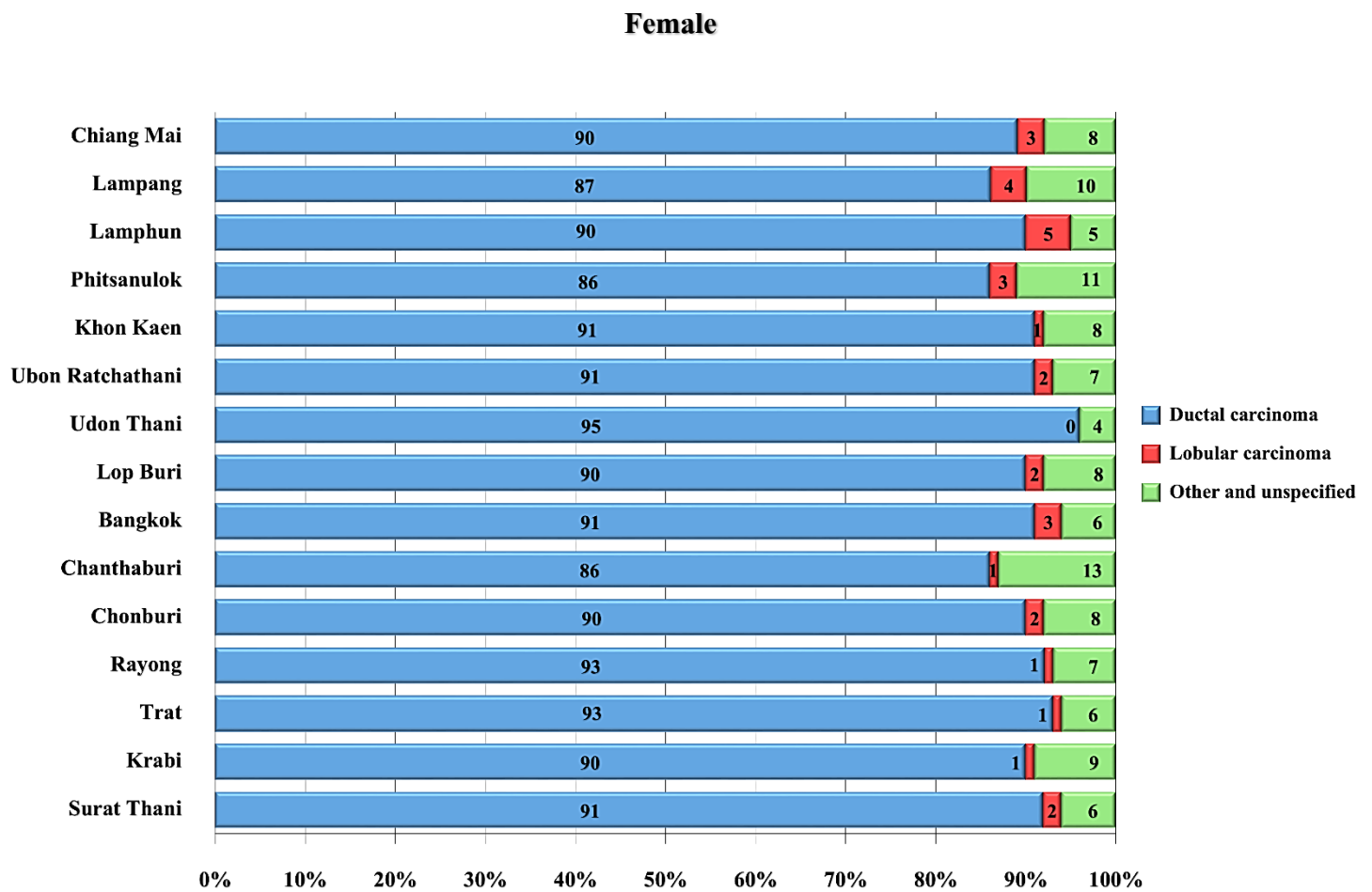
**Male**



**Female**

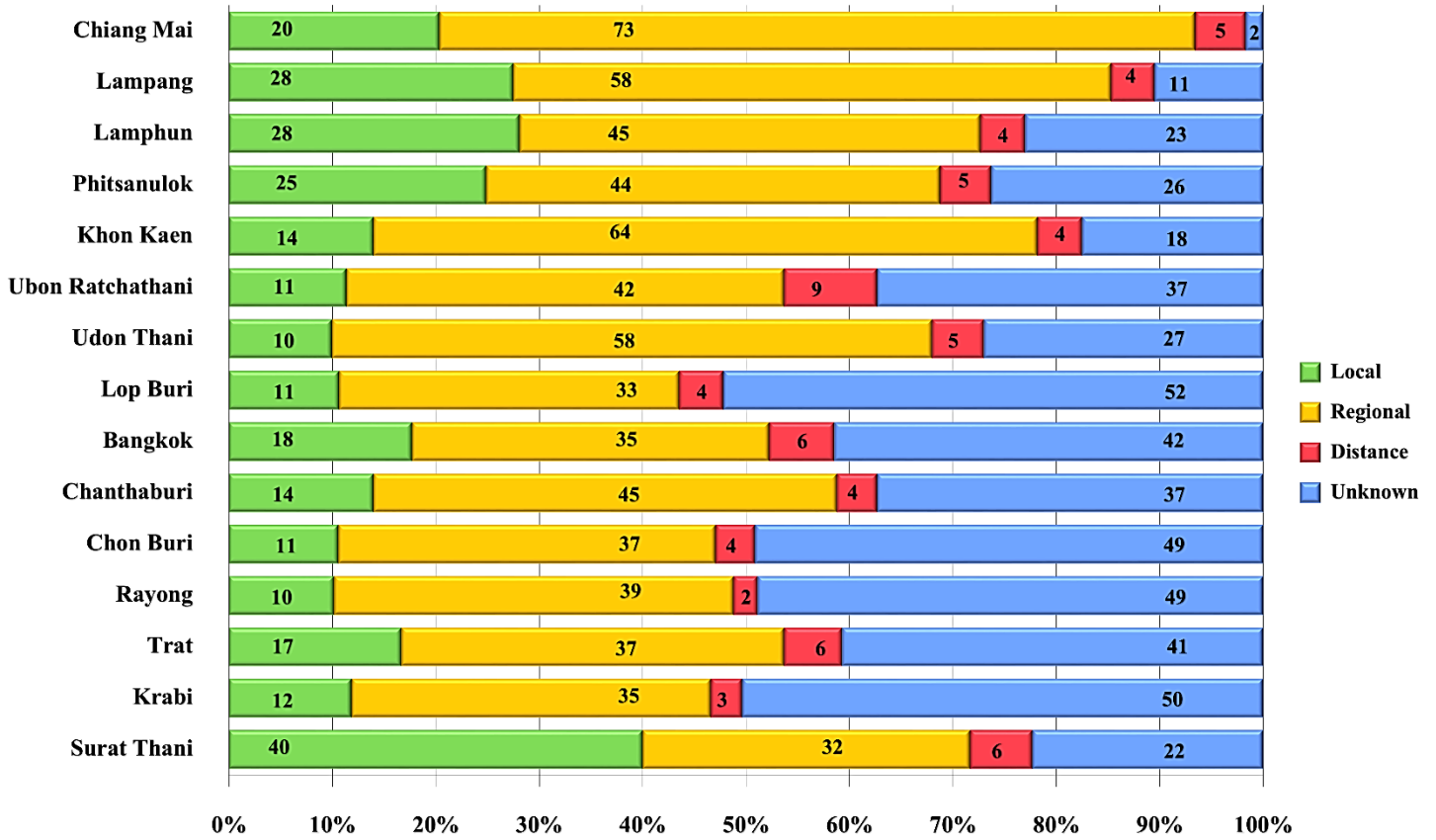


**Figure 2.13.3** Histological types of breast cancer (2010-2012)



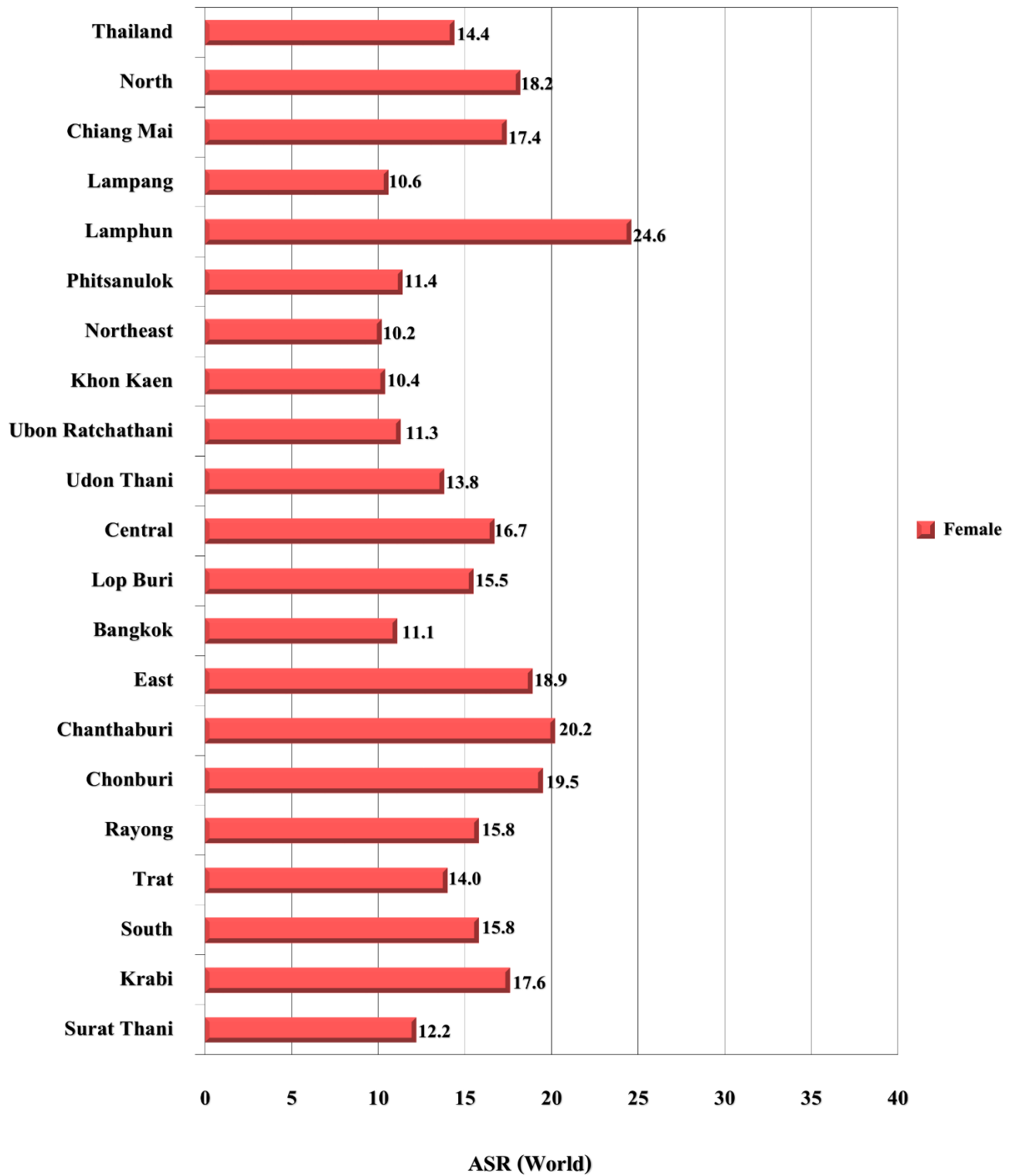
**Figure 2.13.4** Stage distribution of breast cancer (2010-2012)

**Female**

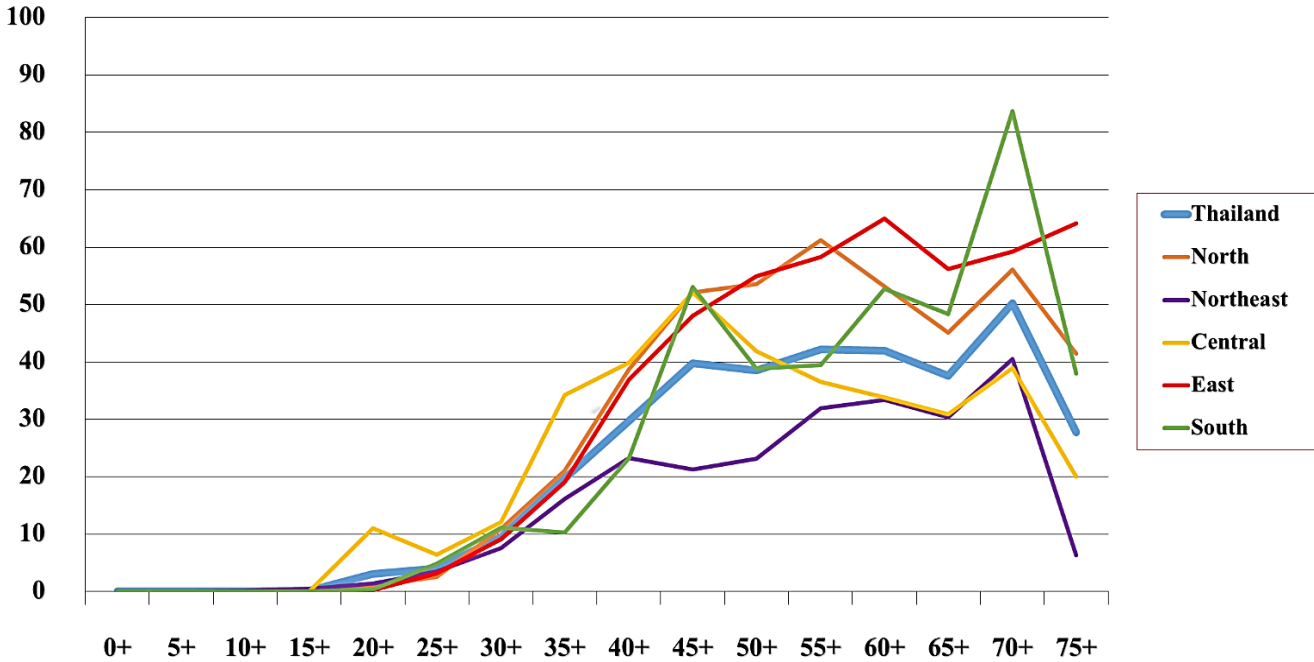


# Cervix uteri

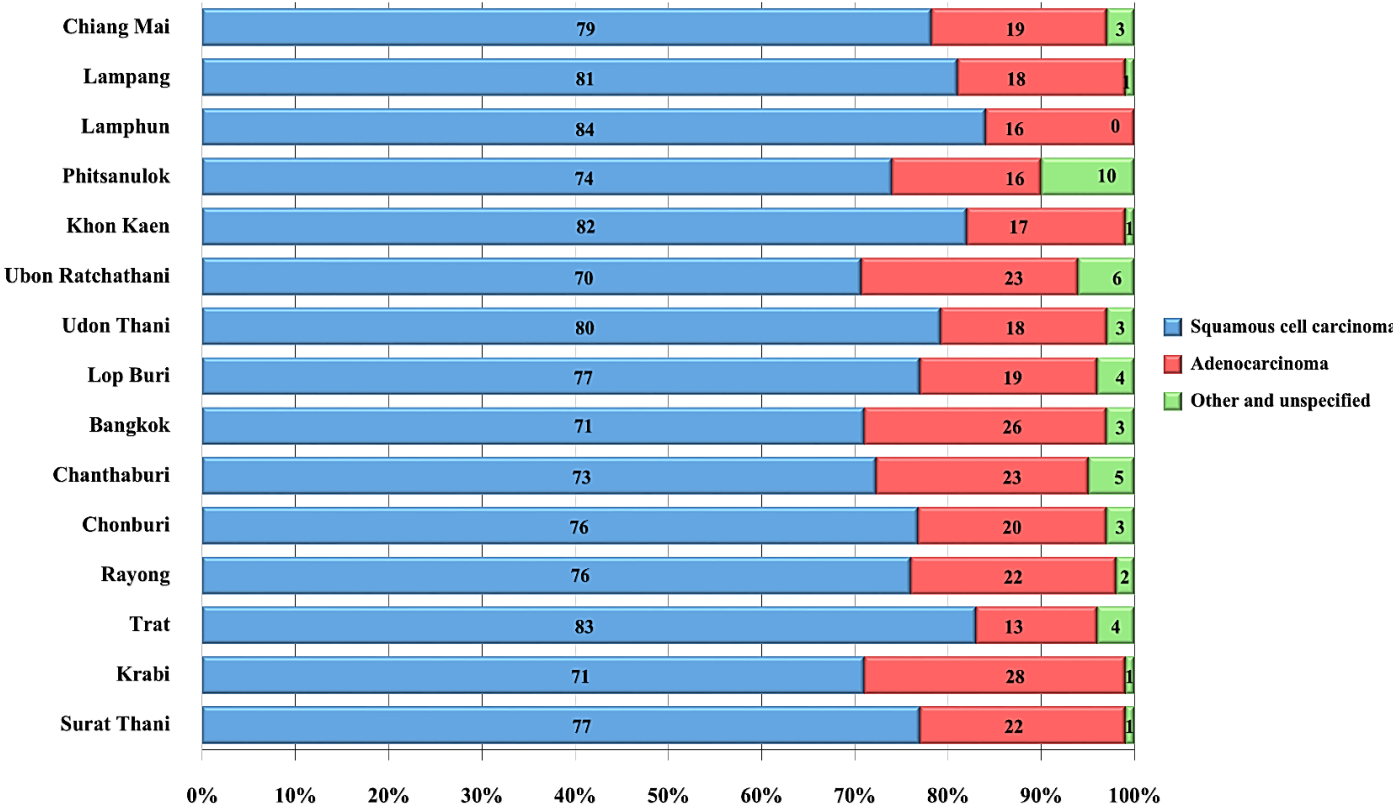
**Figure 2.14.1** Cervical cancer in different regions, mean annual ASR per 100,000 (2010-2012)



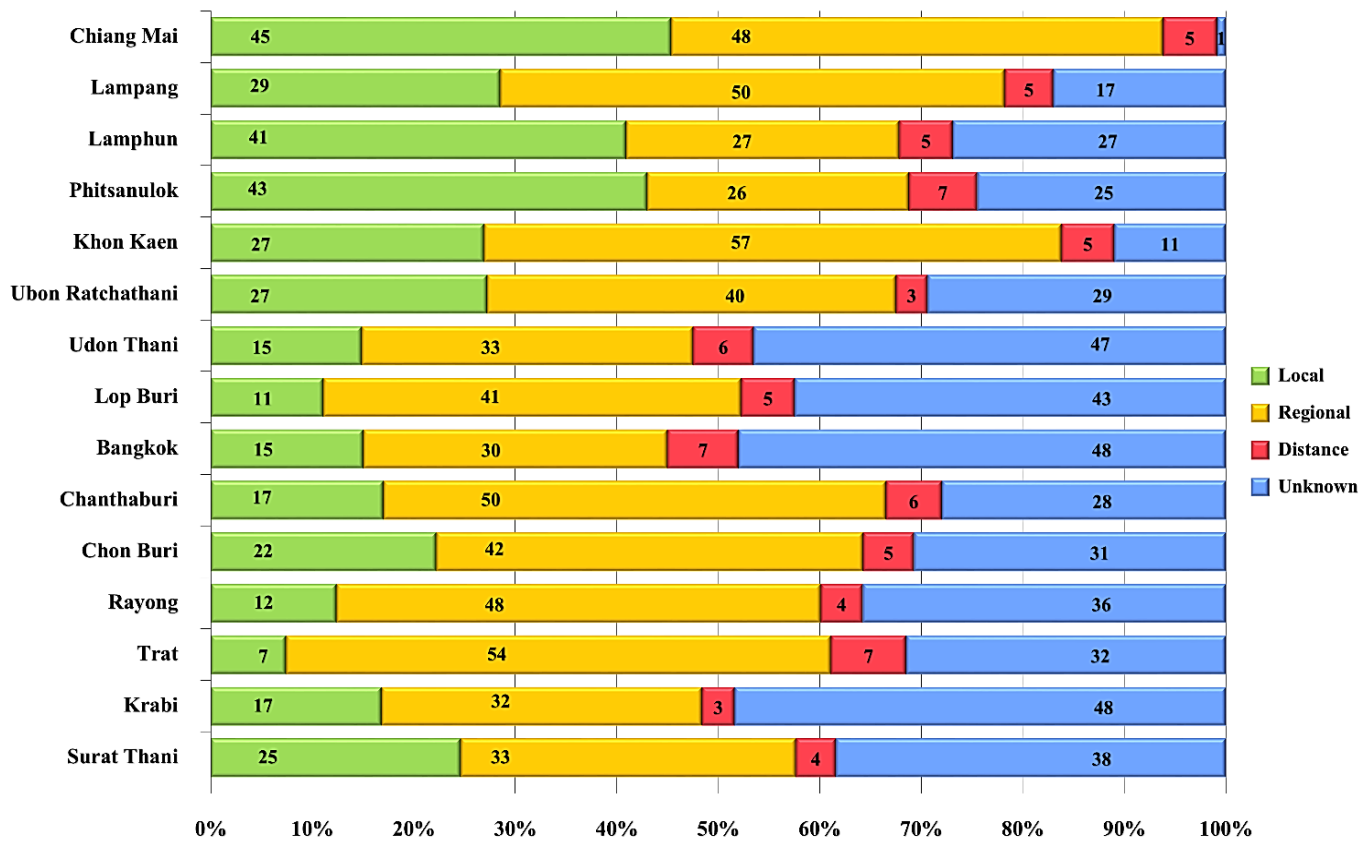
**Figure 2.14.2** Age - specific incidence rates of cervical cancer, mean annual rate per 100,000 (2010-2012)



**Figure 2.14.3** Cervical cancer : percentage distribution of histological types among microscopically verified (2010-2012)

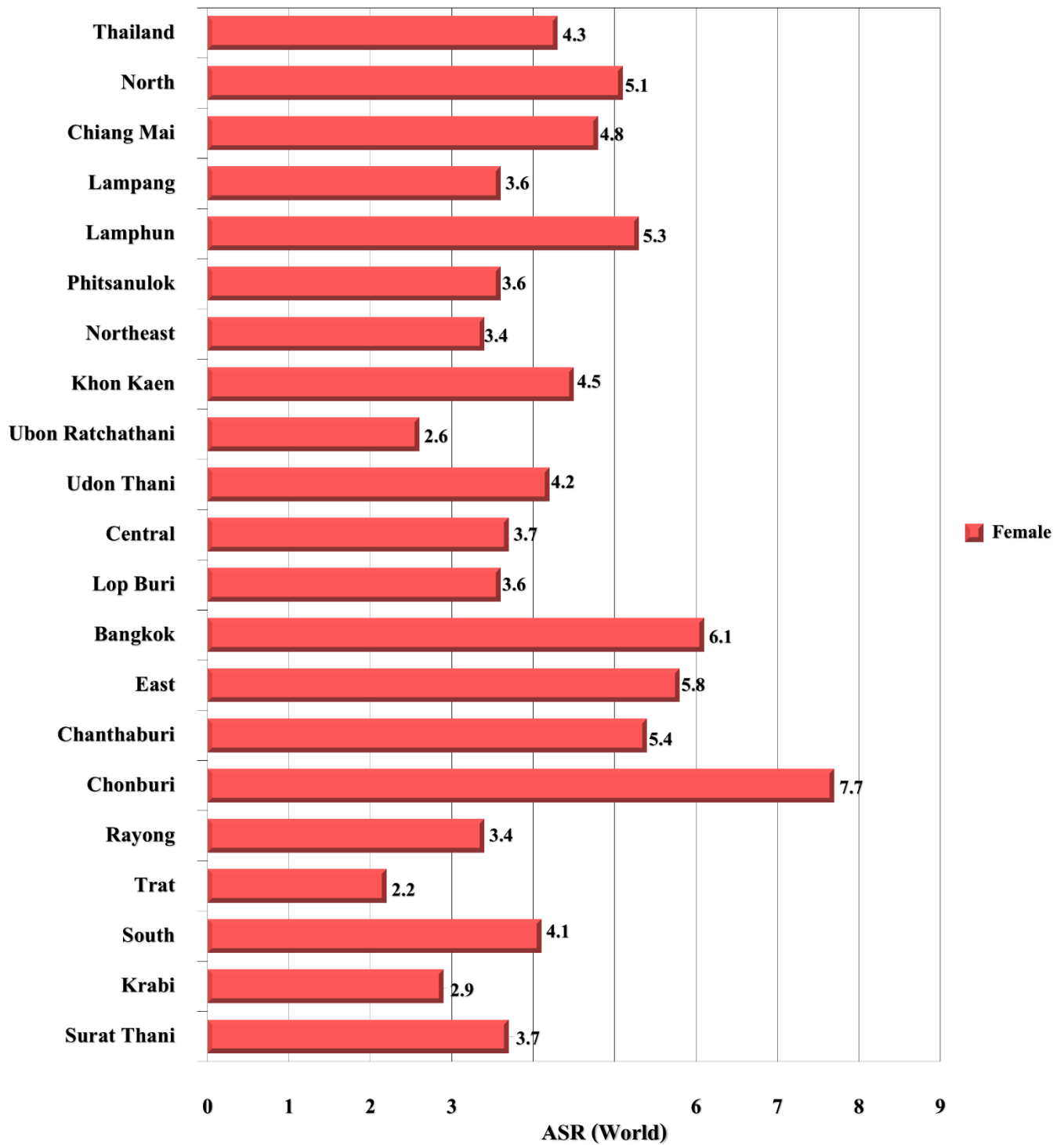


**Figure 2.14.4** Stage distribution of cervical cancer (2010-2012)

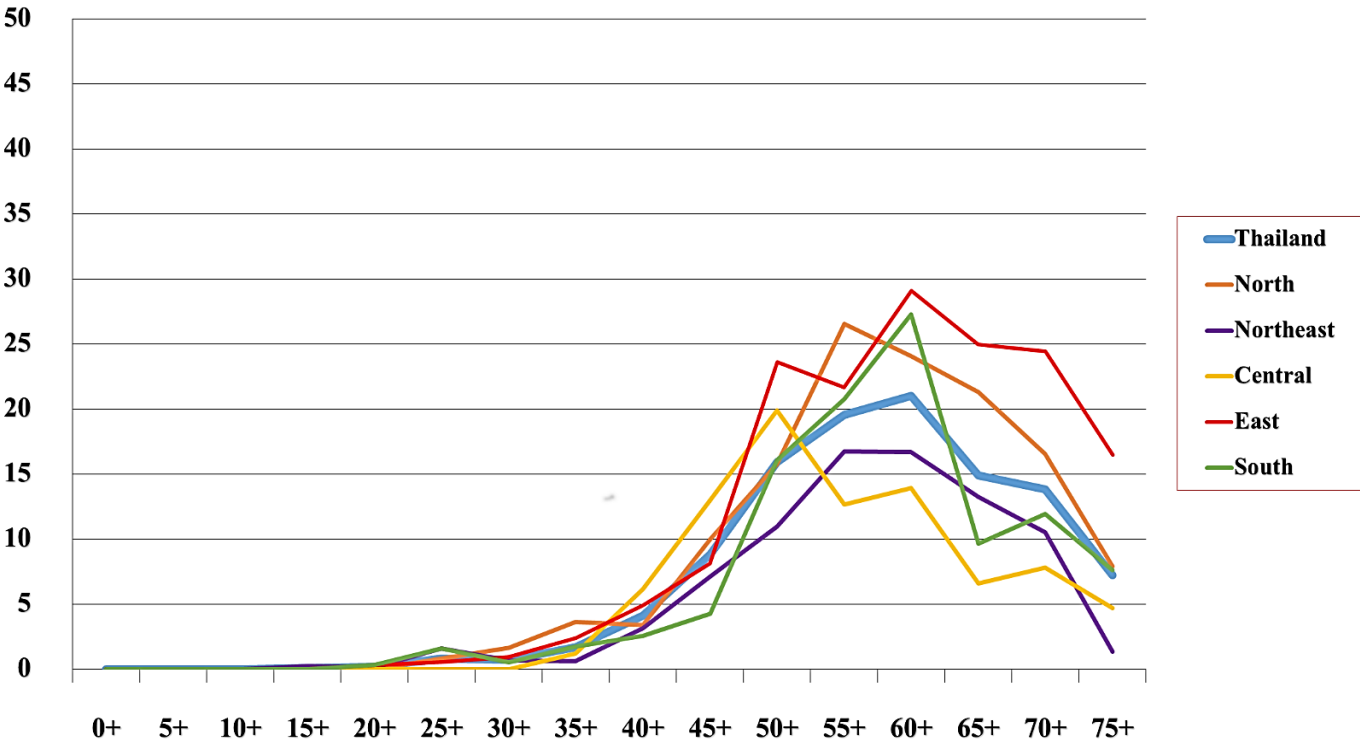


# Corpus uteri

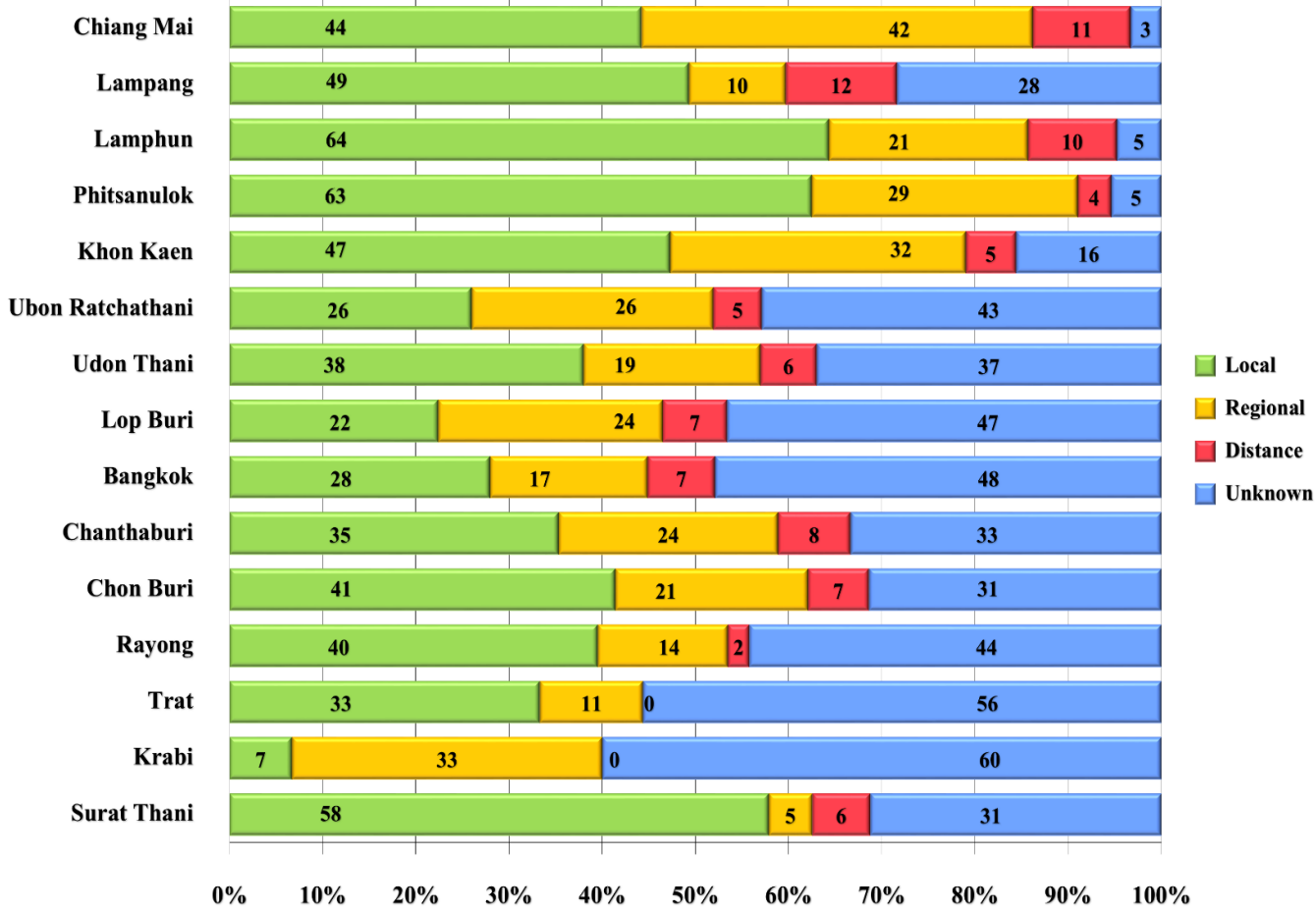
**Figure 2.15.1** Corpus uteri cancer in different regions, mean annual ASR per 100,000 (2010-2012)



**Figure 2.15.2** Age - specific incidence rates of cervical cancer, mean annual rate per 100,000 (2010-2012)

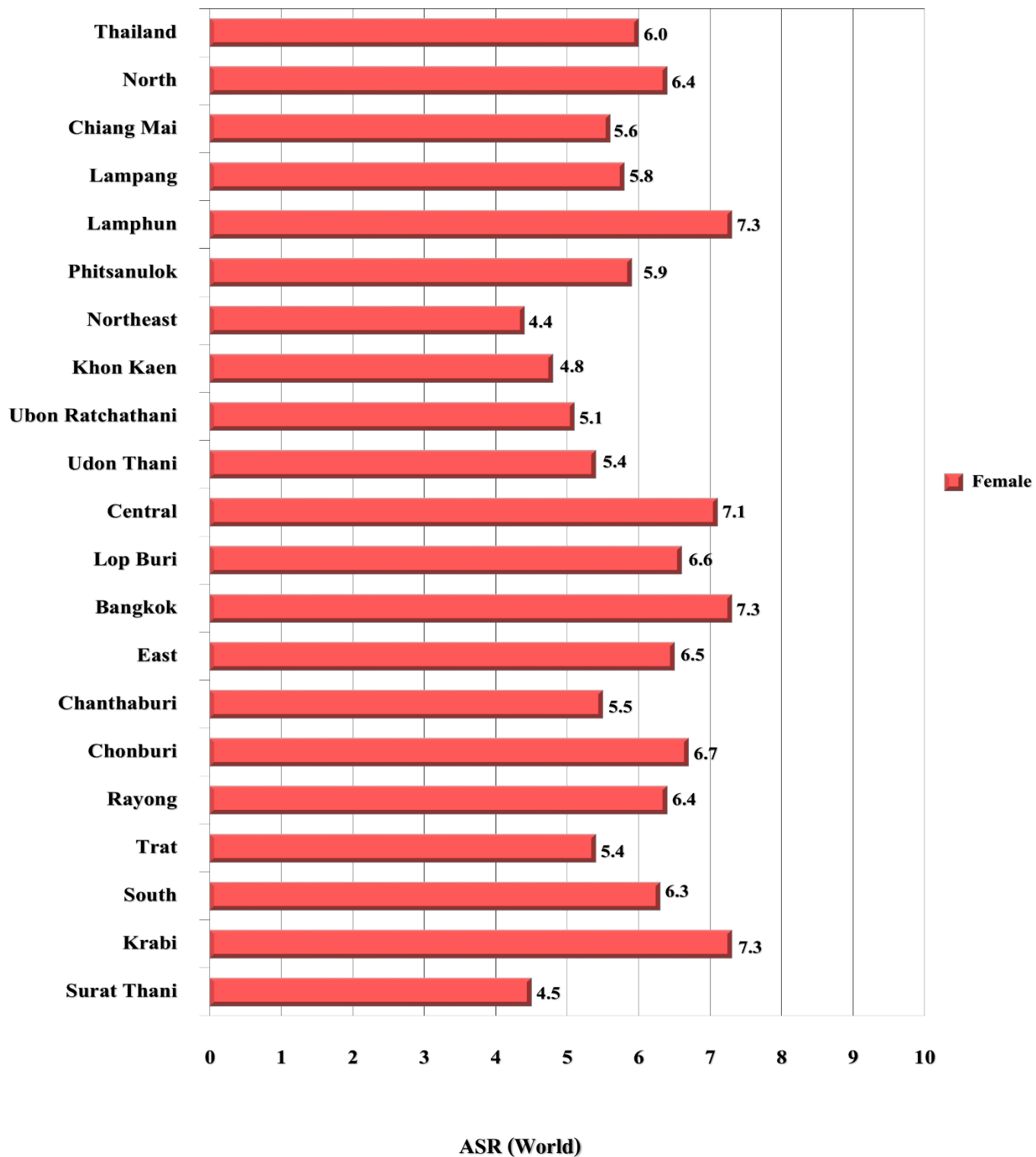


**Figure 2.15.3** Stage distribution of corpus uteri cancer, (2010-2012)

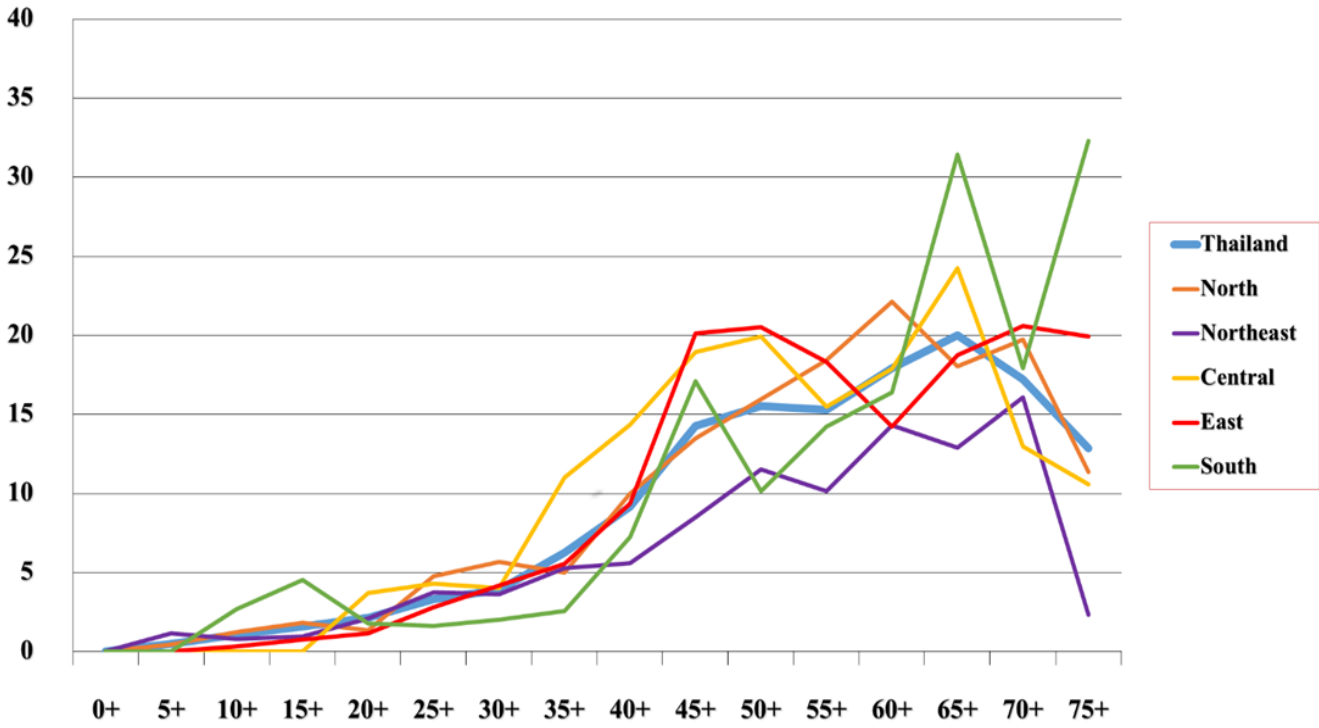


# Ovary

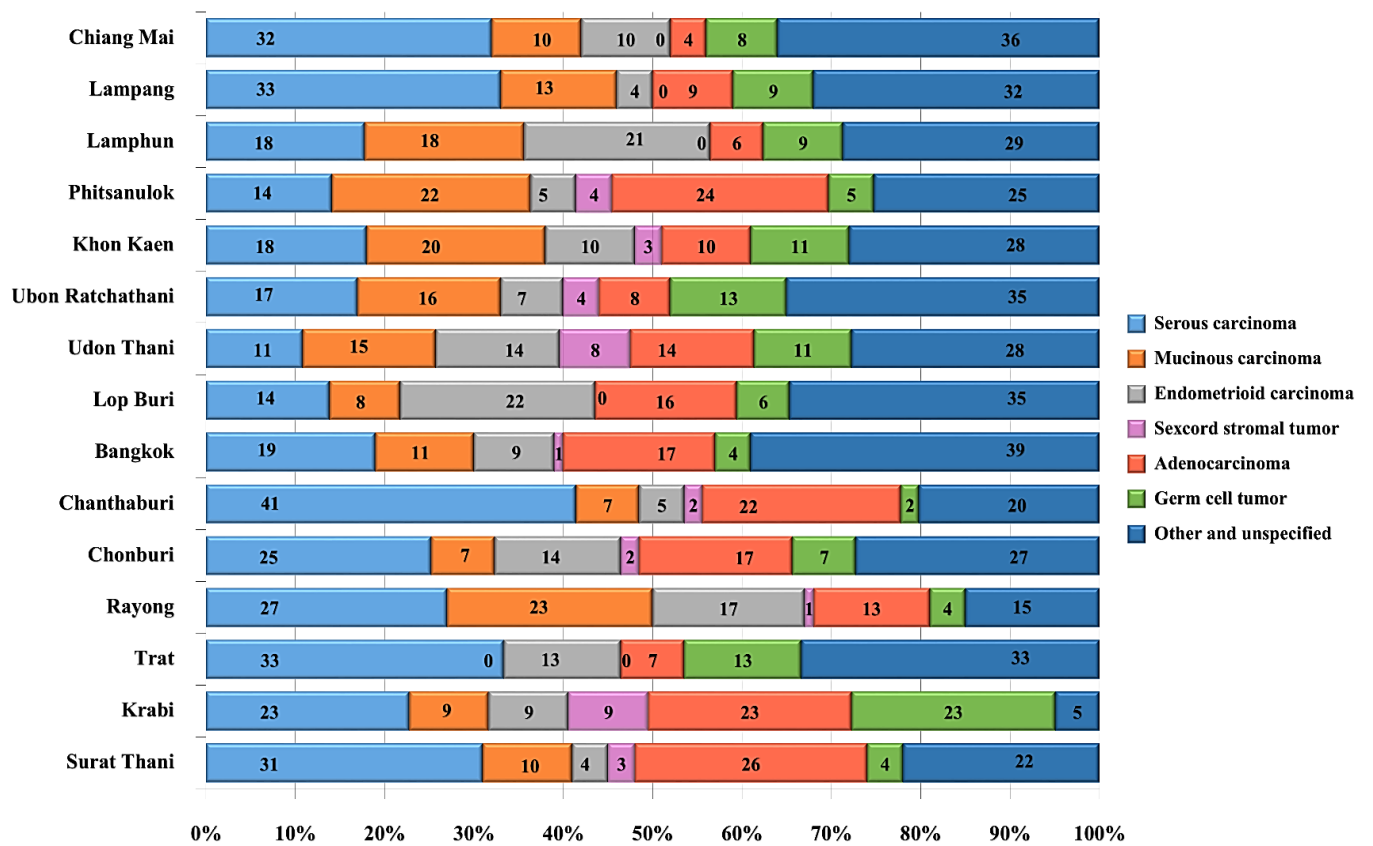
**Figure 2.16.1** Ovarian cancer in different regions, mean annual ASR per 100,000 (2010-2012)



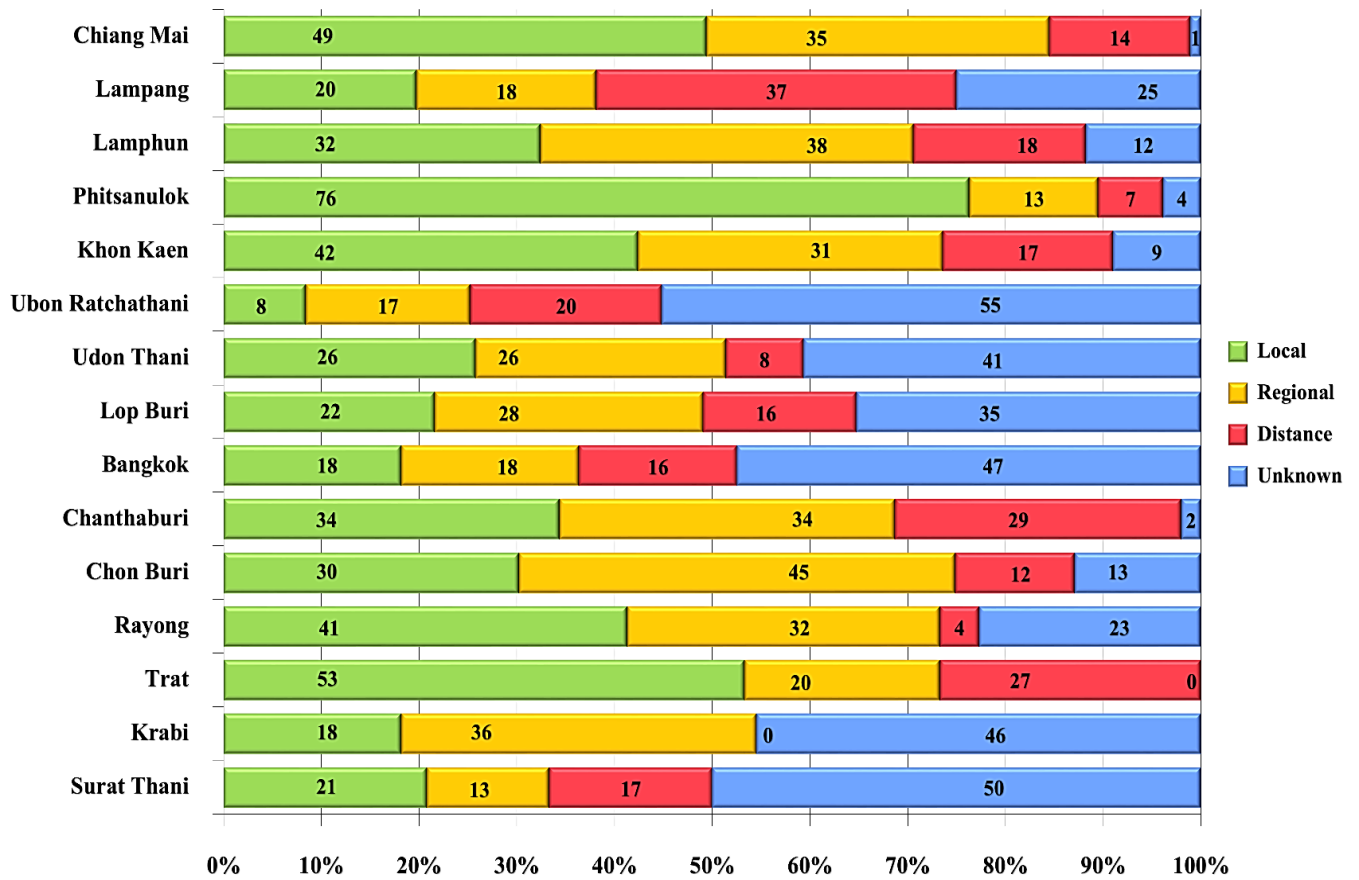
**Figure 2.16.2** Age - specific incidence rates of ovarian cancer, mean annual rate per 100,000 (2010-2012)



**Figure 2.16.3** Histological types of ovarian cancer (2010-2012)

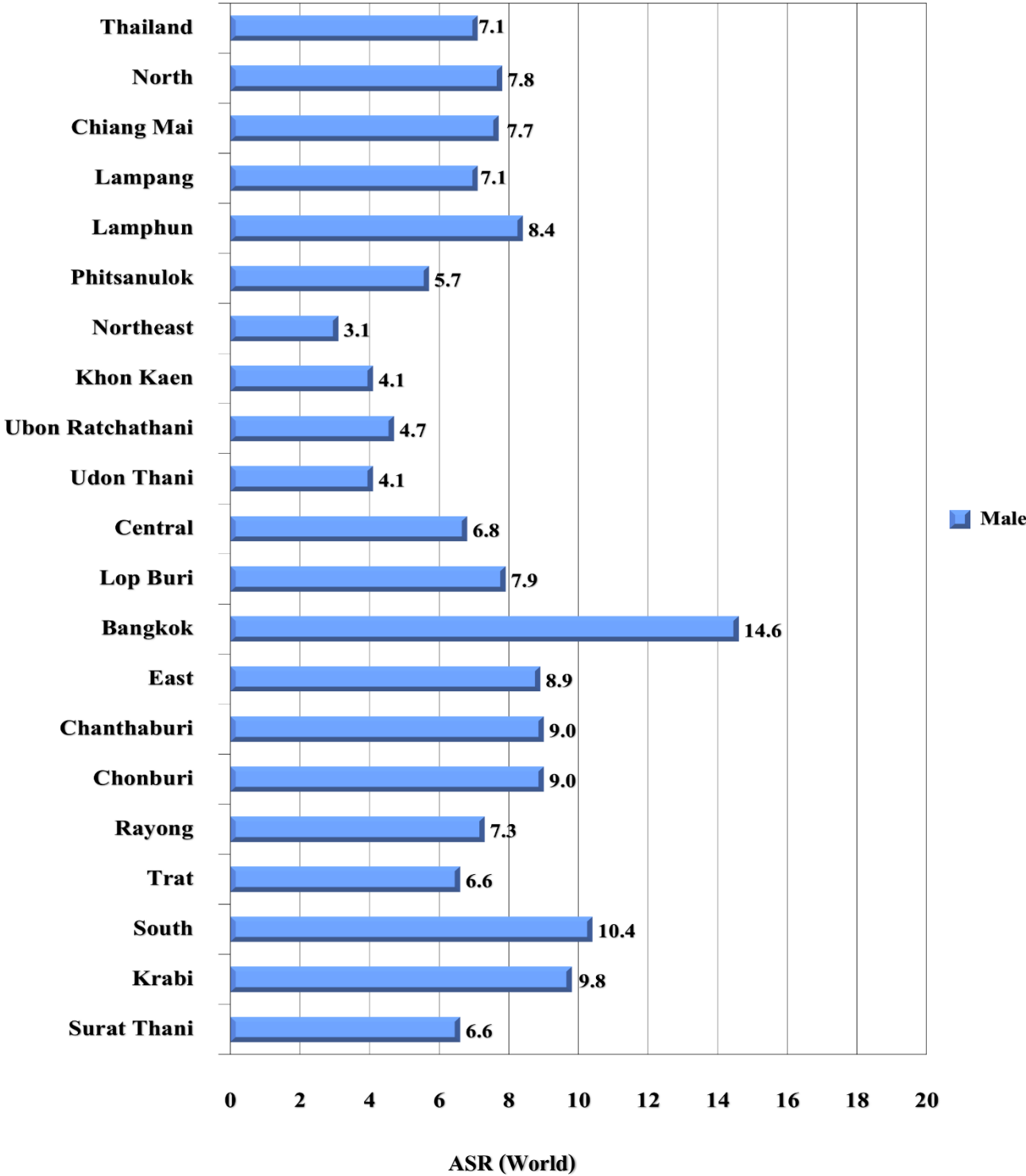


**Figure 2.16.4** Stage distribution of ovarian cancer, (2010-2012)



# Prostate

Figure 2.17.1 Prostate cancer in different regions, mean annual ASR per 100,000 (2010-2012)

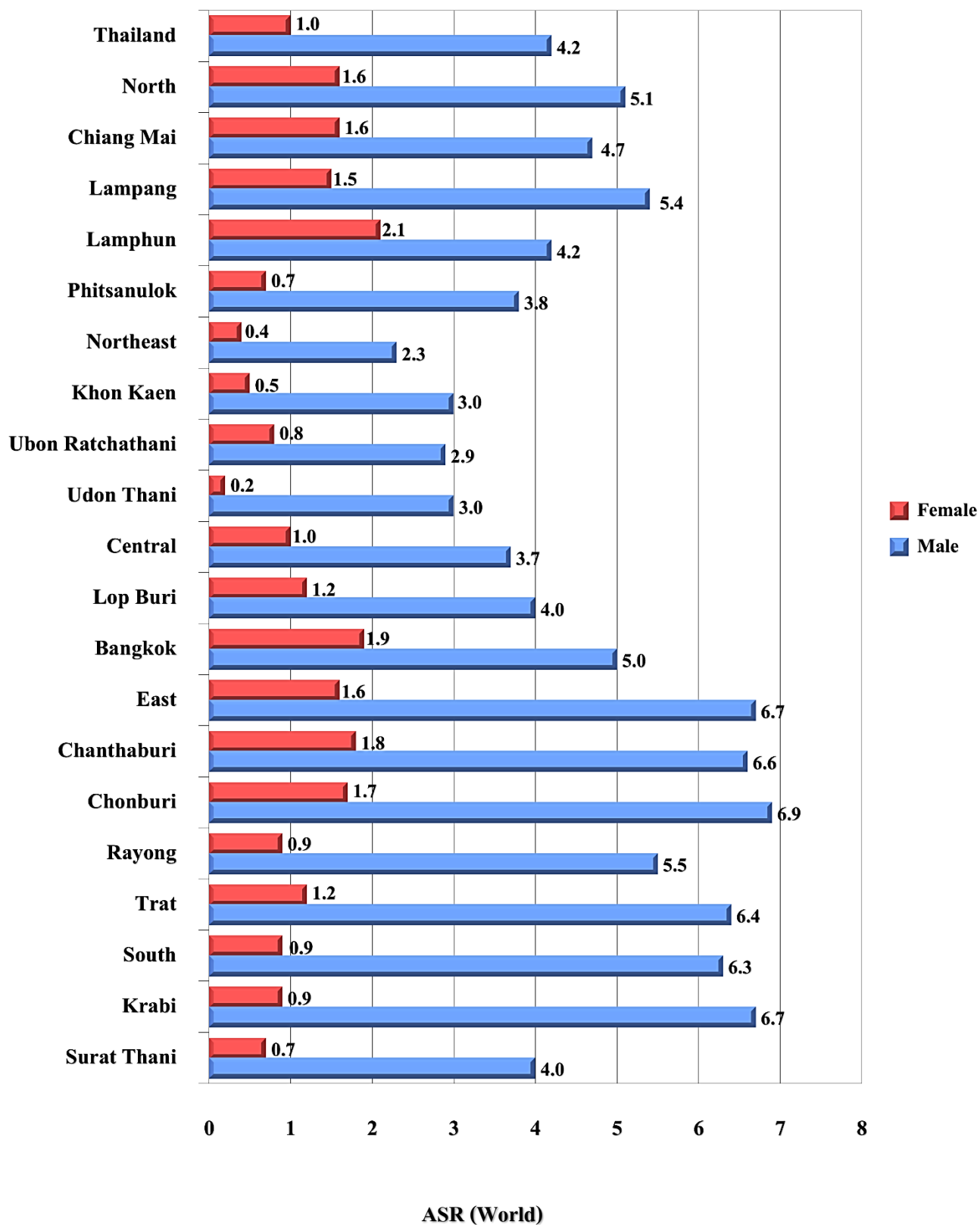


**Figure 2.17.2** Age - specific incidence rates of prostate cancer, mean annual rate per 100,000  
(2010-2012)



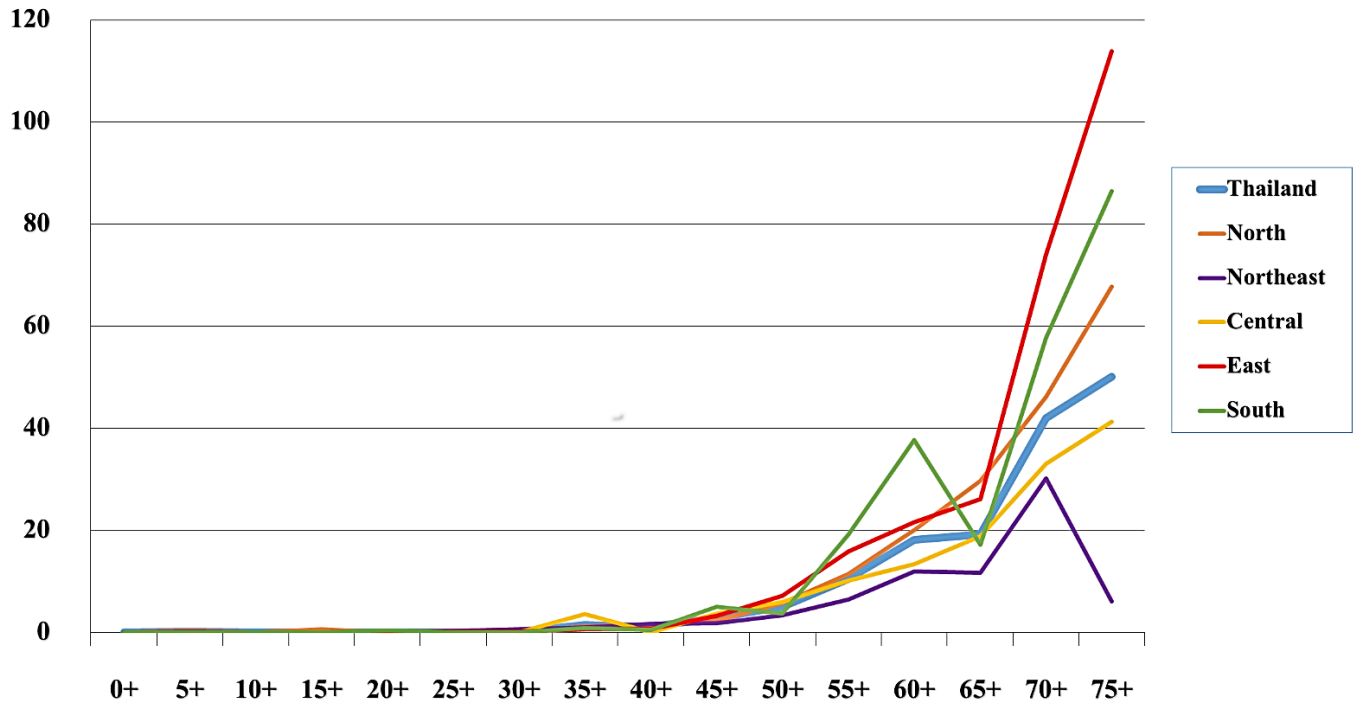
# Urinary bladder

**Figure 2.18.1** Urinary bladder cancer in different regions, mean annual ASR per 100,000 (2010-2012)

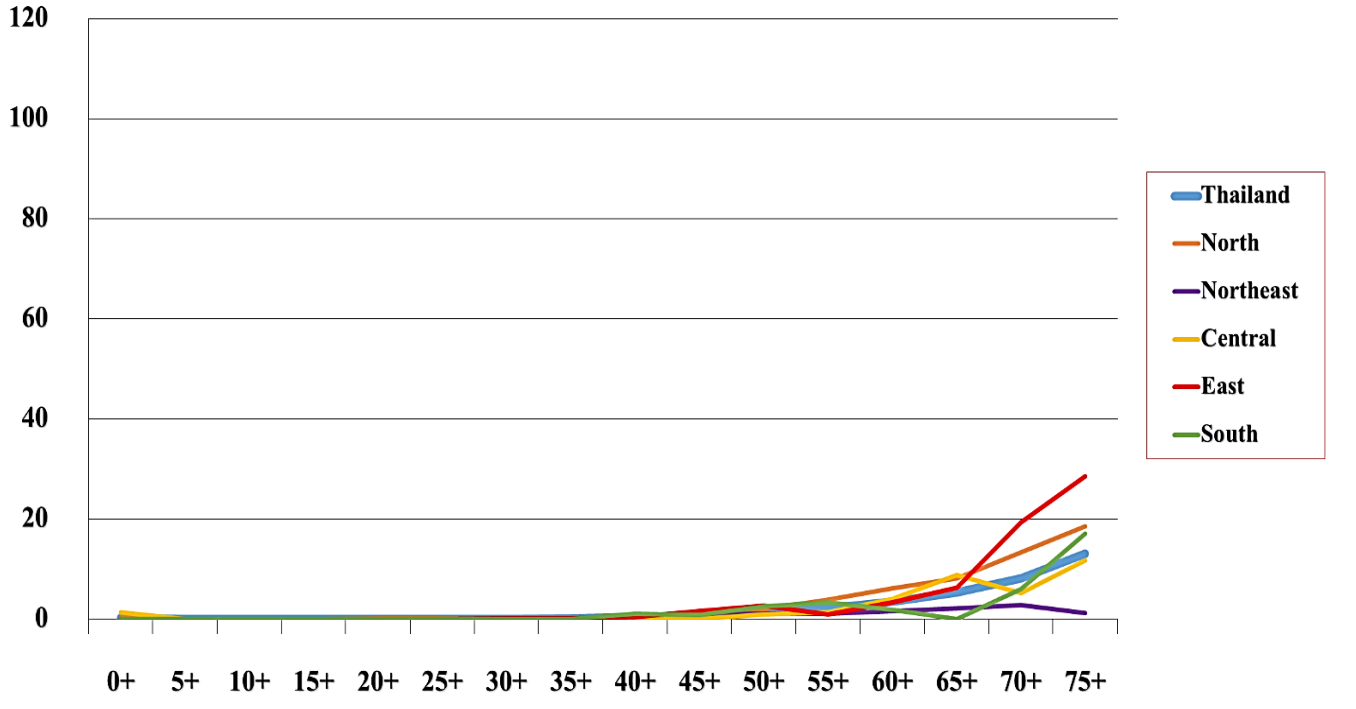


**Figure 2.18.2** Age - specific incidence rates of urinary bladder cancer, mean annual rate per 100,000 (2010-2012)

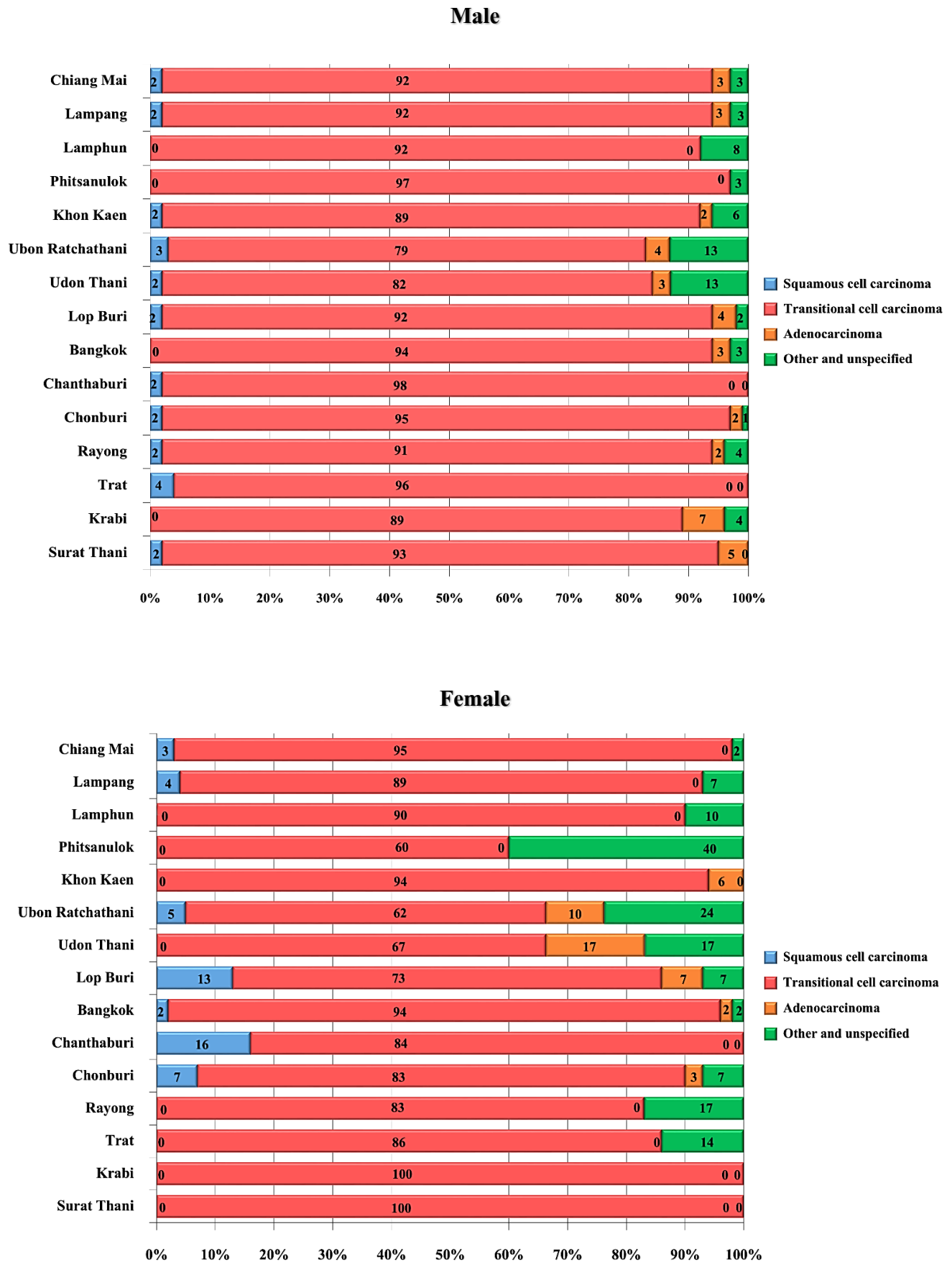
**Male**



**Female**

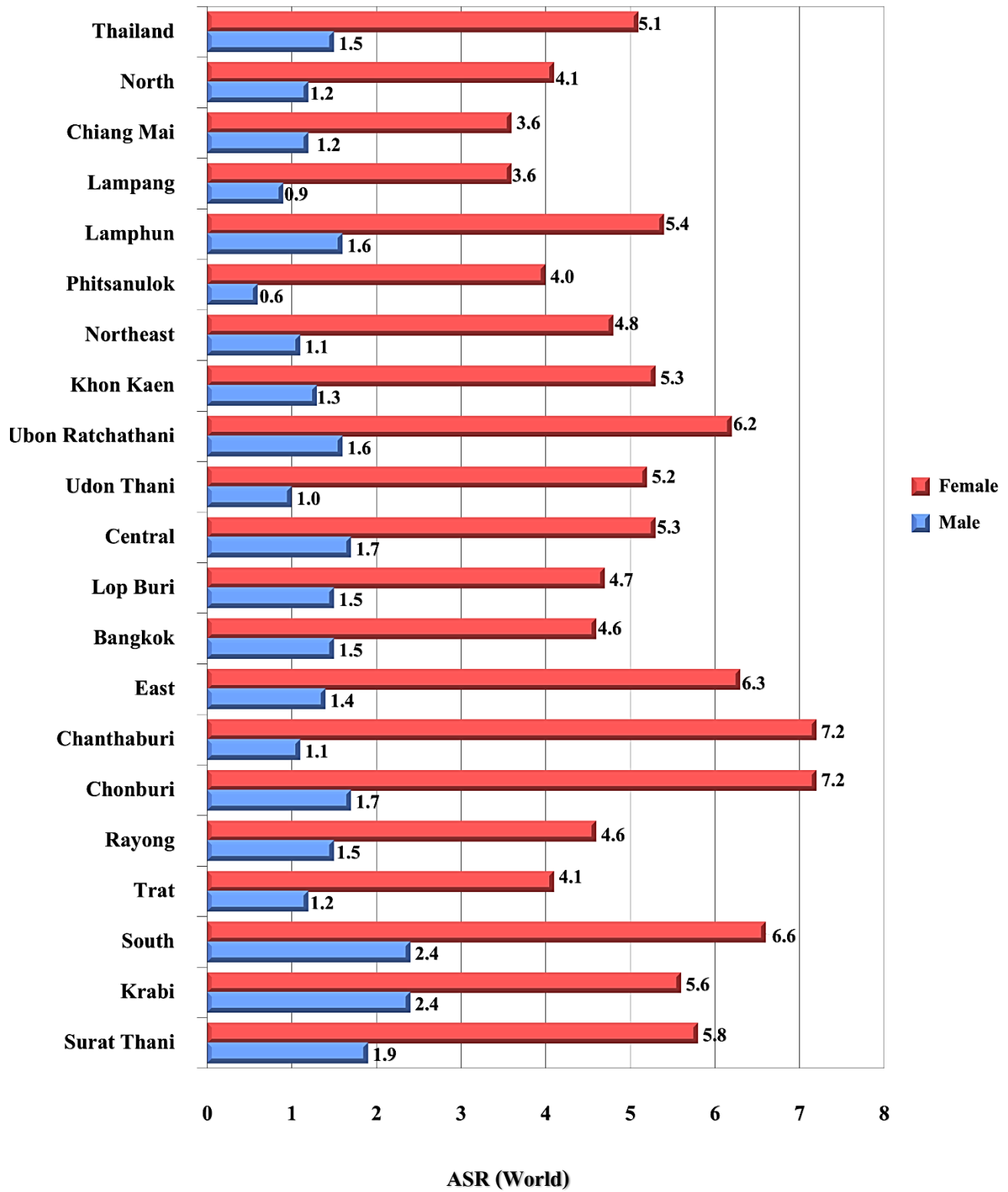


**Figure 2.18.3** Histological types of urinary bladder cancer, (2010-2012)



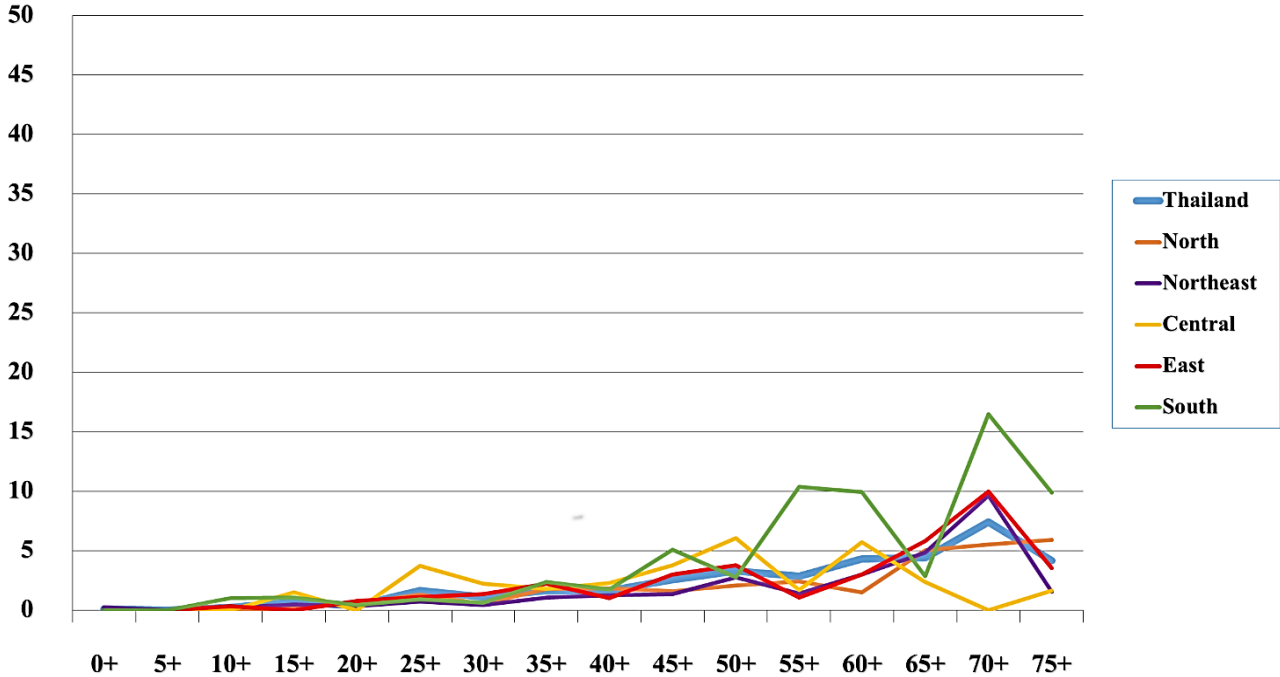
# Thyroid gland

**Figure 2.19.1** Thyroid cancer in different regions, mean annual ASR per 100,000 (2010-2012)

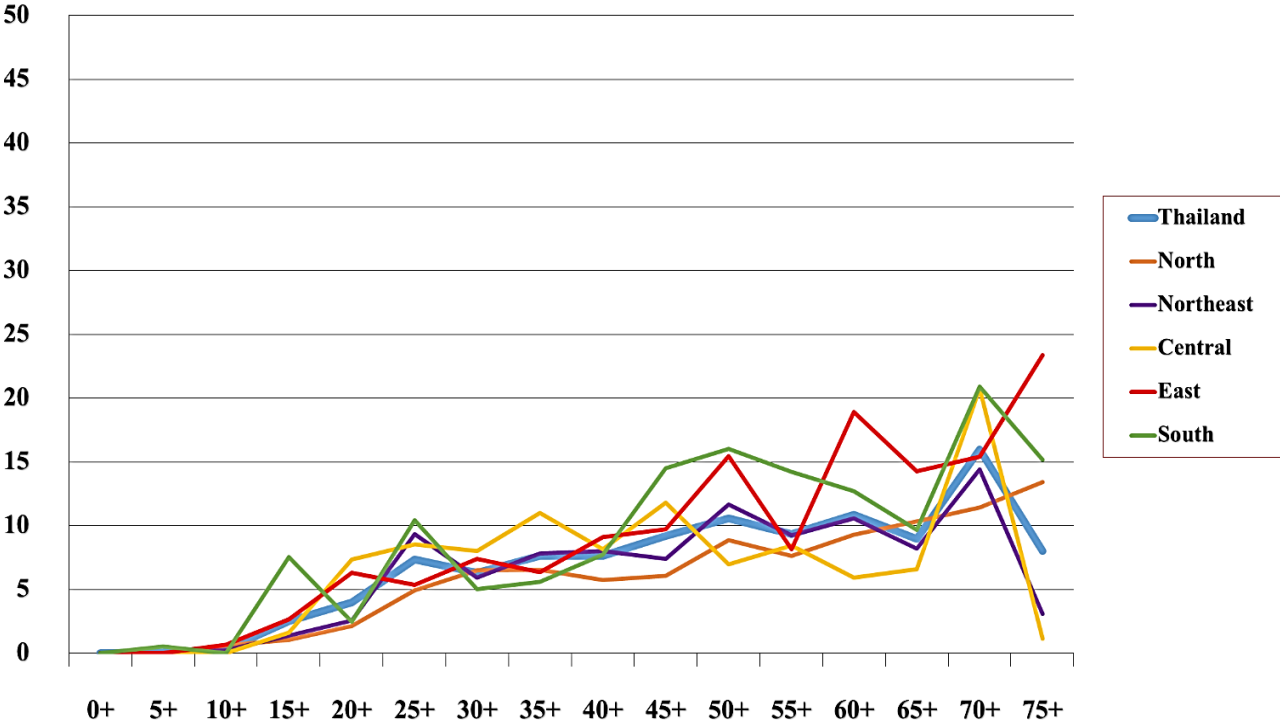


**Figure 2.19.2** Age - specific incidence rates of thyroid cancer, mean annual rate per 100,000 (2010-2012)

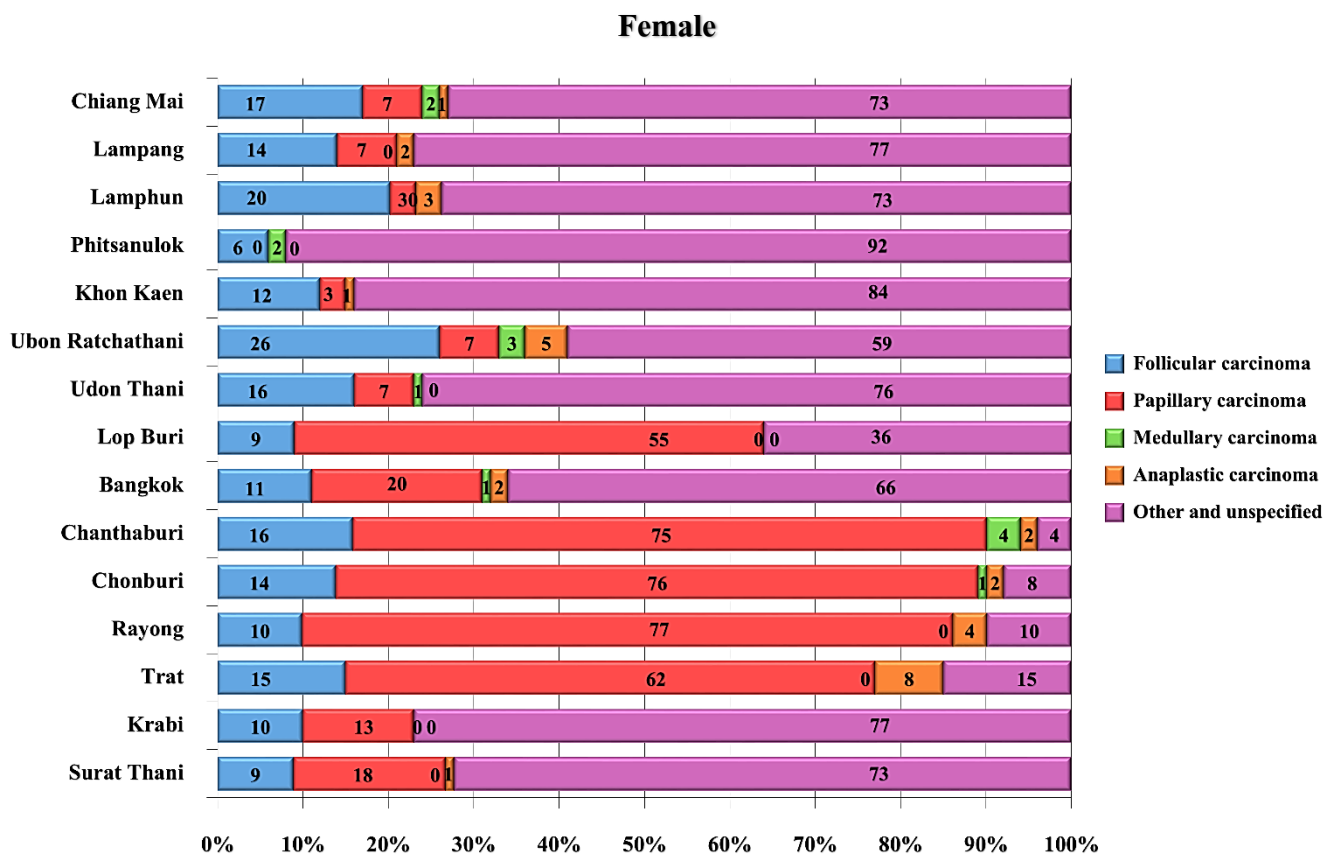
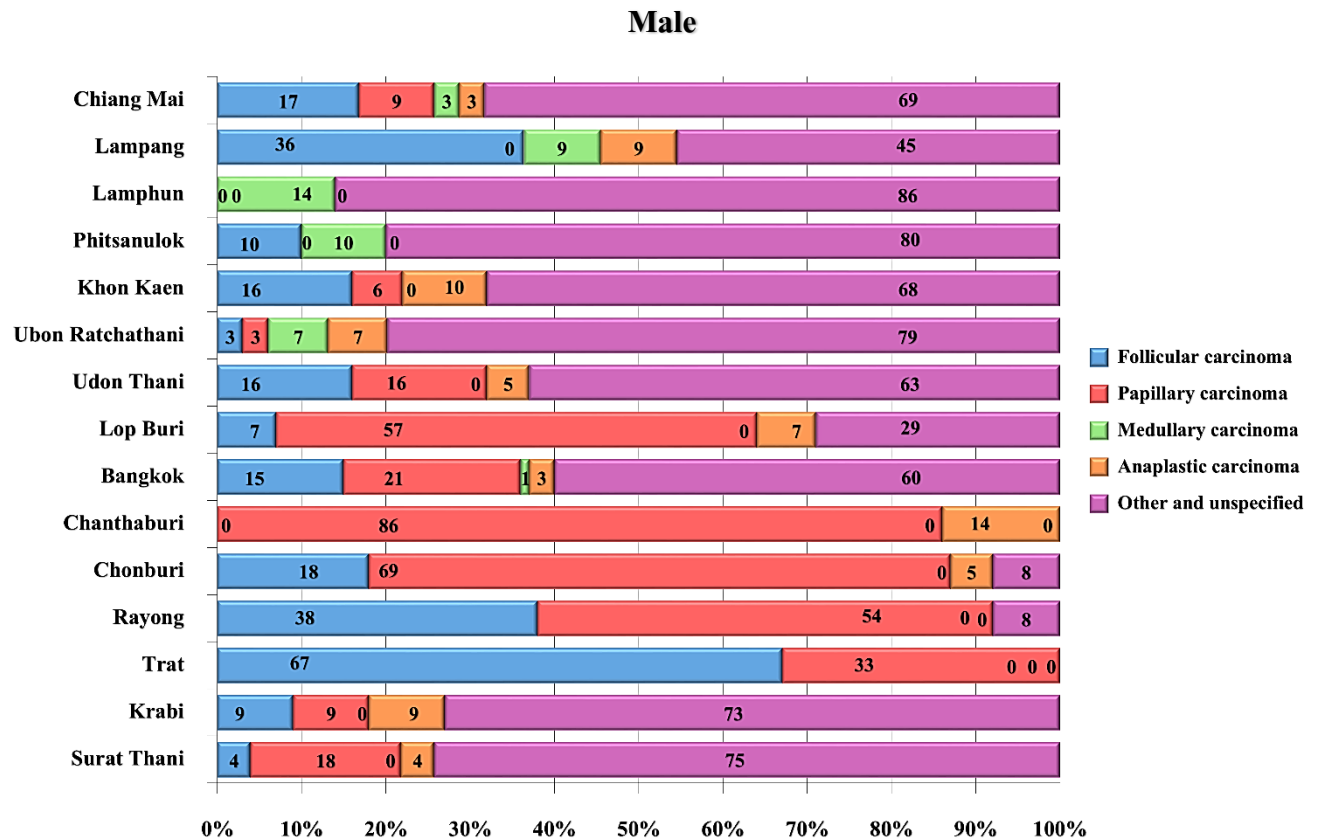
**Male**



**Female**

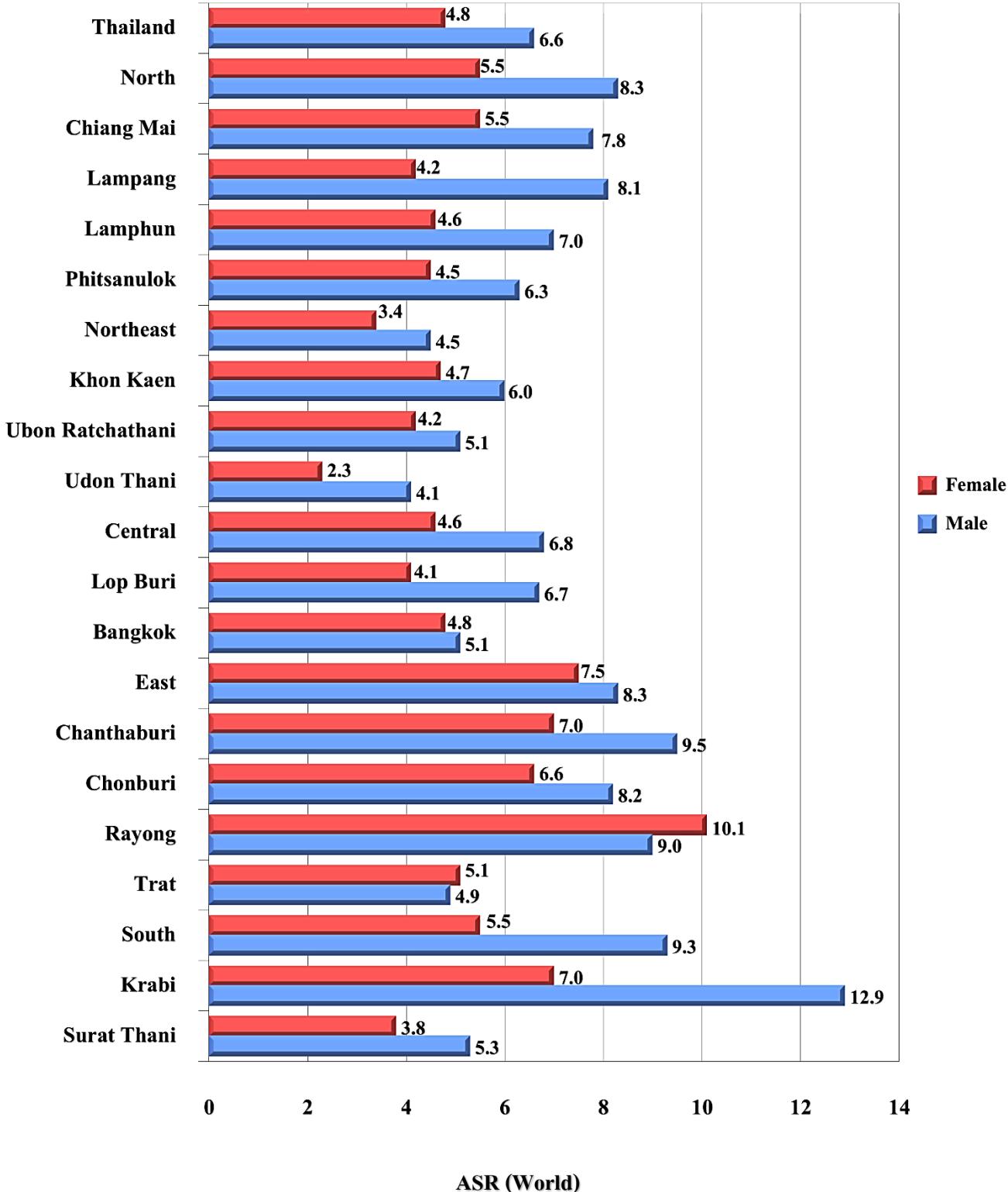


**Figure 2.19.3** Histological types of thyroid cancer (2010-2012)



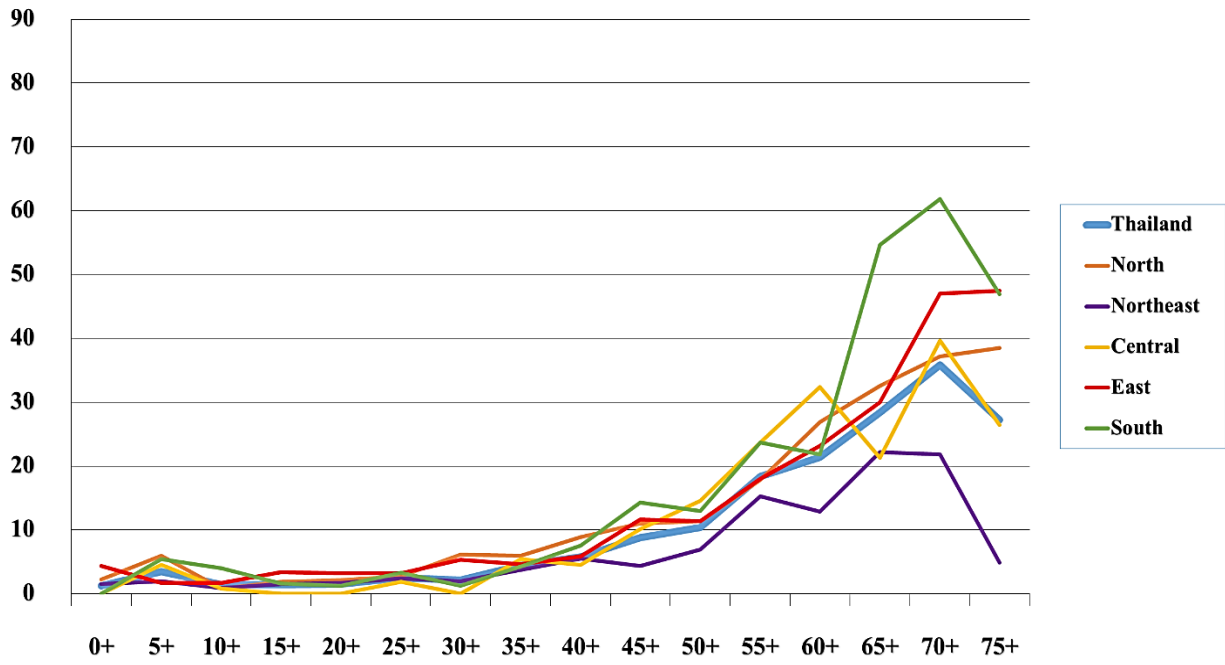
# Lymphoma

**Figure 2.20.1** Lymphoma cancer in different regions, mean annual ASR per 100,000 (2010-2012)

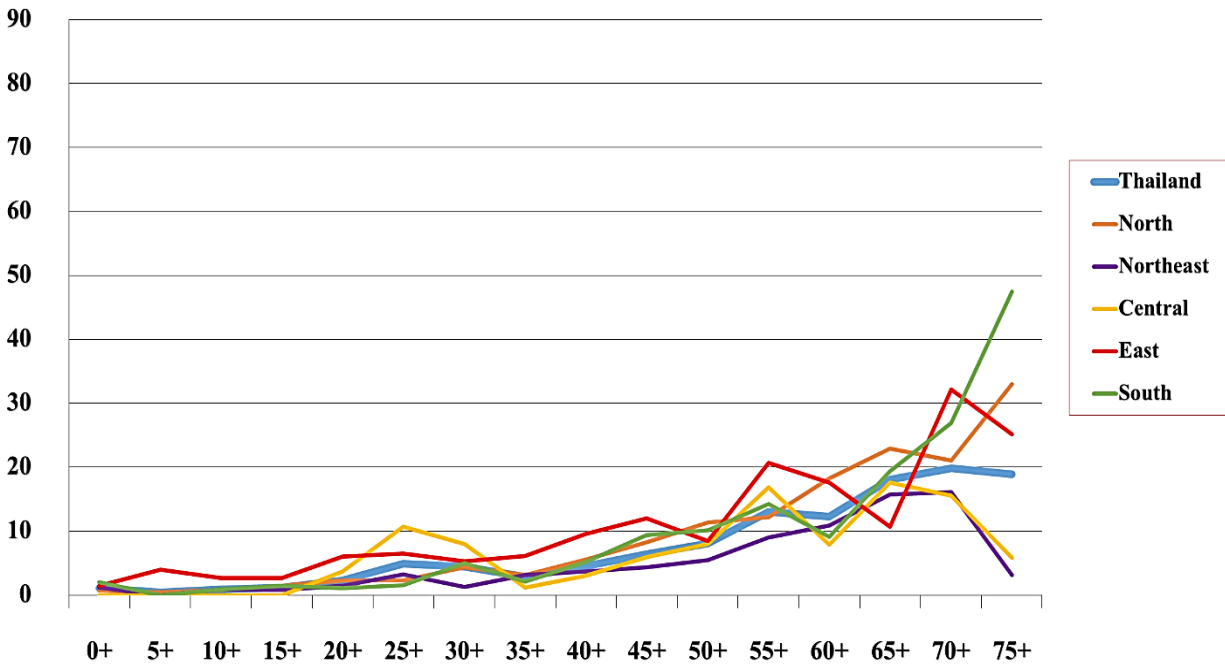


**Figure 2.20.2** Age - specific incidence rates of lymphoma cancer, mean annual rate per 100,000 .  
(2010-2012)

**Male**

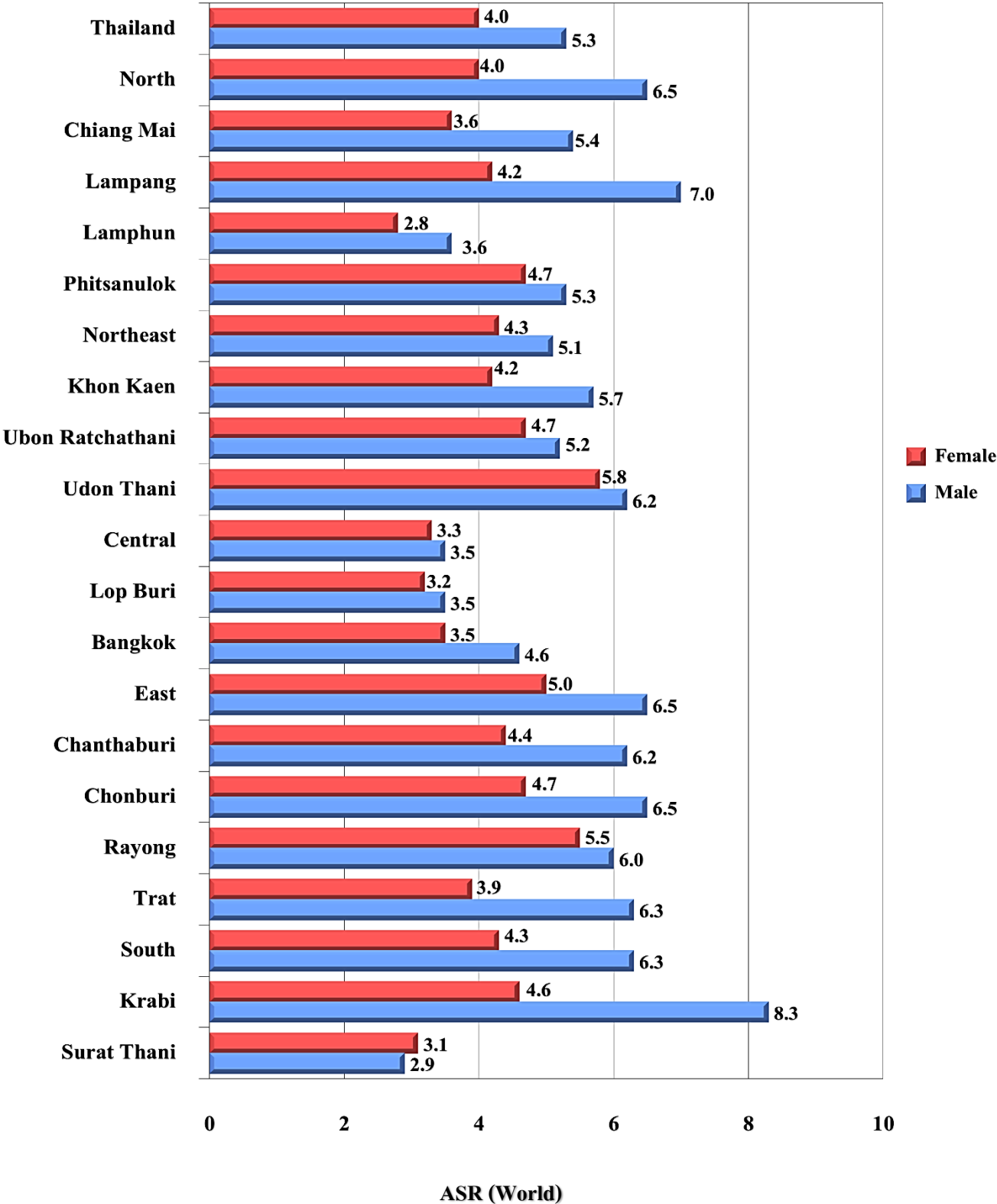


**Female**



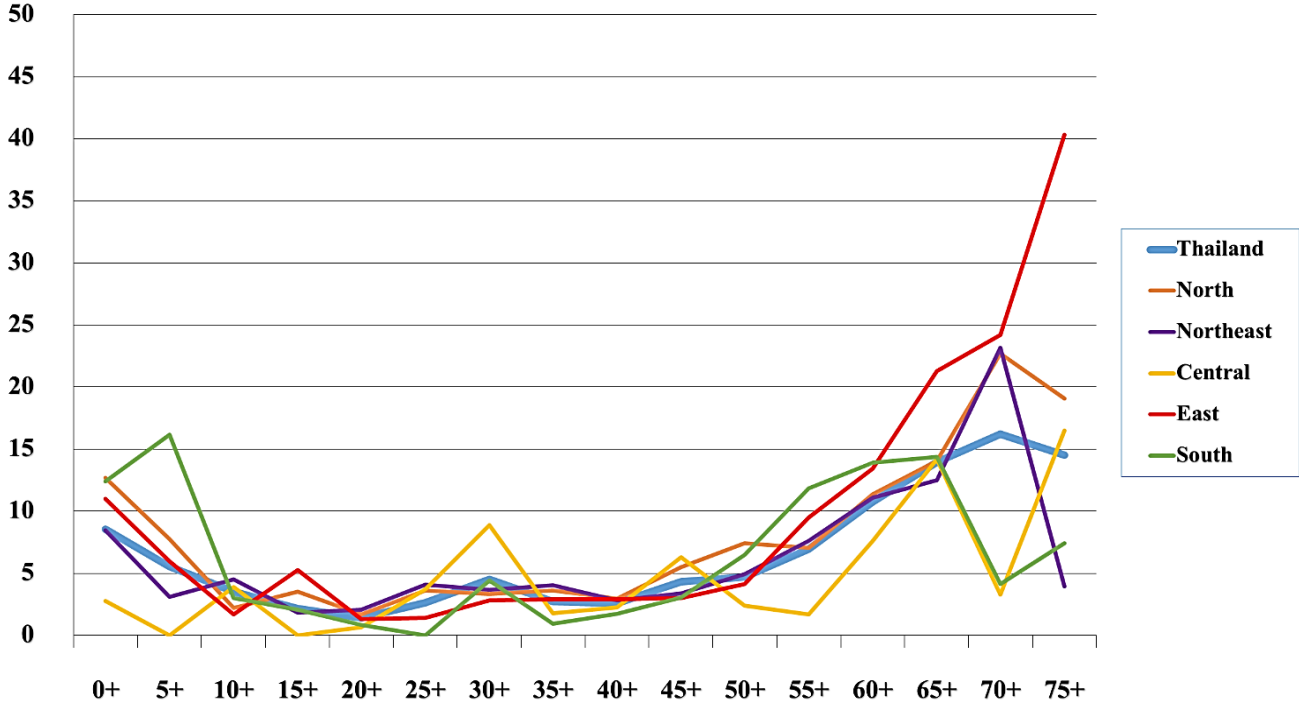
# Leukemia

Figure 2.21.1 Leukemia cancer in different regions, mean annual ASR per 100,000 (2010-2012)

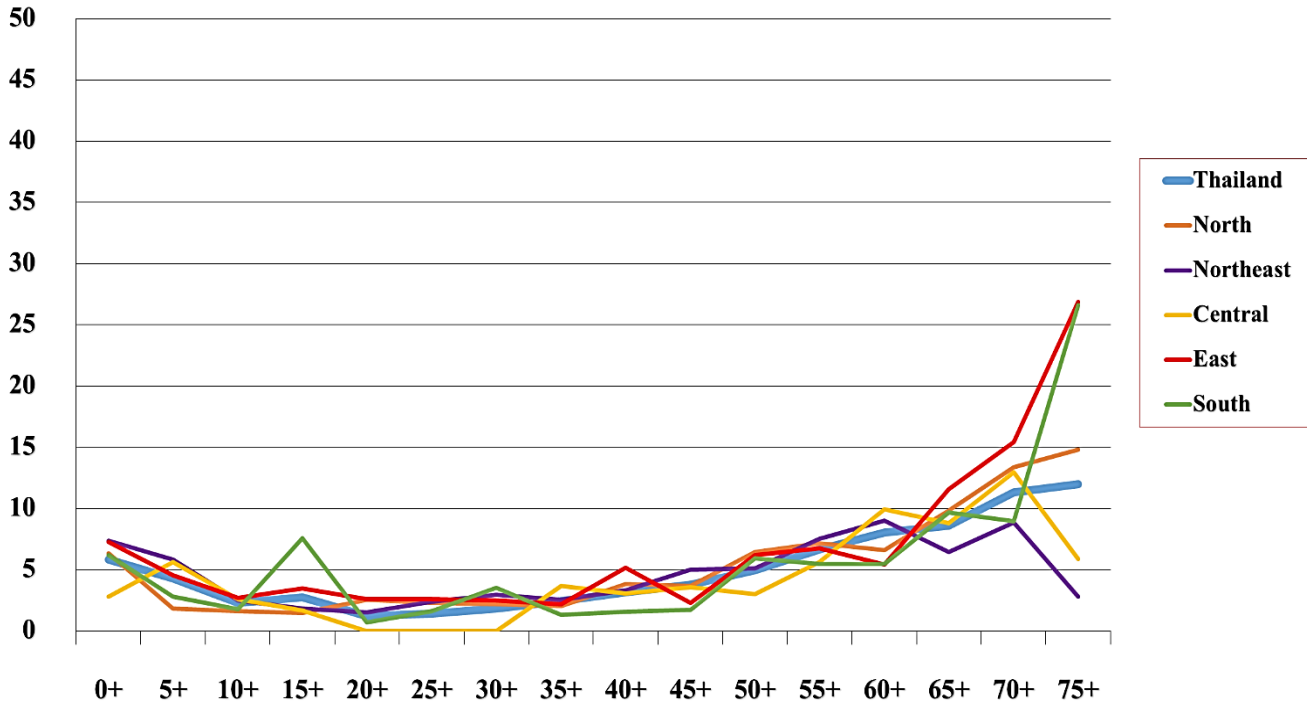


**Figure 2.21.2** Age - specific incidence rates of leukemia cancer, mean annual rate per 100,000  
(2010-2012)

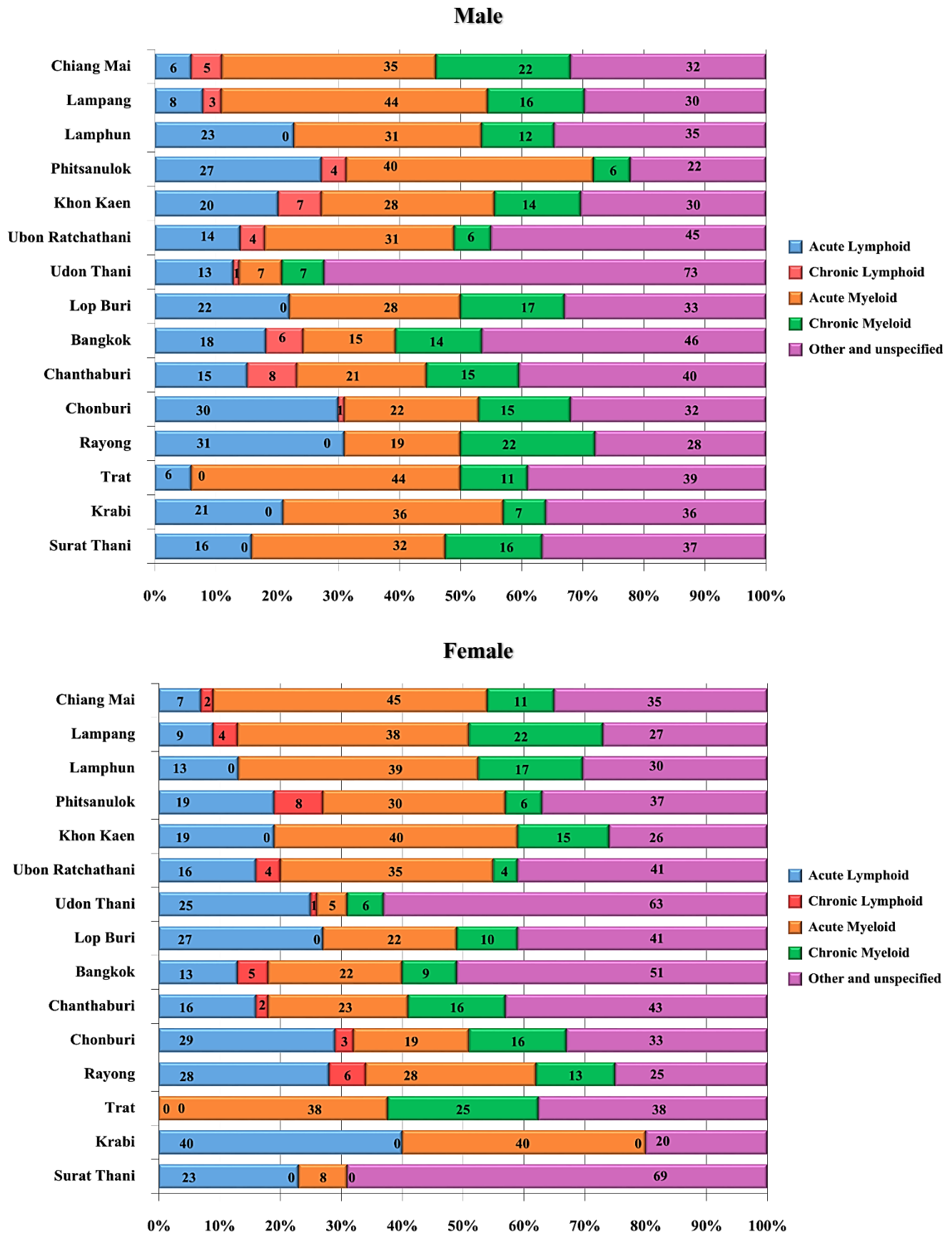
**Male**



**Female**



**Figure 2.21.3** Histological types of thyroid cancer, (2010-2012)



# Chapter III

Chiang Mai Cancer Registry

Lamphun Cancer Registry

Lampang Cancer Registry

Phitsanulok Cancer Registry

Udon Thani Cancer Registry

Khon Kaen Cancer Registry

Ubon Ratchathani Cancer Registry

Lop Buri Cancer Registry

Bangkok Cancer Registry

Chon Buri Cancer Registry

Rayong Cancer Registry

Chanthaburi Cancer Registry

Trat Cancer Registry

Surat Thani Cancer Registry

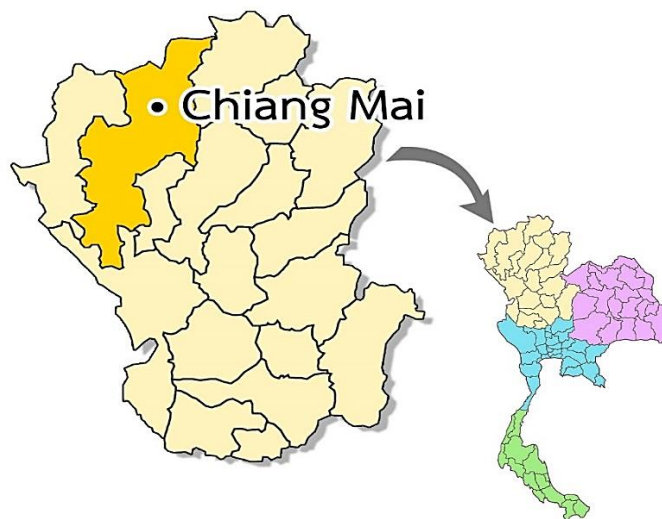
Krabi Cancer Registry

# Chiang Mai Cancer Registry

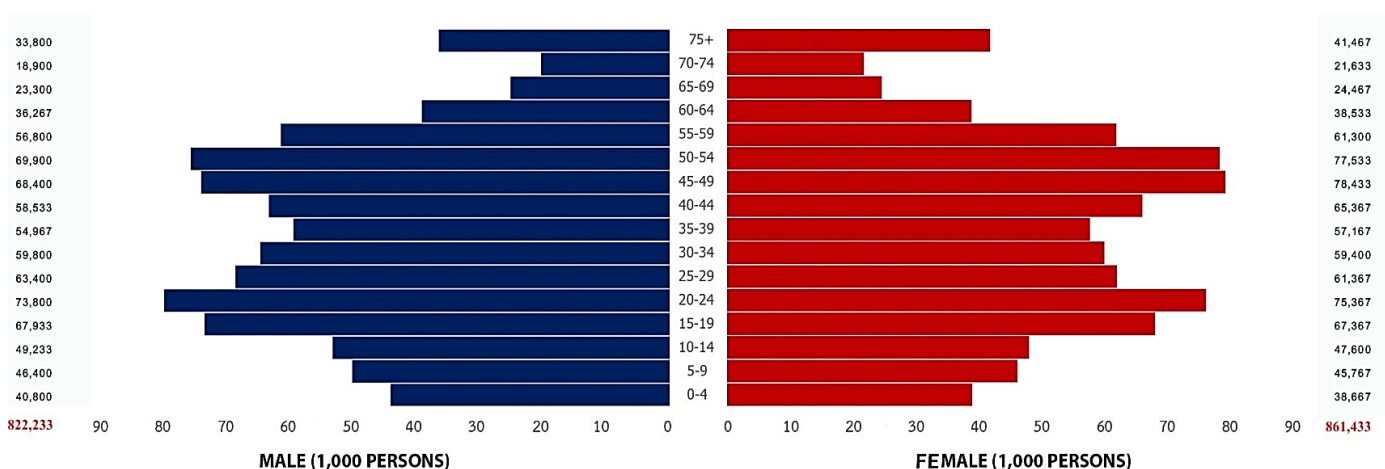
## Registration area

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 24 districts. In the year 2011 the population of Chiang Mai was 1,643,312 of which 841,459 were females and 801,853 were males (National Statistics Office, Thailand, 2011). 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.



Population pyramid, Chiang Mai  
estimated population in 2011 (average 2010-2012)



## **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 9 private hospitals. The total number of hospital beds in Chiang Mai was 4,896 beds with 1,260 doctors in the year 2011 ([www.moph.go.th](http://www.moph.go.th)). 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**

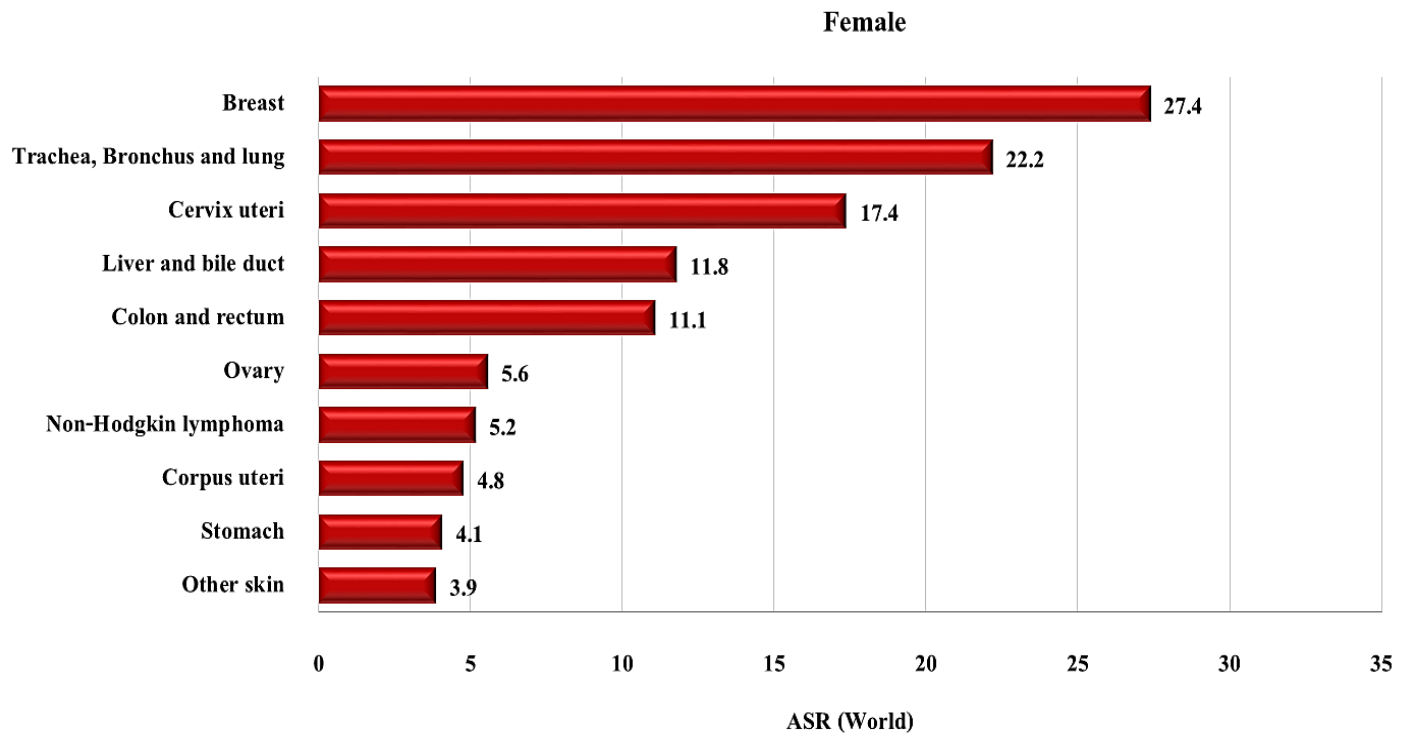
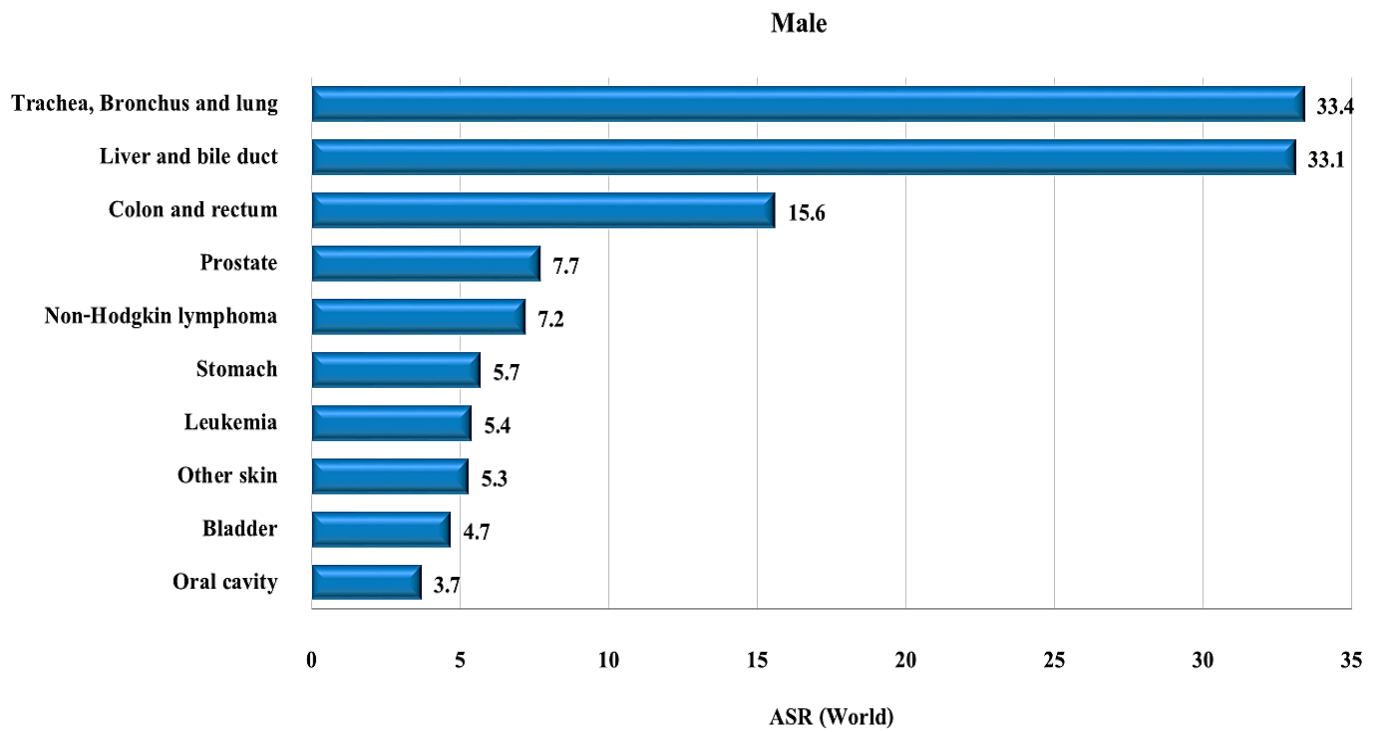
The cancer unit, Faculty of Medicine, Chiang Mai University has been maintaining a hospital-based cancer registry since 1963. Data on cancer patients are now collected actively from every hospital in Chiang Mai. The data of Chiang Mai residents are extracted from the hospital based cancer registry of 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 Canreg-4 program. Death certificates specifying cancer are collected from the website of the office of the Ministry of Interior. The information is matched with the existing records, unmatched cases being registered as death certificate only (DCO).

## **Summary of results**

New cases registered in 2011, 1,738 were males and 1,781 were females, making 3,519 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 156.7 per 100,000, with lung cancer ranking first (ASR = 33.4) followed by liver and bile duct (ASR = 33.1) and colon and rectum (ASR = 15.6). The ASR of all cancer sites in females was 144.9 per 100,000, the three leading cancer sites being breast (ASR = 27.4), lung (ASR = 22.2) and cervix (ASR = 17.4)

**Figure 3.1** Leading cancer in Chiang Mai (mean annual ASR 2010-2012)



**Table 3.1.1** Chiang Mai (2011), Mean annual ASR per 100,000 (2010-2012) 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	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.0	0.0	0.0	0.0	1.8	1.0	0.2	0.1	C00
Tongue	15	0.0	0.0	0.0	0.0	0.0	0.5	1.1	1.2	1.1	3.4	1.9	4.1	1.8	7.2	3.5	9.9	1.8	1.3	C01-02
Mouth	20	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.2	1.7	2.4	2.4	4.1	4.6	10.0	14.1	15.8	2.5	1.8	C03-06
Salivary glands	6	0.0	0.0	0.0	0.5	0.0	0.0	2.2	0.0	0.0	0.5	1.4	0.6	2.8	1.4	0.0	3.9	0.7	0.5	C07-08
Tonsil	9	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.6	1.9	2.4	2.9	2.8	4.3	1.8	3.0	1.1	0.8	C09
Other oropharynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.4	0.6	0.9	1.4	0.0	2.0	0.4	0.2	C10
Nasopharynx	29	0.0	0.0	0.7	0.5	0.0	0.5	1.7	5.5	5.1	5.4	8.1	5.3	8.3	5.7	12.3	6.9	3.6	2.7	C11
Hypopharynx	7	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.0	1.0	1.8	3.7	2.9	3.5	3.9	0.8	0.6	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	1.9	2.9	5.3	10.1	8.6	14.1	11.8	2.4	1.7	C15
Stomach	63	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.4	4.6	8.3	7.6	12.3	29.4	30.0	45.9	41.4	7.7	5.7	C16
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.2	1.8	2.9	1.8	1.0	0.4	0.3	C17
Colon	84	0.0	0.0	0.0	0.5	1.4	0.5	2.2	5.5	5.1	10.2	14.8	21.7	36.8	30.0	47.6	47.3	10.2	7.5	C18
Rectum	87	0.0	0.0	0.0	0.5	0.9	2.1	2.8	3.6	5.7	8.8	14.3	20.5	32.2	30.0	67.0	55.2	10.6	7.7	C19-20
Anus	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.5	0.6	0.9	4.3	5.3	2.0	0.5	0.4	C21
Liver and bile duct	377	0.0	0.0	0.7	0.5	0.5	2.6	10.6	20.6	31.3	47.3	86.8	113.3	148.9	148.8	165.8	179.5	45.8	33.1	C22,C24
Gallbladder	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.4	1.8	0.9	7.2	7.1	8.9	1.1	0.7	C23
Pancreas	30	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.8	2.8	1.5	3.3	12.3	11.9	8.6	19.4	19.7	3.6	2.6	C25
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.6	0.6	1.9	1.0	0.0	0.9	1.4	1.8	1.0	0.5	0.4	C30-31
Larynx	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.4	1.9	6.5	11.0	8.6	15.9	14.8	2.7	2.0	C32
Trachea, Bronchus and lung	373	0.0	0.0	0.0	0.0	0.9	0.0	2.2	7.3	9.7	25.8	54.4	82.2	139.7	247.5	305.1	275.1	45.4	33.4	C33-34
Other thoracic organs	5	0.0	0.0	0.7	1.0	0.9	0.0	0.0	1.2	0.0	0.5	1.4	0.6	0.0	1.4	1.8	1.0	0.6	0.5	C37-38
Bone	5	0.8	0.7	2.7	0.0	0.5	0.0	0.0	0.6	0.6	0.0	0.0	1.8	0.0	0.0	3.5	1.0	0.6	0.7	C40-C41
Melanoma of skin	6	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.6	0.5	1.0	1.2	0.0	4.3	7.1	3.0	0.7	0.5	C43
Other skin	65	0.0	0.0	0.0	0.0	0.5	0.5	0.6	1.2	0.6	4.9	6.2	10.6	18.4	25.8	38.8	86.8	7.9	5.3	C44
Mesothelioma	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	0.0	1.0	0.1	0.1	C45
Kaposi's sarcoma	2	0.0	0.0	0.0	0.0	0.5	1.1	0.6	0.0	0.0	1.0	0.0	0.6	0.0	0.0	0.0	0.0	0.3	0.2	C46
Connective tissue	9	1.6	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	1.9	1.4	1.2	2.8	5.7	0.0	5.9	1.1	0.9	C47,C49
Breast	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.1	1.9	2.4	4.1	4.6	1.4	5.3	3.0	1.3	0.9	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	17	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.2	1.7	3.9	0.5	5.9	3.7	7.2	10.6	9.9	2.0	1.5	C60
Prostate	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	15.3	31.2	37.2	102.3	128.2	11.4	7.7	C61
Testis	6	0.0	0.0	0.0	0.0	0.9	1.6	2.8	0.0	0.0	1.9	1.0	0.0	0.0	0.0	0.0	2.0	0.7	0.6	C62
Other male genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.4	0.0	0.0	0.1	0.1	C63
Kidney	23	1.6	0.0	0.0	0.0	0.0	0.5	0.0	0.6	1.1	3.4	4.8	4.7	9.2	12.9	15.9	9.9	2.8	2.2	C64
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	0.6	0.0	0.0	3.5	0.0	0.1	0.1	C65
Ureter	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.2	1.8	0.0	0.0	3.0	0.3	0.2	C66
Bladder	56	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.2	1.1	2.4	7.2	12.3	13.8	20.0	47.6	64.1	6.9	4.7	C67
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	0.9	0.0	0.0	1.0	0.1	0.1	C68
Eye	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.5	1.0	0.0	0.9	0.0	1.8	3.0	0.4	0.2	C69
Brain, nervous system	24	3.3	3.6	1.4	1.0	1.8	1.1	1.7	1.2	1.7	2.4	2.4	7.0	8.3	5.7	8.8	3.9	2.9	2.8	C70-72
Thyroid	13	0.0	0.0	0.0	0.5	1.4	1.1	0.6	2.4	1.7	2.4	1.4	1.8	1.8	4.3	5.3	4.9	1.5	1.2	C73
Adrenal gland	1	1.6	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	0.2	C74
Other endocrine	1	0.0	0.7	0.7	0.0	0.5	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C75
Hodgkin disease	6	0.0	1.4	0.0	0.0	0.0	0.5	1.7	1.2	0.6	0.5	1.4	0.0	0.9	0.0	0.0	3.0	0.7	0.6	C81
Non-Hodgkin lymphoma	74	3.3	2.2	2.0	2.5	2.3	2.1	5.0	3.0	8.0	8.3	8.6	16.4	23.9	28.6	37.0	39.4	9.0	7.2	C82-85,C96
Multiple myeloma	14	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.6	0.6	0.5	3.3	2.3	8.3	2.9	7.1	10.8	1.7	1.2	C90
Lymphoid leukemia	12	4.9	5.0	2.7	1.5	0.5	0.5	0.6	1.2	0.0	2.4	1.0	0.6	0.9	0.0	0.0	1.0	1.4	1.9	C91
Myeloid leukemia	33	2.5	0.7	0.7	1.0	2.3	3.7	4.5	1.8	2.8	5.4	5.2	5.9	8.3	5.7	12.3	10.8	4.0	3.3	C92-94
Leukemia unspecified	2	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.5	0.0	0.6	0.0	2.9	0.0	0.0	0.2	0.2	C95
Myelodysplastic disease	24	0.0	0.0	0.0	0.5	0.9	0.0	0.6	1.8	1.1	1.0	5.7	5.3	5.5	10.0	14.1	19.7	3.0	2.1	D45-D47
Other and unspecified	63	0.0	0.0	1.4	0.0	0.5	0.5	2.2	1.2	6.3	7.3	11.0	8.2	30.3	30.0	37.0	40.4	7.7	5.8	O&U
<b>All sites</b>	<b>1,738</b>	<b>19.6</b>	<b>14.4</b>	<b>14.2</b>	<b>11.8</b>	<b>16.7</b>	<b>22.1</b>	<b>50.2</b>	<b>72.8</b>	<b>102.5</b>	<b>177.9</b>	<b>278.0</b>	<b>406.7</b>	<b>625.0</b>	<b>768.2</b>	<b>1093.5</b>	<b>1160.7</b>	<b>211.3</b>	<b>156.7</b>	<b>ALL</b>

**Table 3.1.2** Chiang Mai (2011), Mean annual ASR per 100,000 (2010-2012) 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	2	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	1.5	2.4	0.2	0.1	C00
Tongue	6	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.9	2.2	0.9	1.4	4.6	4.8	0.7	0.4	C01-02
Mouth	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.8	2.1	2.2	3.5	2.7	6.2	11.3	1.4	0.9	C03-06
Salivary glands	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.9	1.6	2.6	1.4	1.5	0.8	0.5	0.4	C07-08
Tonsil	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.4	1.1	0.0	4.1	0.0	0.8	0.3	0.2	C09
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	1.6	0.1	0.1	C10
Nasopharynx	14	0.0	0.0	0.0	0.0	0.0	1.6	0.0	2.3	1.0	3.4	2.6	1.1	6.1	2.7	3.1	4.0	1.6	1.2	C11
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	0.0	0.0	0.0	2.4	0.1	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	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	C14
Oesophagus	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	1.1	0.0	5.4	3.1	4.8	0.6	0.4	C15
Stomach	51	0.0	0.0	0.0	0.0	0.0	0.0	5.1	2.9	7.1	5.5	8.2	12.5	7.8	21.8	30.8	19.3	5.9	4.1	C16
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.1	1.7	0.0	0.0	2.4	0.3	0.2	C17
Colon	81	0.0	0.0	0.0	0.5	0.9	0.5	1.1	5.2	7.1	4.7	16.8	16.3	21.6	30.0	38.5	50.6	9.4	6.3	C18
Rectum	56	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.5	5.1	6.8	8.2	9.8	22.5	30.0	27.7	23.3	6.5	4.6	C19-20
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.4	0.5	0.0	0.0	0.0	0.8	0.2	0.2	C21
Liver and bile duct	153	0.0	0.0	0.0	0.5	0.0	0.0	2.2	3.5	13.3	17.0	23.6	33.2	57.1	61.3	53.9	95.7	17.7	11.8	C22,C24
Gallbladder	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	3.9	5.4	13.0	5.4	15.4	18.5	2.8	1.8	C23
Pancreas	19	0.0	0.7	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.8	3.9	4.9	5.2	8.2	6.2	14.5	2.2	1.4	C25
Nose, sinuses etc.	3	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.6	0.0	0.8	0.4	1.6	0.0	0.0	0.0	1.6	0.4	0.3	C30-31
Larynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	2.6	1.4	1.5	2.4	0.3	0.2	C32
Trachea, Bronchus and lung	278	0.0	0.0	0.0	0.0	0.0	1.1	3.9	5.2	6.1	11.9	32.7	54.4	98.6	158.0	212.6	185.7	32.2	22.2	C33-34
Other thoracic organs	2	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.6	0.5	0.0	0.0	0.0	0.9	1.4	0.0	0.0	0.2	0.2	C37-38
Bone	5	0.0	1.5	1.4	1.0	0.4	0.0	0.0	0.6	0.0	0.8	0.4	0.5	1.7	1.4	0.0	0.0	0.6	0.6	C40-C41
Melanoma of skin	5	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.5	0.4	0.9	1.6	0.0	1.4	1.5	4.0	0.6	0.4	C43
Other skin	55	0.0	0.0	0.0	0.0	0.4	1.6	3.4	1.2	1.5	6.4	6.9	7.6	6.9	10.9	33.9	53.9	6.4	3.9	C44
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
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	0.8	0.0	0.0	C46
Connective tissue	8	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.6	1.0	0.8	1.7	2.7	2.6	0.0	4.6	1.6	0.9	0.6	C47,C49
Breast	337	0.0	0.0	0.0	0.0	0.0	4.3	15.7	39.7	46.4	70.5	82.5	94.1	102.9	66.8	80.1	53.1	39.2	27.4	C50
Vulva	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.5	0.4	1.3	1.1	2.6	1.4	3.1	3.2	0.7	0.5	C51
Vagina	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.0	0.0	1.5	1.6	0.2	0.1	C52
Cervix uteri	217	0.0	0.0	0.0	0.0	0.0	3.8	13.5	27.4	40.3	49.7	52.5	54.9	41.5	25.9	61.6	37.8	25.2	17.4	C53
Corpus uteri	60	0.0	0.0	0.0	0.0	0.0	1.1	2.2	3.5	2.5	10.6	18.9	23.4	18.2	21.8	10.8	6.4	7.0	4.8	C54
Uterus unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.4	0.0	0.0	0.9	0.0	0.0	0.0	0.1	0.1	C55
Ovary	63	0.0	0.7	2.1	1.5	1.8	5.4	3.4	4.7	9.7	10.2	12.9	17.4	19.0	13.6	15.4	6.4	7.4	5.6	C56
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	0.9	0.0	0.9	0.0	0.0	0.8	0.2	0.1	C57
Placenta	2	0.0	0.0	0.0	0.5	0.4	0.5	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	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	13	3.4	0.0	0.0	0.5	0.4	0.0	1.1	0.6	0.0	0.8	1.3	2.7	1.7	2.7	7.7	8.0	1.5	1.3	C64
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	0.9	2.7	0.0	0.0	0.1	0.1	C65
Ureter	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.0	1.4	0.0	2.4	0.2	0.1	C66
Bladder	22	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	1.5	0.0	0.9	2.7	6.9	8.2	20.0	21.7	2.5	1.6	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	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	C68
Eye	3	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.4	0.5	0.0	1.4	0.0	1.6	0.3	0.5	C69
Brain, nervous system	20	0.9	2.2	2.1	1.5	0.9	1.1	1.7	1.2	3.1	4.7	3.0	2.2	2.6	2.7	0.0	5.6	2.3	2.0	C70-72
Thyroid	40	0.0	0.0	1.4	1.0	1.8	7.6	3.9	8.2	3.1	4.7	9.9	5.4	4.3	8.2	6.2	9.6	4.6	3.6	C73
Adrenal gland	2	1.7	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0	0.9	0.0	0.0	0.0	0.2	0.3	C74
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
Hodgkin disease	3	0.0	0.0	0.0	0.0	0.9	0.5	0.6	0.6	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.8	0.3	0.3	C81
Non-Hodgkin lymphoma	64	0.0	0.7	0.7	1.5	2.7	2.2	3.4	2.3	5.6	11.0	9.9	11.4	13.0	17.7	23.1	35.4	7.5	5.2	C82-85,C96
Multiple myeloma	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.6	2.7	4.3	4.1	12.3	8.0	1.5	1.0	C90
Lymphoid leukemia	5	5.2	0.0	0.7	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.9	0.5	0.0	0.0	1.5	0.8	0.6	0.9	C91
Myeloid leukemia	25	2.6	0.7	2.1	0.5	1.3	2.2	1.1	0.6	2.5	2.5	3.4	7.6	5.2	8.2	3.1	8.0	2.9	2.5	C92-94
Leukemia unspecified	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.4	0.0	0.0	0.0	4.6	4.0	0.4	0.2	C95
Myelodysplastic disease	26	0.0	0.0	0.0	0.5	0.4	0.5	1.7	2.3	0.5	1.7	3.4	4.4	10.4	9.5	13.9	16.1	3.1	2.1	D45-D47
Other and unspecified	53	0.9	0.0	0.7	1.0	0.9	2.2	3.4	1.2	2.0	3.0	7.3	12.5	12.1	17.7	40.1	29.7	6.2	4.4	O&U
<b>All sites</b>	<b>1,781</b>	<b>17.2</b>	<b>6.6</b>	<b>12.6</b>	<b>10.9</b>	<b>13.7</b>	<b>39.1</b>	<b>71.3</b>	<b>121.3</b>	<b>167.3</b>	<b>234.2</b>	<b>329.8</b>	<b>406.2</b>	<b>504.3</b>	<b>562.7</b>	<b>751.9</b>	<b>770.9</b>	<b>206.7</b>	<b>144.9</b>	<b>ALL</b>

**Table 3.1.3** Mean annual incidence, Chiang Mai, 2010-2012

Site	Male						Female					
	No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum.Rate	
					0-64	0-74					0-64	0-74
Lip	1	0.1	0.2	0.1	0.0	0.0	2	0.1	0.2	0.1	0.0	0.0
Tongue	15	0.8	1.8	1.3	0.1	0.1	6	0.3	0.7	0.4	0.0	0.1
Mouth	20	1.2	2.5	1.8	0.1	0.2	12	0.7	1.4	0.9	0.0	0.1
Salivary glands	6	0.3	0.7	0.5	0.0	0.0	4	0.2	0.5	0.4	0.0	0.0
Tonsil	9	0.5	1.1	0.8	0.1	0.1	3	0.1	0.3	0.2	0.0	0.0
Other oropharynx	3	0.2	0.4	0.2	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Nasopharynx	29	1.7	3.6	2.7	0.2	0.3	14	0.8	1.6	1.2	0.1	0.1
Hypopharynx	7	0.4	0.8	0.6	0.0	0.1	1	0.1	0.1	0.0	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
Oesophagus	19	1.1	2.4	1.7	0.1	0.2	5	0.3	0.6	0.4	0.0	0.1
Stomach	63	3.6	7.7	5.7	0.3	0.7	51	2.8	5.9	4.1	0.2	0.5
Small intestine	3	0.2	0.4	0.3	0.0	0.0	3	0.1	0.3	0.2	0.0	0.0
Colon	84	4.8	10.2	7.5	0.5	0.9	81	4.6	9.4	6.3	0.4	0.7
Rectum	87	5.0	10.6	7.7	0.5	0.9	56	3.1	6.5	4.6	0.3	0.6
Anus	4	0.2	0.5	0.4	0.0	0.1	2	0.1	0.2	0.2	0.0	0.0
Liver and bile duct	377	21.7	45.8	33.1	2.3	3.9	153	8.6	17.7	11.8	0.8	1.3
Gallbladder	9	0.5	1.1	0.7	0.0	0.1	24	1.4	2.8	1.8	0.1	0.2
Pancreas	30	1.7	3.6	2.6	0.2	0.3	19	1.1	2.2	1.4	0.1	0.2
Nose, sinuses etc.	4	0.2	0.5	0.4	0.0	0.0	3	0.2	0.4	0.3	0.0	0.0
Larynx	22	1.3	2.7	2.0	0.1	0.2	3	0.2	0.3	0.2	0.0	0.0
Trachea, Bronchus and lung	373	21.5	45.4	33.4	1.6	4.4	278	15.6	32.2	22.2	1.1	2.9
Other thoracic organs	5	0.3	0.6	0.5	0.0	0.0	2	0.1	0.2	0.2	0.0	0.0
Bone	5	0.3	0.6	0.7	0.0	0.1	5	0.3	0.6	0.6	0.0	0.0
Melanoma of skin	6	0.3	0.7	0.5	0.0	0.1	5	0.3	0.6	0.4	0.0	0.0
Other skin	65	3.7	7.9	5.3	0.2	0.5	55	3.1	6.4	3.9	0.2	0.4
Mesothelioma	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Kaposi's sarcoma	2	0.1	0.3	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Connective tissue	9	0.5	1.1	0.9	0.1	0.1	8	0.4	0.9	0.6	0.1	0.1
Breast	10	0.6	1.3	0.9	0.1	0.1	337	18.9	39.2	27.4	2.3	3.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	6	0.4	0.7	0.5	0.0	0.1
Vagina	0	0.0	0.0	0.0	0.0	0.0	2	0.1	0.2	0.1	0.0	0.0
Cervix uteri							217	12.2	25.2	17.4	1.4	1.9
Corpus uteri							60	3.4	7.0	4.8	0.4	0.6
Uterus unspecified							1	0.1	0.1	0.1	0.0	0.0
Ovary							63	3.6	7.4	5.6	0.4	0.6
Other female genital organs							1	0.1	0.2	0.1	0.0	0.0
Placenta							2	0.1	0.2	0.2	0.0	0.0
Penis	17	1.0	2.0	1.5	0.1	0.2						
Prostate	93	5.4	11.4	7.7	0.2	0.9						
Testis	6	0.3	0.7	0.6	0.0	0.0						
Other male genital organs	1	0.0	0.1	0.1	0.0	0.0						
Kidney	23	1.3	2.8	2.2	0.1	0.3	13	0.7	1.5	1.3	0.1	0.1
Renal pelvis	1	0.1	0.1	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Ureter	3	0.2	0.3	0.2	0.0	0.0	2	0.1	0.2	0.1	0.0	0.0
Bladder	56	3.2	6.9	4.7	0.2	0.5	22	1.2	2.5	1.6	0.1	0.2
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
Eye	3	0.2	0.4	0.2	0.0	0.0	3	0.2	0.3	0.5	0.0	0.0
Brain, nervous system	24	1.4	2.9	2.8	0.2	0.3	20	1.1	2.3	2.0	0.1	0.1
Thyroid	13	0.7	1.5	1.2	0.1	0.1	40	2.2	4.6	3.6	0.3	0.3
Adrenal gland	1	0.0	0.1	0.2	0.0	0.0	2	0.1	0.2	0.3	0.0	0.0
Other endocrine	1	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Hodgkin disease	6	0.3	0.7	0.6	0.0	0.0	3	0.1	0.3	0.3	0.0	0.0
Non-Hodgkin lymphoma	74	4.3	9.0	7.2	0.4	0.8	64	3.6	7.5	5.2	0.3	0.5
Multiple myeloma	14	0.8	1.7	1.2	0.1	0.1	13	0.7	1.5	1.0	0.1	0.1
Lymphoid leukemia	12	0.7	1.4	1.9	0.1	0.1	5	0.3	0.6	0.9	0.0	0.1
Myeloid leukemia	33	1.9	4.0	3.3	0.2	0.3	25	1.4	2.9	2.5	0.2	0.2
Leukemia unspecified	2	0.1	0.2	0.2	0.0	0.0	3	0.2	0.4	0.2	0.0	0.0
Myelodysplastic disease	24	1.4	3.0	2.1	0.1	0.2	26	1.5	3.1	2.1	0.1	0.2
Other and unspecified	63	3.6	7.7	5.8	0.3	0.7	53	3.0	6.2	4.4	0.2	0.5
<b>All sites</b>	<b>1,738</b>	<b>100.0</b>	<b>211.3</b>	<b>156.7</b>	<b>9.1</b>	<b>18.4</b>	<b>1,781</b>	<b>100.0</b>	<b>206.7</b>	<b>144.9</b>	<b>9.7</b>	<b>16.2</b>

**Table 3.1.4** 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	127	96.9	0.0	74	98.6	0.0	C00-C08
Oropharynx	36	97.2	0.0	12	100.0	0.0	C09-C10,C14
Nasopharynx	88	97.7	0.0	41	97.6	0.0	C11
Hypopharynx	20	95.0	0.0	3	66.7	0.0	C12-C13
Esophagus	58	81.0	0.0	16	81.3	0.0	C15
Stomach	189	92.6	0.0	152	93.4	0.0	C16
Small intestine	9	66.7	11.1	8	75.0	0.0	C17
Colon and rectum	525	90.9	0.2	417	92.8	0.0	C18-C21
Liver and bile duct	1,130	18.0	1.3	458	26.2	2.8	C22,C24
Gallbladder	26	42.3	0.0	73	50.7	0.0	C23
pancreas	90	43.3	1.1	57	35.1	0.0	C25
Nose,sinuses etc	13	100.0	0.0	10	100.0	0.0	C30-C31
Larynx	67	83.6	3.0	9	88.9	11.1	C32
Trachea, brochus and lung	1,119	60.5	1.4	833	59.4	1.2	C33-C34
Other thoracic organs	15	73.3	0.0	5	100.0	0.0	C37-C38
Bone	15	73.3	13.3	15	86.7	0.0	C40-C41
Melanoma of skin	17	100.0	0.0	15	100.0	0.0	C43
Other skin	195	99.0	0.0	165	100.0	0.0	C44
Mesothelioma	3	66.7	0.0	0	0.0	0.0	C45
Kaposi sarcoma	7	100.0	0.0	1	100.0	0.0	C46
Connective and soft tissue	26	96.2	0.0	24	95.8	0.0	C47,C49
Breast	31	93.5	0.0	1,012	98.6	0.2	C50
Vulva				19	100.0	0.0	C51
Vagina				6	83.3	0.0	C52
Cervix uteri				651	98.3	0.5	C53
Corpus uteri				181	100.0	0.0	C54
Uterus unspecified				3	66.7	0.0	C55
Ovary				190	93.2	0.5	C56
Other female genital organs				4	100.0	0.0	C57
Placenta				6	66.7	0.0	C58
Penis	50	94.0	0.0				C60
Prostate	280	88.9	0.4				C61
Testis	18	100.0	0.0				C62
Other male genital organs	2	100.0	0.0				C63
Kidney	69	69.6	0.0	38	81.6	0.0	C64
Renal pelvis	3	66.7	0.0	3	100.0	0.0	C65
Ureter	8	62.5	12.5	6	100.0	0.0	C66
Bladder	169	92.3	0.0	65	96.9	0.0	C67
Other urinary organs	2	100.0	0.0	1	0.0	0.0	C68
Eye	9	100.0	0.0	9	88.9	0.0	C69
Brain, nervous system	71	71.8	4.2	59	55.9	6.8	C70-C72
Thyroid	38	100.0	0.0	120	94.2	0.0	C73
Adrenal gland	2	100.0	0.0	5	80.0	0.0	C74
Other endocrine	4	100.0	0.0	0	0.0	0.0	C75
Hodgkin disease	17	100.0	0.0	8	100.0	0.0	C81
Non-Hodgkin lymphoma	222	100.0	0.0	193	99.5	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	42	100.0	0.0	38	100.0	0.0	C90
Leukemia	139	100.0	0.0	100	100.0	0.0	C91-C95
Myelodysplastic	73	100.0	0.0	79	100.0	0.0	D45-D47
Other and unspecified	189	55.6	10.1	159	54.7	10.7	O&U
<b>All sites</b>	<b>5,213</b>	<b>67.0</b>	<b>1.2</b>	<b>5,343</b>	<b>82.0</b>	<b>1.0</b>	<b>All</b>

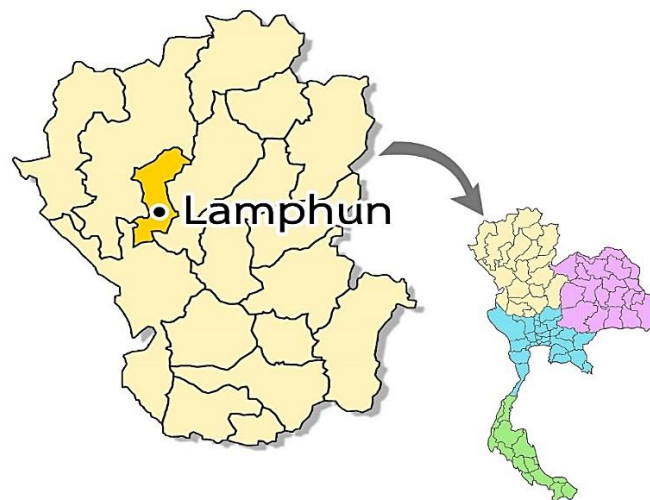
# Lamphun Cancer Registry

## Registration area

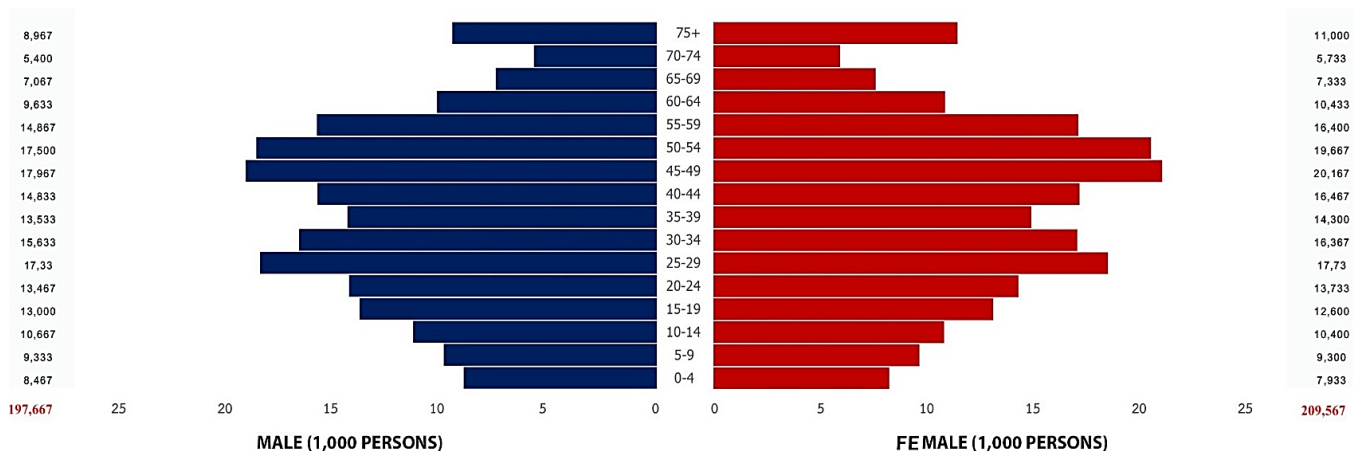
Lamphun is a small province among 17 provinces located in the northern region of Thailand, between 17.5°-18.5° N and 98°-99.3° E, It is 200-400 meters above sea level with land area of 4,505.08 square kilometers. It situated between Chiang Mai and Lampang. It has common boundary with Chiang Mai in the 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 total population in 2010 (housing census by National Statistics Office, Thailand) was 412,741 with 201,351 males and 211,390 females. The average population density is about 89.8 persons per square kilometer (National Statistics Office, Thailand, 2012).

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 2011 (average 2010-2012)



## **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 equipments and pathologist are not available, only cancer surgery 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 1:4,043. The ratio between registered nurses to population is 1:543 (Ministry of public Health, 2012).

## **Registry procedures**

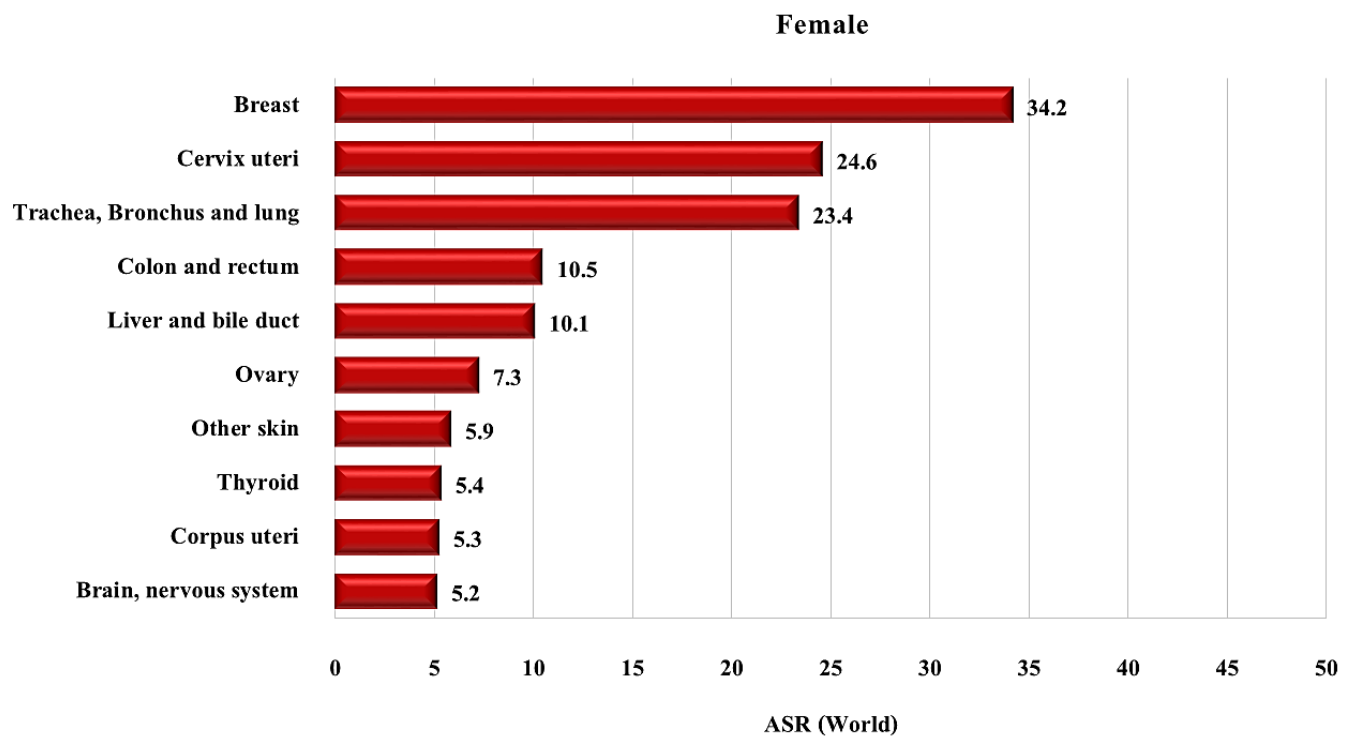
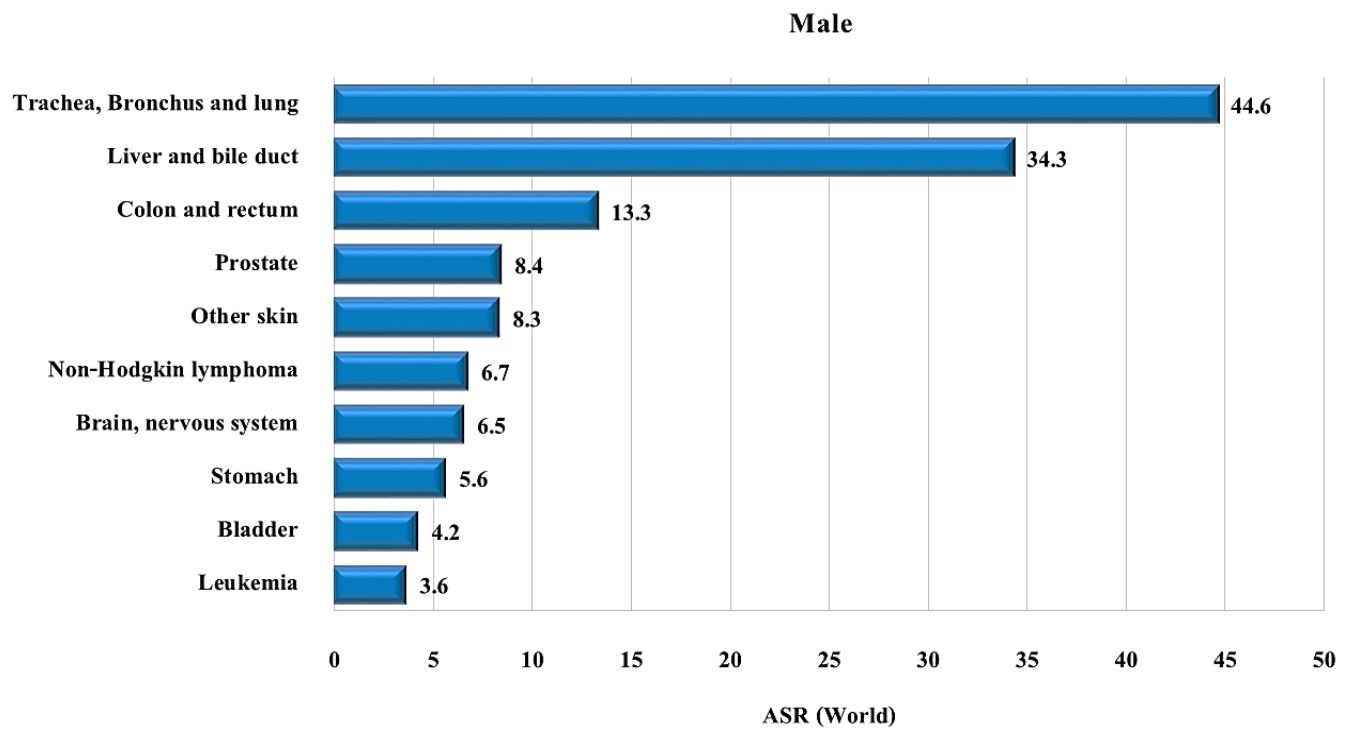
Population-based cancer registration of Lamphun province was established by Cancer Registry Unit of Lampang Cancer Hospital in 2004 with the back-up cancer data since 1983 to 1994 of all cancer cases in Lamphun province, which was collected by Dr. Nimit Martin, the expert consultant. All data on cancer 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 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 (*Fritz et al.*, 2000). Second primary cancer was also registered; a new registration number was given for each new primary cancer. 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, using Canreg 4 software for data entry and analysis.

## **Summary of Results**

New cases registered in 2011, 513 were males and 551 were females, making 1,064 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 175.9 per 100,000, with lung cancer ranking first (ASR = 44.6) followed by liver and bile duct (ASR = 34.3) and colon and rectum (ASR = 13.3). The ASR of all cancer sites in females was 171.5 per 100,000, the three leading cancer sites being breast (ASR = 34.2), cervix (ASR = 24.6) and lung (ASR = 23.4).

**Figure 3.2** Leading cancer in Lamphun, (mean annual ASR 2010-2012)



**Table 3.2.1** Lamphun (2011), Mean annual ASR per 100,000 (2010-2012) 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	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	0.3	0.2	C00	
Tongue	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	3.8	4.5	0.0	0.0	0.0	7.4	1.2	0.7	C01-02
Mouth	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	9.5	4.5	0.0	0.0	12.3	14.9	2.5	1.5	C03-06
Salivary glands	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.8	0.0	0.0	0.0	24.7	3.7	1.3	0.9	C07-08	
Tonsil	2	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	1.9	0.0	0.0	3.5	0.0	6.2	3.7	0.8	0.6	C09	
Nasopharynx	7	0.0	0.0	0.0	0.0	0.0	1.9	2.1	4.9	4.5	11.1	0.0	11.2	10.4	0.0	6.2	3.7	3.7	2.6	C11	
Hypopharynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.8	2.2	0.0	9.4	6.2	11.2	1.7	1.0	C12-13	
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	3.5	4.7	0.0	0.0	0.3	0.3	C14	
Oesophagus	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.2	3.7	9.5	6.7	6.9	9.4	6.2	11.2	3.4	2.2	C15	
Stomach	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	4.5	7.4	9.5	17.9	34.6	18.9	18.5	63.2	9.1	5.6	C16	
Small intestine	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.2	0.1	C17	
Colon	23	0.0	0.0	0.0	0.0	0.0	3.8	0.0	4.9	4.5	14.8	17.1	31.4	13.8	28.3	49.4	48.3	11.5	7.2	C18	
Rectum	18	0.0	0.0	0.0	0.0	0.0	1.9	4.3	2.5	2.2	7.4	11.4	17.9	27.7	23.6	55.6	33.5	9.1	6.0	C19-20	
Anus	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.2	0.1	C21	
Liver and bile duct	98	11.8	0.0	0.0	0.0	5.0	3.8	8.5	9.9	31.5	55.7	97.1	116.6	159.2	155.7	154.3	107.8	49.7	34.3	C22,C24	
Gallbladder	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	1.9	0.0	2.2	3.5	9.4	6.2	3.7	1.3	1.0	C23	
Pancreas	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.7	13.3	9.0	3.5	9.4	12.3	14.9	3.9	2.3	C25	
Nose, sinuses etc.	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	6.7	3.5	0.0	0.0	7.4	1.3	0.8	C30-31	
Larynx	10	0.0	0.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0	1.9	3.8	4.5	13.8	23.6	24.7	40.9	5.2	3.4	C32	
Trachea, Bronchus and lung	137	0.0	0.0	0.0	0.0	0.0	1.9	2.1	4.9	15.7	33.4	70.5	112.1	211.1	268.9	413.6	412.6	69.5	44.6	C33-34	
Other thoracic organs	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	0.0	4.7	0.0	0.0	0.3	0.2	C37-38	
Bone	3	0.0	0.0	0.0	5.1	0.0	0.0	2.1	0.0	2.2	0.0	5.7	0.0	0.0	0.0	0.0	3.7	1.3	1.1	C40-C41	
Melanoma of skin	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	0.0	0.0	0.0	3.7	0.3	0.2	C43	
Other skin	27	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.7	5.7	24.7	10.4	47.2	92.6	133.8	13.8	8.3	C44	
Mesothelioma	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	0.0	0.2	0.1	C45	
Kaposi's sarcoma	1	0.0	0.0	0.0	0.0	2.5	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	C46	
Connective tissue	1	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	4.7	0.0	0.0	0.5	0.7	C47,C49	
Breast	2	0.0	0.0	0.0	0.0	0.0	1.9	2.1	7.4	0.0	0.0	0.0	0.0	3.5	0.0	0.0	3.7	1.2	0.9	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	4	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.9	3.8	0.0	6.9	4.7	0.0	14.9	2.0	1.6	C60	
Prostate	26	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	1.9	11.2	17.3	94.3	92.6	119.0	13.3	8.4	C61	
Testis	5	0.0	3.6	0.0	2.6	2.5	5.8	2.1	2.5	2.2	3.7	0.0	2.2	0.0	0.0	0.0	7.4	2.4	2.1	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	6.2	0.0	0.2	0.1	C63	
Kidney	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	1.9	4.5	13.8	4.7	24.7	7.4	2.5	1.8	C64	
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	2.2	0.0	4.7	0.0	0.0	0.3	0.2	C65	
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	6.2	0.0	0.2	0.1	C66	
Bladder	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.2	0.0	1.9	6.7	24.2	33.0	37.0	40.9	6.2	4.2	C67	
Other urinary organs	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	0.0	0.0	0.0	0.2	0.1	C68	
Eye	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	6.2	0.0	0.3	0.2	C69	
Brain, nervous system	14	3.9	7.1	9.4	5.1	2.5	0.0	2.1	7.4	9.0	7.4	15.2	9.0	3.5	9.4	24.7	11.2	7.3	6.5	C70-72	
Thyroid	4	0.0	0.0	0.0	0.0	2.5	3.8	0.0	0.0	0.0	0.0	3.8	6.7	3.5	9.4	12.3	0.0	2.2	1.6	C73	
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	
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	3.7	0.2	0.1	C75	
Hodgkin disease	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.2	0.0	4.7	0.0	0.0	0.5	0.3	C81	
Non-Hodgkin lymphoma	17	3.9	3.6	6.2	0.0	5.0	3.8	0.0	7.4	2.2	3.7	3.8	17.9	13.8	33.0	24.7	40.9	8.4	6.7	C82-85,C96	
Multiple myeloma	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	3.5	4.7	0.0	7.4	1.0	0.7	C90	
Lymphoid leukemia	2	7.9	3.6	3.1	2.6	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	C91	
Myeloid leukemia	5	0.0	0.0	0.0	0.0	0.0	1.9	2.1	0.0	4.5	3.7	3.8	0.0	0.0	4.7	6.2	14.9	2.4	1.5	C92-94	
Leukemia 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	3.5	0.0	0.0	0.0	0.2	0.1	C95	
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	2.2	6.9	4.7	0.0	7.4	1.0	0.7	D45-D47	
Other and unspecified	26	3.9	7.1	0.0	2.6	2.5	1.9	4.3	7.4	4.5	7.4	11.4	38.1	20.8	56.6	49.4	44.6	13.2	9.7	O&U	
<b>All sites</b>	<b>513</b>	<b>39.4</b>	<b>28.6</b>	<b>18.8</b>	<b>17.9</b>	<b>24.8</b>	<b>34.6</b>	<b>38.4</b>	<b>73.9</b>	<b>107.9</b>	<b>183.7</b>	<b>327.6</b>	<b>477.6</b>	<b>629.8</b>	<b>886.8</b>	<b>1179.0</b>	<b>1256.5</b>	<b>259.4</b>	<b>175.9</b>	<b>ALL</b>	

**Table 3.2.2** Lamphun (2011), Mean annual ASR per 100,000 (2010-2012) 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	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	2.0	0.0	0.0	5.8	3.0	0.6	0.4	C00
Tongue	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	4.0	1.7	1.7	2.0	6.4	0.0	0.0	6.1	1.6	1.0	C01-02
Mouth	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.7	1.7	2.0	3.2	13.6	5.8	0.0	1.4	1.0	C03-06
Salivary glands	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C07-08
Tonsil	1	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3.0	0.5	0.5	C09
Nasopharynx	5	0.0	0.0	3.2	0.0	2.4	0.0	0.0	0.0	0.0	3.3	6.8	0.0	16.0	4.5	5.8	0.0	2.4	1.9	C11
Hypopharynx	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	0.0	0.0	0.0	0.2	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	3.2	9.1	0.0	3.0	0.8	0.5	C15
Stomach	10	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	4.0	8.3	1.7	6.1	6.4	18.2	17.4	24.2	4.8	2.9	C16
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	2.0	0.0	3.4	2.0	0.0	0.0	0.0	6.1	1.3	0.7	C17
Colon	24	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.3	0.0	9.9	18.6	24.4	44.7	27.3	29.1	48.5	11.5	6.9	C18
Rectum	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	11.6	5.1	8.1	19.2	18.2	11.6	18.2	5.6	3.5	C19-20
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	0.0	0.0	0.0	6.1	0.3	0.1	C21
Liver and bile duct	36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	4.0	13.2	27.1	36.6	31.9	59.1	52.3	93.9	17.3	10.1	C22,C24
Gallbladder	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	3.3	1.7	6.1	3.2	9.1	17.4	18.2	3.0	1.8	C23
Pancreas	5	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.3	0.0	3.3	0.0	2.0	6.4	9.1	17.4	9.1	2.4	1.6	C25
Nose, sinuses etc.	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	2.0	0.0	0.0	0.0	9.1	1.0	0.4	C30-31
Larynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.0	0.0	0.0	5.8	9.1	1.0	0.5	C32
Trachea, Bronchus and lung	78	0.0	0.0	0.0	0.0	0.0	0.0	6.1	11.7	2.0	19.8	25.4	56.9	92.7	168.2	244.2	190.9	37.4	23.4	C33-34
Other thoracic organs	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	3.2	4.5	0.0	0.0	0.5	0.4	C37-38
Bone	3	0.0	3.6	0.0	0.0	0.0	0.0	0.0	2.3	4.0	0.0	0.0	6.1	0.0	4.5	0.0	3.0	1.4	1.2	C40-C41
Melanoma of skin	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	2.0	0.0	9.1	0.0	3.0	0.8	0.5	C43
Other skin	21	4.2	0.0	3.2	0.0	0.0	1.9	0.0	2.3	0.0	1.7	5.1	6.1	25.6	13.6	34.9	106.1	10.0	5.9	C44
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
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
Connective tissue	2	0.0	0.0	0.0	0.0	0.0	1.9	2.0	0.0	0.0	1.7	1.7	2.0	0.0	0.0	5.8	3.0	1.1	0.7	C47,C49
Breast	109	0.0	0.0	0.0	0.0	7.3	5.6	10.2	32.6	81.0	100.8	125.4	81.3	105.4	118.2	75.6	42.4	51.9	34.2	C50
Vulva	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	2.0	0.0	1.7	2.0	0.0	0.0	0.0	0.0	0.8	0.6	C51
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.5	0.3	C52
Cervix uteri	82	0.0	0.0	0.0	0.0	2.4	0.0	6.1	32.6	54.7	77.7	71.2	101.6	63.9	63.6	46.5	57.6	39.0	24.6	C53
Corpus uteri	17	0.0	0.0	0.0	0.0	0.0	1.9	2.0	4.7	4.0	13.2	13.6	18.3	25.6	18.2	29.1	9.1	8.1	5.3	C54
Uterus unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	C55
Ovary	23	0.0	0.0	0.0	5.3	0.0	11.3	4.1	2.3	10.1	19.8	23.7	28.5	12.8	9.1	23.3	9.1	11.0	7.3	C56
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.3	0.2	C57
Placenta	0	0.0	0.0	0.0	0.0	2.4	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	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	3	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	6.8	0.0	6.4	0.0	5.8	3.0	1.4	1.0	C64
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	5.8	0.0	0.2	0.1	C65
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
Bladder	6	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	6.8	8.1	12.8	4.5	0.0	9.1	2.9	2.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	4.1	0.0	4.5	0.0	0.0	0.6	0.4	C69
Brain, nervous system	15	0.0	3.6	0.0	2.6	0.0	3.8	4.1	4.7	14.2	14.9	8.5	10.2	9.6	9.1	11.6	15.2	7.3	5.2	C70-72
Thyroid	15	0.0	0.0	0.0	2.6	9.7	1.9	12.2	4.7	6.1	8.3	6.8	6.1	9.6	27.3	11.6	18.2	7.3	5.4	C73
Adrenal gland	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.3	0.2	0.2	C74
Other endocrine	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	0.0	0.0	0.0	0.2	0.1	C75
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	0.0	0.0	0.0	0.0	0.0	C81
Non-Hodgkin lymphoma	14	0.0	0.0	0.0	2.6	2.4	3.8	8.1	2.3	6.1	0.0	11.9	12.2	12.8	22.7	11.6	18.2	6.7	4.6	C82-85,C96
Multiple myeloma	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	6.4	0.0	11.6	0.0	0.6	0.5	C90
Lymphoid leukemia	1	4.2	3.6	3.2	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	0.5	1.2	C91
Myeloid leukemia	5	0.0	0.0	0.0	0.0	2.4	1.9	4.1	0.0	2.0	1.7	3.4	8.1	0.0	0.0	5.8	6.1	2.4	1.5	C92-94
Leukemia unspecified	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	0.0	0.0	0.0	0.2	0.1	C95
Myelodysplastic disease	4	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.7	0.0	2.0	3.2	0.0	11.6	15.2	1.7	1.0	D45-D47
Other and unspecified	25	4.2	0.0	12.8	0.0	7.3	1.9	8.1	4.7	10.1	5.0	20.3	20.3	25.6	40.9	11.6	30.3	11.8	9.0	O&U
<b>All sites</b>	<b>551</b>	<b>16.8</b>	<b>10.8</b>	<b>25.6</b>	<b>13.2</b>	<b>38.8</b>	<b>37.6</b>	<b>79.4</b>	<b>128.2</b>	<b>222.7</b>	<b>335.5</b>	<b>413.6</b>	<b>471.5</b>	<b>555.9</b>	<b>690.9</b>	<b>715.1</b>	<b>800.0</b>	<b>262.8</b>	<b>171.5</b>	<b>ALL</b>

**Table 3.2.3** Mean annual incidence, Lamphun, 2010-2012

Site	Male						Female					
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate	
					0-64	0-74					0-64	0-74
					(per 100,000)						(percent)	
Lip	1	0.1	0.3	0.2	0.0	0.0	1	0.2	0.6	0.4	0.0	0.0
Tongue	2	0.5	1.2	0.7	0.1	0.1	3	0.6	1.6	1.0	0.1	0.1
Mouth	5	1.0	2.5	1.5	0.1	0.2	3	0.5	1.4	1.0	0.1	0.2
Salivary glands	3	0.5	1.3	0.9	0.0	0.2	0	0.0	0.0	0.0	0.0	0.0
Tonsil	2	0.3	0.8	0.6	0.0	0.1	1	0.2	0.5	0.5	0.0	0.0
Nasopharynx	7	1.4	3.7	2.6	0.2	0.3	5	0.9	2.4	1.9	0.2	0.2
Hypopharynx	3	0.7	1.7	1.0	0.0	0.1	0	0.1	0.2	0.1	0.0	0.0
Pharynx unspecified	1	0.1	0.3	0.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Oesophagus	7	1.3	3.4	2.2	0.2	0.2	2	0.3	0.8	0.5	0.0	0.1
Stomach	18	3.5	9.1	5.6	0.4	0.6	10	1.8	4.8	2.9	0.2	0.3
Small intestine	0	0.1	0.2	0.1	0.0	0.0	3	0.5	1.3	0.7	0.1	0.1
Colon	23	4.4	11.5	7.2	0.5	0.8	24	4.4	11.5	6.9	0.5	0.8
Rectum	18	3.5	9.1	6.0	0.4	0.8	12	2.1	5.6	3.5	0.3	0.4
Anus	0	0.1	0.2	0.1	0.0	0.0	1	0.1	0.3	0.1	0.0	0.0
Liver and bile duct	98	19.2	49.7	34.3	2.5	4.0	36	6.6	17.3	10.1	0.6	1.1
Gallbladder	3	0.5	1.3	1.0	0.1	0.1	6	1.2	3.0	1.8	0.1	0.2
Pancreas	8	1.5	3.9	2.3	0.2	0.3	5	0.9	2.4	1.6	0.1	0.2
Nose, sinuses etc.	3	0.5	1.3	0.8	0.1	0.1	2	0.4	1.0	0.4	0.0	0.0
Larynx	10	2.0	5.2	3.4	0.1	0.4	2	0.4	1.0	0.5	0.0	0.0
Trachea, Bronchus and lung	137	26.8	69.5	44.6	2.3	5.7	78	14.2	37.4	23.4	1.1	3.1
Other thoracic organs	1	0.1	0.3	0.2	0.0	0.0	1	0.2	0.5	0.4	0.0	0.0
Bone	3	0.5	1.3	1.1	0.1	0.1	3	0.5	1.4	1.2	0.1	0.1
Melanoma of skin	1	0.1	0.3	0.2	0.0	0.0	2	0.3	0.8	0.5	0.0	0.1
Other skin	27	5.3	13.8	8.3	0.3	1.0	21	3.8	10.0	5.9	0.3	0.5
Mesothelioma	0	0.1	0.2	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Kaposi's sarcoma	1	0.1	0.3	0.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Connective tissue	1	0.2	0.5	0.7	0.0	0.1	2	0.4	1.1	0.7	0.0	0.1
Breast	2	0.5	1.2	0.9	0.1	0.1	109	19.7	51.9	34.2	2.7	3.7
Vulva							2	0.3	0.8	0.6	0.1	0.1
Vagina							1	0.2	0.5	0.3	0.0	0.0
Cervix uteri							82	14.8	39.0	24.6	2.1	2.6
Corpus uteri							17	3.1	8.1	5.3	0.4	0.7
Uterus unspecified							1	0.1	0.3	0.2	0.0	0.0
Ovary							23	4.2	11.0	7.3	0.6	0.8
Other female genital organs							1	0.1	0.3	0.2	0.0	0.0
Placenta							0	0.1	0.2	0.2	0.0	0.0
Penis	4	0.8	2.0	1.6	0.1	0.1						
Prostate	26	5.1	13.3	8.4	0.2	1.1						
Testis	5	0.9	2.4	2.1	0.1	0.1						
Other male genital organs	0	0.1	0.2	0.1	0.0	0.0						
Kidney	5	1.0	2.5	1.8	0.1	0.3	3	0.5	1.4	1.0	0.1	0.1
Renal pelvis	1	0.1	0.3	0.2	0.0	0.0	0	0.1	0.2	0.1	0.0	0.0
Ureter	0	0.1	0.2	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Bladder	12	2.4	6.2	4.2	0.2	0.5	6	1.1	2.9	2.1	0.2	0.2
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
Eye	1	0.1	0.3	0.2	0.0	0.0	1	0.2	0.6	0.4	0.0	0.1
Brain, nervous system	14	2.8	7.3	6.5	0.4	0.6	15	2.8	7.3	5.2	0.4	0.5
Thyroid	4	0.8	2.2	1.6	0.1	0.2	15	2.8	7.3	5.4	0.3	0.5
Adrenal gland	0	0.0	0.0	0.0	0.0	0.0	1	0.1	0.3	0.2	0.0	0.0
Other endocrine	0	0.1	0.2	0.1	0.0	0.0	0	0.1	0.2	0.1	0.0	0.0
Hodgkin disease	1	0.2	0.5	0.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Non-Hodgkin lymphoma	17	3.3	8.4	6.7	0.4	0.6	14	2.5	6.7	4.6	0.3	0.5
Multiple myeloma	2	0.4	1.0	0.7	0.0	0.1	1	0.2	0.6	0.5	0.0	0.1
Lymphoid leukemia	2	0.4	1.0	2.0	0.1	0.1	1	0.2	0.5	1.2	0.1	0.1
Myeloid leukemia	5	0.9	2.4	1.5	0.1	0.1	5	0.9	2.4	1.5	0.1	0.1
Leukemia unspecified	0	0.1	0.2	0.1	0.0	0.0	0	0.1	0.2	0.1	0.0	0.0
Myelodysplastic disease	2	0.4	1.0	0.7	0.0	0.1	4	0.7	1.7	1.0	0.0	0.1
Other and unspecified	26	5.1	13.2	9.7	0.6	1.1	25	4.5	11.8	9.0	0.6	0.9
<b>All sites</b>	<b>513</b>	<b>100.0</b>	<b>259.4</b>	<b>175.9</b>	<b>10.0</b>	<b>20.3</b>	<b>551</b>	<b>100.0</b>	<b>262.8</b>	<b>171.5</b>	<b>11.7</b>	<b>18.8</b>

**Table 3.2.4** 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	32	84.4	3.1	23	78.3	4.3	C00-C08
Oropharynx	7	57.1	14.3	3	33.3	0.0	C09-C10,C14
Nasopharynx	22	72.7	4.5	15	46.7	0.0	C11
Hypopharynx	10	80.0	0.0	1	100.0	0.0	C12-C13
Esophagus	20	70.0	0.0	5	60.0	20.0	C15
Stomach	54	68.5	3.7	30	66.7	0.0	C16
Small intestine	1	0.0	0.0	8	75.0	0.0	C17
Colon and rectum	123	81.3	0.8	109	85.3	0.0	C18-C21
Liver and bile duct	295	13.2	18.3	109	13.8	18.3	C22,C24
Gallbladder	8	62.5	0.0	19	52.6	0.0	C23
pancrease	23	52.2	0.0	15	13.3	0.0	C25
Nose,sinuses etc	8	62.5	0.0	6	50.0	0.0	C30-C31
Larynx	31	61.3	6.5	6	16.7	0.0	C32
Trachea, brochus and lung	412	46.1	9.7	235	44.7	14.0	C33-C34
Other thoracic organs	2	100.0	0.0	3	33.3	0.0	C37-C38
Bone	8	37.5	37.5	9	33.3	33.3	C40-C41
Melanoma of skin	2	100.0	0.0	5	100.0	0.0	C43
Other skin	82	75.6	0.0	63	73.0	0.0	C44
Mesothelioma	1	100.0	0.0	0	0.0	0.0	C45
Kaposi sarcoma	2	100.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	3	66.7	33.3	7	85.7	0.0	C47,C49
Breast	7	57.1	0.0	326	80.1	1.5	C50
Vulva				5	60.0	0.0	C51
Vagina				3	100.0	0.0	C52
Cervix uteri				245	69.8	0.4	C53
Corpus uteri				51	84.3	0.0	C54
Uterus unspecified				2	0.0	100.0	C55
Ovary				69	50.7	1.4	C56
Other female genital organs				2	50.0	0.0	C57
Placenta				1	0.0	100.0	C58
Penis	12	58.3	0.0				C60
Prostate	79	49.4	1.3				C61
Testis	14	35.7	0.0				C62
Other male genital organs	1	0.0	0.0				C63
Kidney	15	60.0	0.0	9	44.4	0.0	C64
Renal pelvis	2	100.0	0.0	1	100.0	0.0	C65
Ureter	1	0.0	0.0	0	0.0	0.0	C66
Bladder	37	70.3	5.4	18	55.6	0.0	C67
Other urinary organs	1	0.0	0.0	0	0.0	0.0	C68
Eye	2	0.0	0.0	4	25.0	0.0	C69
Brain, nervous system	43	30.2	27.9	46	15.2	21.7	C70-C72
Thyroid	13	69.2	0.0	46	69.6	0.0	C73
Adrenal gland	0	0.0	0.0	2	0.0	50.0	C74
Other endocrine	1	0.0	100.0	1	0.0	0.0	C75
Hodgkin disease	3	100.0	0.0	0	0.0	0.0	C81
Non-Hodgkin lymphoma	50	100.0	0.0	42	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	6	100.0	0.0	4	100.0	0.0	C90
Leukemia	21	100.0	0.0	19	100.0	0.0	C91-C95
Myelodysplastic	6	100.0	0.0	11	100.0	0.0	D45-D47
Other and unspecified	78	15.4	34.6	74	10.8	21.6	O&U
<b>All sites</b>	<b>1,538</b>	<b>49.5</b>	<b>9.7</b>	<b>1,652</b>	<b>60.7</b>	<b>5.8</b>	<b>All</b>

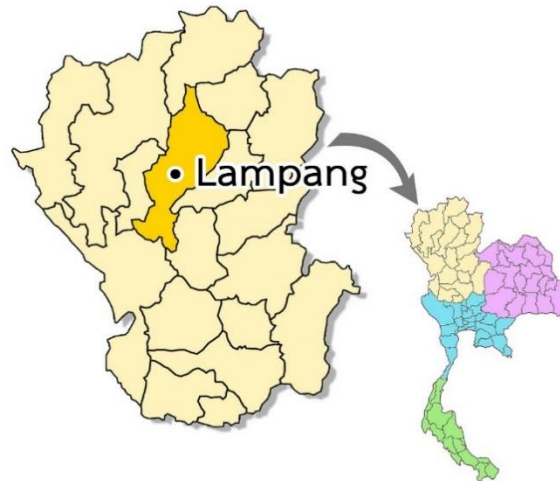
# Lampang Cancer Registry

## Registration area

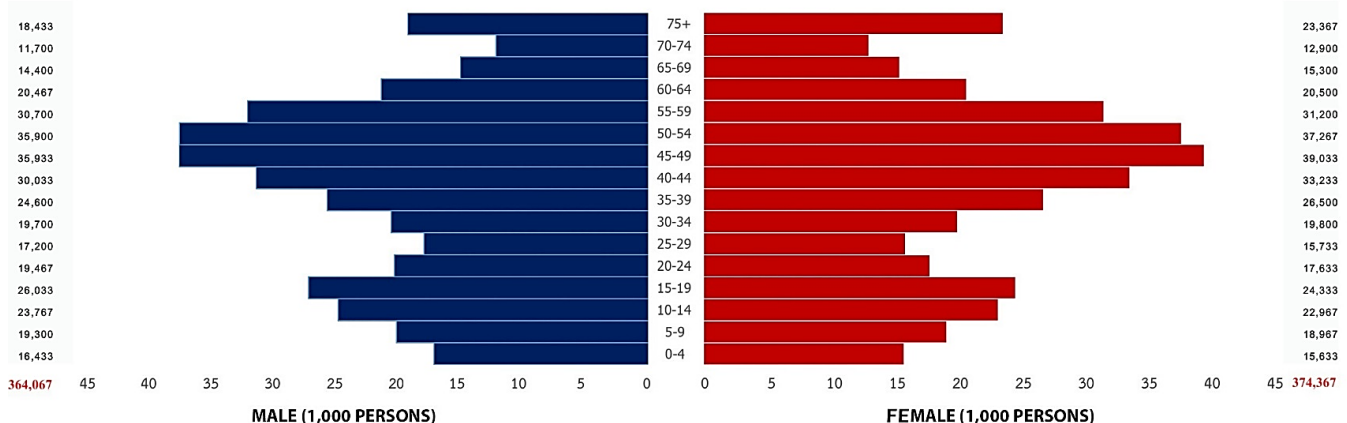
Lampang is one of the 17 provinces of the Northern region of Thailand, located at latitude 17-19 °N and longitude 98-100 °E. It is 268.8 meters above sea level with a land area of 12,534 km<sup>2</sup>. It has common boundary with Chiang Mai and Phayao in the north, Phare in the east, Tak and Sukhothai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

The total population in 2000 (housing census by National Statistics Office, Thailand) was 782,152, with 390,256 males and 391, 896 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 61.2 persons per square kilometer (National Statistics Office, Thailand, 2008).

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 2011 (average 2010-2012)



## 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 was available only in Lampang 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 Lampang Cancer hospital. All hospitals in the province provide palliative care. However, some patients are referred to National Cancer Institute, university hospital in Chiang Mai and Bangkok. The ratio of doctors to population is 1:2,499. The ratio between registered nurses to population is 1:405. (Ministry of public Health, 2012)

## Registry procedures

The registry unit is located within Lampang Cancer Hospital. The Lampang registry was established in 1995 with the back up 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.

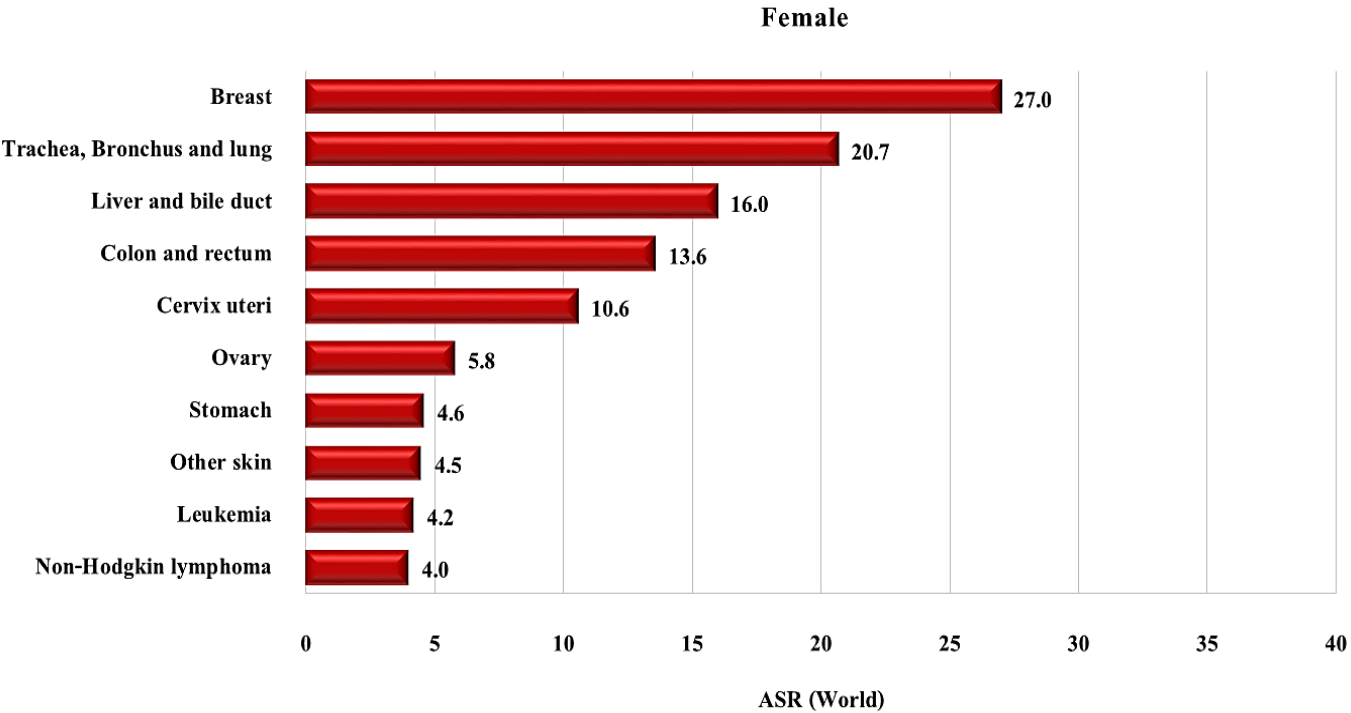
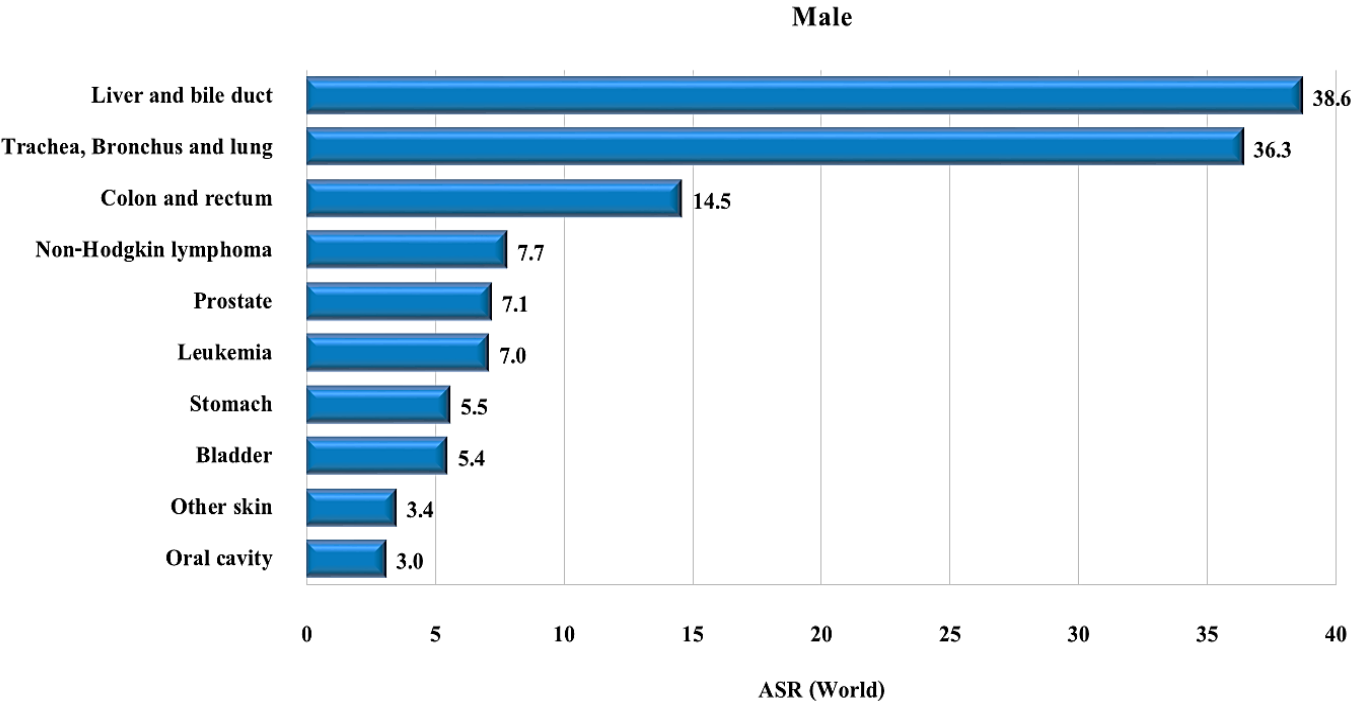
Data collection consists of: registry number, name, residential address, date of birth, age, sex, date of diagnosis, site of cancer, histology of cancer, staging, extension of disease, method of diagnosis, treatment, date of last contact and vital status of cancer patients. The primary site and histology were coded according to ICD-O 3<sup>rd</sup> edition (*Fritz et al.*, 2000). 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 were 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 CanReg 4 program for data entry and analysis.

## Summary of Results

New cases registered in 2011, 969 were males and 907 were females, making 1,876 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 161.4 per 100,000, with liver and bile duct cancer ranking first (ASR = 38.6) followed by lung (ASR = 36.3) and colon and rectum (ASR = 14.5). The ASR of all cancer sites in females was 143.2 per 100,000, the three leading cancer sites being breast (ASR = 27.0), lung (ASR = 20.7) and liver and bile duct (ASR = 16.0).

**Figure 3.3** Leading cancer in Lampang (mean annual ASR 2010-2012)



**Table 3.3.1** Lampung (2011), Mean annual ASR per 100,000 (2010-2012) 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	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	C00
Tongue	11	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.4	6.7	0.9	5.6	4.3	9.8	0.0	8.5	9.0	3.0	1.8	C01-02
Mouth	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	1.1	3.3	6.9	5.7	5.4	1.3	0.7	C03-06
Salivary glands	2	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.9	0.0	1.6	0.0	0.0	3.6	0.6	0.5	C07-08
Tonsil	2	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.4	0.0	0.9	0.9	1.1	0.0	0.0	2.8	1.8	0.6	0.4	C09
Other oropharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.9	0.0	1.1	0.0	0.0	2.8	0.0	0.5	0.3	C10
Nasopharynx	14	0.0	0.0	0.0	1.3	0.0	0.0	3.4	1.4	2.2	6.5	5.6	8.7	4.9	9.3	11.4	9.0	3.9	2.4	C11
Hypopharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.9	0.0	0.0	0.0	2.8	3.6	0.5	0.3		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	0.0	1.1	0.0	0.0	0.0	0.0	0.1	0.0	C14
Oesophagus	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	3.7	5.6	5.4	11.4	2.3	8.5	10.8	3.0	1.7	C15
Stomach	33	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	4.4	8.3	10.2	15.2	17.9	46.3	45.6	25.3	9.2	5.5	C16
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	1.6	4.6	8.5	0.0	0.5	0.4	C17
Colon	47	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.7	5.5	6.5	15.8	26.1	40.7	27.8	48.4	56.1	12.9	7.4	C18
Rectum	43	0.0	0.0	0.0	0.0	0.0	3.9	1.7	1.4	6.7	5.6	14.9	23.9	22.8	37.0	48.4	50.6	11.8	6.9	C19-20
Anus	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	4.6	0.0	1.8	0.4	0.2	C21
Liver and bile duct	238	0.0	0.0	0.0	0.0	1.7	5.8	16.9	27.1	34.4	66.8	93.8	130.3	156.4	148.1	216.5	217.0	65.4	38.6	C22,C24
Gallbladder	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.1	1.9	1.9	2.2	4.9	9.3	14.2	10.8	2.4	1.4	C23
Pancreas	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.1	5.6	2.8	9.8	14.7	18.5	5.7	19.9	4.6	2.7	C25
Nose, sinuses etc.	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.9	0.0	2.2	1.6	0.0	2.8	1.8	0.7	0.4	C30-31
Larynx	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.9	0.0	1.1	3.3	6.9	11.4	16.3	2.0	1.1	C32
Trachea, Bronchus and lung	230	0.0	0.0	0.0	1.3	0.0	3.9	5.1	12.2	11.1	15.8	43.6	82.5	136.8	261.6	350.4	368.9	63.1	36.3	C33-34
Other thoracic organs	3	0.0	3.5	0.0	1.3	0.0	1.9	0.0	0.0	0.0	0.0	0.9	1.1	1.6	2.3	0.0	0.0	0.7	0.8	C37-38
Bone	2	0.0	1.7	1.4	0.0	0.0	1.9	1.7	0.0	1.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	C40-C41
Melanoma of skin	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	4.9	0.0	0.0	5.4	0.7	0.4	C43
Other skin	23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.2	1.9	3.7	7.6	11.4	20.8	19.9	56.1	6.4	3.4	C44
Mesothelioma	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	0.0	0.1	0.0	C45
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	1.7	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	C46
Connective tissue	5	2.0	0.0	0.0	2.6	0.0	0.0	3.4	0.0	1.1	2.8	0.9	2.2	0.0	0.0	2.8	3.6	1.4	1.2	C47,C49
Breast	1	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	0.0	0.0	0.0	1.8	0.4	0.3	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	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.9	1.9	1.1	4.9	11.6	11.4	9.0	2.0	1.2	C60
Prostate	48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.9	18.5	21.2	48.6	94.0	101.3	13.1	7.1	C61
Testis	4	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	2.2	1.9	0.9	1.1	1.6	0.0	2.8	3.6	1.0	0.6	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	1.6	0.0	0.0	0.0	0.1	0.1	C63
Kidney	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.9	3.7	7.6	6.5	13.9	14.2	10.8	3.1	1.8	C64
Renal pelvis	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.1	4.9	2.3	2.8	5.4	1.0	0.6	C65
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.3	0.0	0.0	0.0	0.3	0.2	C66
Bladder	35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	3.3	4.6	5.6	11.9	29.3	32.4	31.3	65.1	9.6	5.4	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	0.0	0.0	0.0	0.0	0.0	1.8	0.1	0.0	C68
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	2.8	0.0	0.1	0.1	C69
Brain, nervous system	11	6.1	3.5	0.0	1.3	1.7	1.9	0.0	5.4	2.2	2.8	1.9	1.1	3.3	2.3	11.4	9.0	2.9	2.9	C70-72
Thyroid	5	0.0	0.0	0.0	0.0	0.0	1.9	0.0	2.7	2.2	0.9	1.9	2.2	0.0	2.3	2.8	5.4	1.4	0.9	C73
Adrenal gland	1	2.0	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	1.8	0.3	0.3	C74
Other endocrine	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	0.0	0.1	0.0	C75
Hodgkin disease	2	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.1	0.0	2.3	0.0	3.6	0.5	0.4	C81
Non-Hodgkin lymphoma	39	0.0	5.2	0.0	2.6	8.6	1.9	8.5	6.8	8.9	11.1	7.4	13.0	26.1	23.1	39.9	30.7	10.8	7.7	C82-85,C96
Multiple myeloma	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	2.2	4.9	9.3	8.5	16.3	2.1	1.2	C90
Lymphoid leukemia	3	4.1	3.5	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.6	0.0	5.7	1.8	0.9	1.2	C91
Myeloid leukemia	19	6.1	1.7	4.2	1.3	5.1	1.9	3.4	1.4	2.2	0.9	3.7	8.7	6.5	16.2	11.4	23.5	5.3	4.4	C92-94
Leukemia unspecified	6	0.0	1.7	1.4	1.3	0.0	3.9	0.0	1.4	1.1	0.9	1.9	1.1	1.6	2.3	2.8	7.2	1.6	1.4	C95
Myelodysplastic disease	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	2.3	2.8	0.0	0.3	0.2	D45-D47
Other and unspecified	45	0.0	0.0	0.0	0.0	1.7	0.0	5.1	4.1	7.8	5.6	5.6	20.6	40.7	41.7	62.7	45.2	12.4	7.6	O&U
<b>All sites</b>	<b>969</b>	<b>20.3</b>	<b>22.5</b>	<b>9.8</b>	<b>15.4</b>	<b>20.5</b>	<b>29.1</b>	<b>55.8</b>	<b>79.9</b>	<b>114.3</b>	<b>167.9</b>	<b>257.2</b>	<b>421.3</b>	<b>607.5</b>	<b>817.1</b>	<b>1125.4</b>	<b>1220.6</b>	<b>266.1</b>	<b>161.4</b>	<b>ALL</b>

**Table 3.3.2** Lampung (2011), Mean annual ASR per 100,000 (2010-2012) 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	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	3.3	2.2	5.2	1.4	0.5	0.3	C00
Tongue	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.9	1.1	1.6	0.0	7.8	5.7	1.0	0.5	C01-02
Mouth	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	2.7	0.0	3.3	6.5	7.8	10.0	1.7	0.9	C03-06
Salivary glands	2	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	5.2	2.9	0.5	0.4	C07-08
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.9	0.0	0.0	0.0	0.0	1.4	0.3	0.1	C09
Other oropharynx	1	0.0	0.0	0.0	1.4	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	C10
Nasopharynx	6	0.0	0.0	0.0	0.0	1.9	2.1	1.7	1.3	2.0	3.4	1.8	1.1	4.9	2.2	0.0	2.9	1.7	1.3	C11
Hypopharynx	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	3.3	0.0	0.0	2.9	0.4	0.2	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.9	1.1	0.0	2.2	0.0	5.7	0.7	0.3	C15
Stomach	30	0.0	0.0	0.0	0.0	0.0	2.1	1.7	3.8	9.0	7.7	8.9	10.7	9.8	24.0	28.4	25.7	7.9	4.6	C16
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	1.1	1.6	4.4	0.0	1.4	0.4	0.3	C17
Colon	50	0.0	0.0	0.0	2.7	0.0	0.0	3.4	1.3	4.0	8.5	13.4	27.8	40.7	30.5	51.7	44.2	13.4	7.5	C18
Rectum	37	0.0	0.0	0.0	1.4	5.7	0.0	0.0	2.5	1.0	7.7	10.7	17.1	26.0	28.3	36.2	35.7	10.0	5.8	C19-20
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	3.3	0.0	0.0	2.9	0.5	0.3	C21
Liver and bile duct	107	0.0	0.0	0.0	0.0	1.9	4.2	5.1	6.3	11.0	17.9	27.7	48.1	84.6	76.3	95.6	111.3	28.6	16.0	C22,C24
Gallbladder	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.7	5.4	2.1	13.0	8.7	23.3	22.8	4.3	2.2	C23
Pancreas	18	0.0	0.0	0.0	1.4	0.0	0.0	1.7	0.0	1.0	1.7	2.7	13.9	6.5	19.6	20.7	18.5	4.9	2.7	C25
Nose, sinuses etc.	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	2.9	0.3	0.1	C30-31
Larynx	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.6	2.2	12.9	5.7	1.1	0.6	C32
Trachea, Bronchus and lung	138	0.0	0.0	0.0	0.0	0.0	4.2	3.4	2.5	7.0	13.7	20.6	39.5	125.2	143.8	178.3	161.2	36.9	20.7	C33-34
Other thoracic organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.2	0.1	C37-38
Bone	2	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	3.3	0.0	0.0	1.4	0.4	0.3	C40-C41
Melanoma of skin	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	2.1	3.3	0.0	0.0	4.3	0.7	0.4	C43
Other skin	35	0.0	0.0	0.0	0.0	1.9	0.0	3.4	1.3	0.0	4.3	9.8	11.8	11.4	19.6	23.3	68.5	9.3	4.5	C44
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	5	0.0	0.0	0.0	1.4	0.0	0.0	3.4	0.0	2.0	0.9	2.7	1.1	1.6	2.2	5.2	2.9	1.4	1.0	C47,C49
Breast	169	0.0	0.0	0.0	0.0	0.0	8.5	13.5	28.9	60.2	89.7	86.8	69.4	74.8	63.2	95.6	45.6	45.1	27.0	C50
Vulva	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.2	0.1	C51
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	2.6	1.4	0.3	0.1	C52
Cervix uteri	63	0.0	0.0	0.0	0.0	1.9	6.4	8.4	15.1	20.1	27.3	30.4	21.4	30.9	28.3	36.2	24.3	16.9	10.6	C53
Corpus uteri	23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	4.0	8.5	7.2	21.4	19.5	13.1	2.6	7.1	6.1	3.6	C54
Uterus unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.9	1.1	0.0	0.0	0.0	0.0	0.4	0.2	C55
Ovary	32	0.0	0.0	1.5	4.1	0.0	6.4	5.1	8.8	8.0	7.7	12.5	10.7	19.5	13.1	20.7	17.1	8.5	5.8	C56
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	0.9	1.1	0.0	0.0	2.6	0.0	0.4	0.2	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	1.1	0.0	0.0	0.0	0.0	0.1	0.0	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	8	4.3	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.9	1.8	3.2	6.5	6.5	10.3	4.3	2.0	1.6	C64
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	1.6	2.2	0.0	5.7	0.5	0.2	C65
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	1.4	0.2	0.1	C66
Bladder	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	7.5	1.6	13.1	12.9	18.5	3.0	1.5	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	0.0	0.0	1.6	0.0	0.0	0.0	0.1	0.1	C68
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	2.6	1.4	0.2	0.1	C69
Brain, nervous system	10	2.1	1.8	1.5	0.0	1.9	2.1	0.0	3.8	3.0	0.9	3.6	2.1	3.3	4.4	12.9	4.3	2.7	2.2	C70-72
Thyroid	20	0.0	0.0	0.0	2.7	0.0	4.2	11.8	3.8	5.0	4.3	5.4	6.4	4.9	8.7	12.9	15.7	5.3	3.6	C73
Adrenal gland	0	2.1	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	0.3	C74
Other endocrine	1	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.2	0.2	C75
Hodgkin disease	1	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.3	0.2	C81
Non-Hodgkin lymphoma	25	0.0	0.0	1.5	0.0	0.0	2.1	1.7	6.3	2.0	6.0	8.1	6.4	9.8	26.1	23.3	22.8	6.7	4.0	C82-85,C96
Multiple myeloma	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.9	2.1	4.9	0.0	7.8	2.9	1.3	0.7	C90
Lymphoid leukemia	3	2.1	1.8	0.0	1.4	0.0	0.0	0.0	1.3	1.0	1.7	0.9	0.0	0.0	0.0	0.0	1.4	0.8	0.9	C91
Myeloid leukemia	13	0.0	0.0	2.9	2.7	1.9	0.0	3.4	1.3	1.0	3.4	5.4	4.3	8.1	2.2	12.9	7.1	3.5	2.4	C92-94
Leukemia unspecified	4	0.0	0.0	0.0	0.0	3.8	0.0	1.7	1.3	1.0	0.9	1.8	2.1	0.0	2.2	0.0	1.4	1.1	0.9	C95
Myelodysplastic disease	1	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	1.8	0.0	1.6	0.0	0.0	0.0	0.4	0.3	D45-D47
Other and unspecified	34	2.1	0.0	0.0	0.0	0.0	0.0	1.7	3.8	2.0	2.6	6.3	13.9	22.8	24.0	28.4	49.9	9.0	4.9	O&U
<b>All sites</b>	<b>907</b>	<b>12.8</b>	<b>3.5</b>	<b>10.2</b>	<b>19.2</b>	<b>20.8</b>	<b>50.8</b>	<b>72.4</b>	<b>100.6</b>	<b>149.4</b>	<b>230.6</b>	<b>290.7</b>	<b>355.8</b>	<b>561.0</b>	<b>579.5</b>	<b>785.5</b>	<b>774.6</b>	<b>242.4</b>	<b>143.2</b>	<b>ALL</b>

**Table 3.3.3** Mean annual incidence, Lampung, 2010-2012

Site	Male						Female					
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate	
					0-64	0-74					0-64	0-74
			(per 100,000)		(percent)			(per 100,000)		(percent)		
Lip	0	0.0	0.1	0.0	0.0	0.0	2	0.2	0.5	0.3	0.0	0.1
Tongue	11	1.1	3.0	1.8	0.2	0.2	4	0.4	1.0	0.5	0.0	0.1
Mouth	5	0.5	1.3	0.7	0.0	0.1	6	0.7	1.7	0.9	0.0	0.1
Salivary glands	2	0.2	0.6	0.5	0.0	0.0	2	0.2	0.5	0.4	0.0	0.0
Tonsil	2	0.2	0.6	0.4	0.0	0.0	1	0.1	0.3	0.1	0.0	0.0
Other oropharynx	2	0.2	0.5	0.3	0.0	0.0	1	0.1	0.2	0.3	0.0	0.0
Nasopharynx	14	1.5	3.9	2.4	0.2	0.3	6	0.7	1.7	1.3	0.1	0.1
Hypopharynx	2	0.2	0.5	0.3	0.0	0.0	2	0.2	0.4	0.2	0.0	0.0
Pharynx unspecified	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Oesophagus	11	1.1	3.0	1.7	0.1	0.2	3	0.3	0.7	0.3	0.0	0.0
Stomach	33	3.4	9.2	5.5	0.3	0.7	30	3.3	7.9	4.6	0.3	0.5
Small intestine	2	0.2	0.5	0.4	0.0	0.1	2	0.2	0.4	0.3	0.0	0.0
Colon	47	4.9	12.9	7.4	0.5	0.9	50	5.5	13.4	7.5	0.5	0.9
Rectum	43	4.4	11.8	6.9	0.4	0.8	37	4.1	10.0	5.8	0.4	0.7
Anus	1	0.1	0.4	0.2	0.0	0.0	2	0.2	0.5	0.3	0.0	0.0
Liver and bile duct	238	24.6	65.4	38.6	2.7	4.5	107	11.8	28.6	16.0	1.0	1.9
Gallbladder	9	0.9	2.4	1.4	0.1	0.2	16	1.8	4.3	2.2	0.1	0.3
Pancreas	17	1.7	4.6	2.7	0.2	0.3	18	2.0	4.9	2.7	0.1	0.3
Nose, sinuses etc.	3	0.3	0.7	0.4	0.0	0.0	1	0.1	0.3	0.1	0.0	0.0
Larynx	7	0.8	2.0	1.1	0.0	0.1	4	0.4	1.1	0.6	0.0	0.1
Trachea, Bronchus and lung	230	23.7	63.1	36.3	1.6	4.6	138	15.2	36.9	20.7	1.1	2.7
Other thoracic organs	3	0.3	0.7	0.8	0.1	0.1	1	0.1	0.2	0.1	0.0	0.0
Bone	2	0.2	0.5	0.7	0.0	0.0	2	0.2	0.4	0.3	0.0	0.0
Melanoma of skin	3	0.3	0.7	0.4	0.0	0.0	3	0.3	0.7	0.4	0.0	0.0
Other skin	23	2.4	6.4	3.4	0.1	0.3	35	3.8	9.3	4.5	0.2	0.4
Mesothelioma	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
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
Connective tissue	5	0.5	1.4	1.2	0.1	0.1	5	0.6	1.4	1.0	0.1	0.1
Breast	1	0.1	0.4	0.3	0.0	0.0	169	18.6	45.1	27.0	2.2	3.0
Vulva							1	0.1	0.2	0.1	0.0	0.0
Vagina							1	0.1	0.3	0.1	0.0	0.0
Cervix uteri							63	7.0	16.9	10.6	0.8	1.1
Corpus uteri							23	2.5	6.1	3.6	0.3	0.4
Uterus unspecified							1	0.1	0.4	0.2	0.0	0.0
Ovary							32	3.5	8.5	5.8	0.4	0.6
Other female genital organs							1	0.1	0.4	0.2	0.0	0.0
Placenta							0	0.0	0.1	0.0	0.0	0.0
Penis	7	0.8	2.0	1.2	0.1	0.2						
Prostate	48	4.9	13.1	7.1	0.2	0.9						
Testis	4	0.4	1.0	0.6	0.0	0.1						
Other male genital organs	0	0.0	0.1	0.1	0.0	0.0						
Kidney	11	1.2	3.1	1.8	0.1	0.2	8	0.8	2.0	1.6	0.1	0.2
Renal pelvis	4	0.4	1.0	0.6	0.0	0.1	2	0.2	0.5	0.2	0.0	0.0
Ureter	1	0.1	0.3	0.2	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0
Bladder	35	3.6	9.6	5.4	0.3	0.6	11	1.2	3.0	1.5	0.1	0.2
Other urinary organs	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0
Eye	0	0.0	0.1	0.1	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0
Brain, nervous system	11	1.1	2.9	2.9	0.2	0.2	10	1.1	2.7	2.2	0.1	0.2
Thyroid	5	0.5	1.4	0.9	0.1	0.1	20	2.2	5.3	3.6	0.2	0.4
Adrenal gland	1	0.1	0.3	0.3	0.0	0.0	0	0.0	0.1	0.3	0.0	0.0
Other endocrine	0	0.0	0.1	0.0	0.0	0.0	1	0.1	0.2	0.2	0.0	0.0
Hodgkin disease	2	0.2	0.5	0.4	0.0	0.0	1	0.1	0.3	0.2	0.0	0.0
Non-Hodgkin lymphoma	39	4.1	10.8	7.7	0.5	0.8	25	2.8	6.7	4.0	0.2	0.5
Multiple myeloma	8	0.8	2.1	1.2	0.0	0.1	5	0.6	1.3	0.7	0.1	0.1
Lymphoid leukemia	3	0.3	0.9	1.2	0.1	0.1	3	0.3	0.8	0.9	0.1	0.1
Myeloid leukemia	19	2.0	5.3	4.4	0.2	0.4	13	1.4	3.5	2.4	0.2	0.2
Leukemia unspecified	6	0.6	1.6	1.4	0.1	0.1	4	0.4	1.1	0.9	0.1	0.1
Myelodysplastic disease	1	0.1	0.3	0.2	0.0	0.0	1	0.1	0.4	0.3	0.0	0.0
Other and unspecified	45	4.6	12.4	7.6	0.5	1.0	34	3.7	9.0	4.9	0.3	0.5
<b>All sites</b>	<b>969</b>	<b>100.0</b>	<b>266.1</b>	<b>161.4</b>	<b>9.1</b>	<b>18.8</b>	<b>907</b>	<b>100.0</b>	<b>242.4</b>	<b>143.2</b>	<b>9.4</b>	<b>16.2</b>

**Table 3.3.4** Percentage of morphologically verified and death certificate only cases, Lampung

Site	Male			Female		
	Cases 3 Year	% MV	% DCO	Cases 3 Year	% MV	% DCO
Oral cavity	55	94.5	0.0	42	95.2	0.0
Oropharynx	13	100.0	0.0	5	40.0	20.0
Nasopharynx	43	88.4	0.0	19	68.4	5.3
Hypopharynx	6	83.3	0.0	5	100.0	0.0
Esophagus	33	84.8	3.0	8	87.5	0.0
Stomach	100	87.0	1.0	89	94.4	0.0
Small intestine	6	100.0	0.0	5	100.0	0.0
Colon and rectum	274	87.2	0.0	268	85.8	1.1
Liver and bile duct	714	16.7	1.5	321	23.1	0.9
Gallbladder	26	46.2	0.0	48	56.3	0.0
pancrease	50	40.0	0.0	55	38.2	0.0
Nose,sinuses etc	8	100.0	0.0	3	66.7	0.0
Larynx	22	86.4	0.0	12	83.3	0.0
Trachea, brochus and lung	689	58.8	1.2	414	61.4	0.7
Other thoracic organs	8	87.5	0.0	2	100.0	0.0
Bone	6	100.0	0.0	5	60.0	0.0
Melanoma of skin	8	100.0	0.0	8	100.0	0.0
Other skin	70	98.6	0.0	104	94.2	0.0
Mesothelioma	1	100.0	0.0	0	0.0	0.0
Kaposi sarcoma	1	0.0	0.0	0	0.0	0.0
Connective and soft tissue	15	93.3	0.0	16	87.5	0.0
Breast	4	100.0	0.0	506	94.5	0.4
Vulva				2	100.0	0.0
Vagina				3	100.0	0.0
Cervix uteri				190	88.4	0.0
Corpus uteri				69	98.6	0.0
Uterus unspecified				4	75.0	0.0
Ovary				96	80.2	0.0
Other female genital organs				4	100.0	0.0
Placenta				1	100.0	0.0
Penis	22	100.0	0.0			
Prostate	143	86.0	0.7			
Testis	11	54.5	0.0			
Other male genital organs	1	100.0	0.0			
Kidney	34	70.6	0.0	23	69.6	0.0
Renal pelvis	11	90.9	0.0	6	66.7	0.0
Ureter	3	100.0	0.0	2	100.0	0.0
Bladder	105	93.3	0.0	34	79.4	0.0
Other urinary organs	1	100.0	0.0	1	100.0	0.0
Eye	1	100.0	0.0	2	50.0	0.0
Brain, nervous system	32	62.5	6.3	30	46.7	6.7
Thyroid	15	80.0	0.0	59	84.7	0.0
Adrenal gland	3	66.7	0.0	1	0.0	0.0
Other endocrine	1	0.0	0.0	2	0.0	0.0
Hodgkin disease	6	100.0	0.0	3	100.0	0.0
Non-Hodgkin lymphoma	118	100.0	0.0	75	100.0	0.0
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0
Multiple myeloma	23	100.0	0.0	15	100.0	0.0
Leukemia	86	100.0	0.0	60	100.0	0.0
Myelodysplastic	3	100.0	0.0	4	100.0	0.0
Other and unspecified	135	39.3	3.7	101	31.7	4.0
<b>All sites</b>	<b>2,906</b>	<b>61.0</b>	<b>1.0</b>	<b>2,722</b>	<b>73.7</b>	<b>0.7</b>

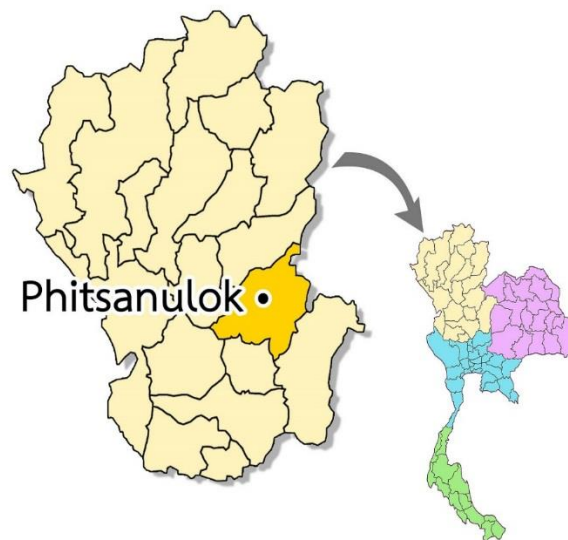
# Phitsanulok Cancer Registry

## Registration area

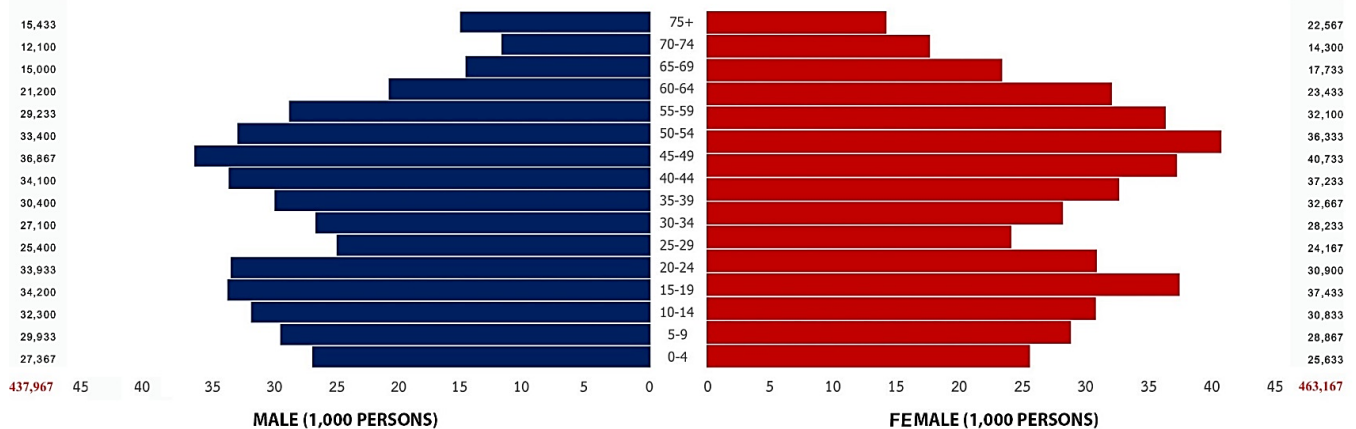
Phitsanulok is in the lower part of Northern Thailand with the land area of 10,815.8 square kilometers. It is located between 16.5°-17.5° N and 100°-101° E. Phitsanulok has common boundary with Uttradit and Loa People's Democratic Republic in the north, Loei and Phetchabun in the east, Phichit, and Kamphaeng Phet in the south and Sukhothai in the west. Phitsanulok population based cancer registry covers the population of 9 districts.

The total population in 2010 (housing census by National Statistics Office, Thailand) was 912,827 with 445,505 males and 467,322 females. The average population density is about 78.9 persons per square kilometer (National Statistics Office, Thailand, 2012).

The most important occupations are farming of rice, corn and cassava. In addition, other occupations are commercial, fishery, mineral resources and industry.



Population pyramid, Phitsanulok  
estimated population in 2011 (average 2010-2012)



## **Cancer care facilities**

The total number of hospitals in Phitsanulok province was 18 hospitals composed of 1 provincial hospital, 9 community hospitals, 6 private hospitals, 1 military hospital and 1 university hospital. Cancer diagnostic services including radiological (X-ray, ultrasound, CT Scan and mammography), pathological investigations and cancer surgery services are available in Phitsanulok provincial hospital. Cancer diagnostic and cancer chemotherapy are provided in Phitsanulok provincial hospital but cancer radiotherapy equipments are available in only private hospital. Most of the cancer patients were diagnosed and treated in the province. Only few patients referred to Lampang Cancer Center, Chiang Mai University hospital and Bangkok for cancer diagnosis or cancer treatment. All hospitals in the province provide palliative care. The ratio of doctors to population is 1:1,443. The ratio between registered nurses to population is 1:404. (Ministry of public Health, 2012)

## **Registry procedures**

Population-based cancer registration of Phitsanulok province was established by Cancer Registry Unit of Lampang Cancer Hospital in 2004. All data on cancer patients were collected by passive methods with notification by the staff of Phitsanulok provincial hospital, 5 private hospitals, two military hospitals, one university hospital and 8 community hospitals which under supervision of Phitsanulok Provincial Public Health Service. Including notified some information from Cancer Registry Unit of Chiang Mai University Hospital and Lampang Cancer Hospital. 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 were carried out by passive methods with linking database of National Health Security office.

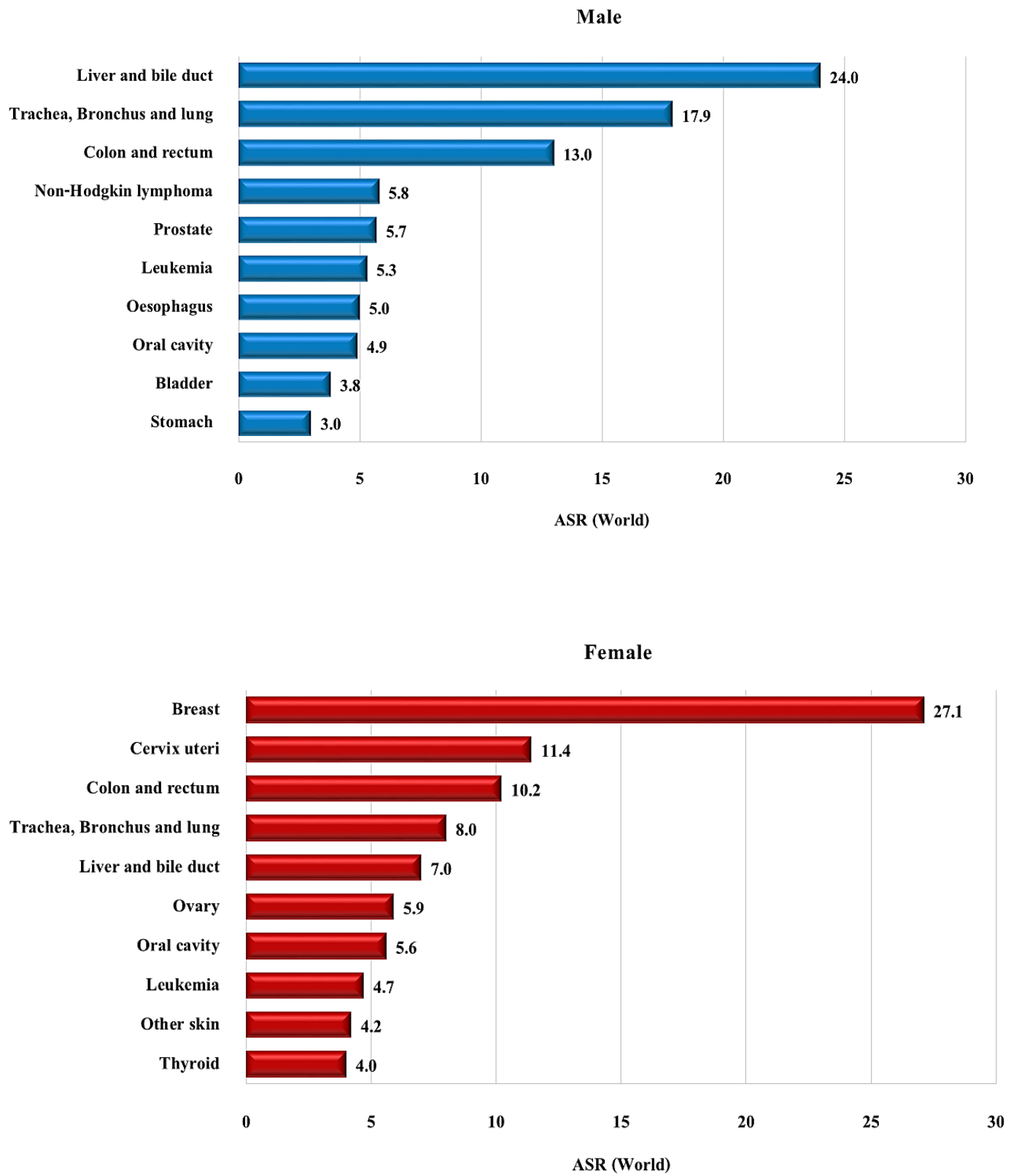
The primary site and histology were coded according to ICD-O third edition (*Fritz et al.*, 2000). Second primary cancer was also registered; a new registration number was given for each new primary cancer. All death certificates are matched with the incidence case records of the registry. Death certificates were obtained from Bureau of Policy and Strategy, Ministry of Public Health.

The completed data forms were checked manually, and entered into the database file in a personal computer at Cancer Registry Unit of Lampang Cancer Hospital, using Canreg 4 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 2011, 729 were males and 802 were females, making 1,531 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 122.2 per 100,000, with liver and bile duct cancer ranking first (ASR = 24.0) followed by lung (ASR = 17.9) and colon and rectum (ASR = 13.0). The ASR of all cancer sites in females was 121.9 per 100,000, the three leading cancer sites being breast (ASR = 27.1), cervix (ASR = 11.4) and colon and rectum (ASR = 10.2).

**Figure 3.4** Leading cancer in Phitsanulok (mean annual ASR 2010-2012)



**Table 3.4.1** Phitsanulok (2011), Mean annual ASR per 100,000 (2010-2012) 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	0	0.0	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	0.1	0.1	C00
Tongue	11	0.0	0.0	0.0	1.9	0.0	1.3	0.0	1.1	2.9	4.5	4.0	3.4	7.9	6.7	8.3	8.6	2.6	2.0	C01-02
Mouth	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.0	5.4	8.0	6.8	9.4	13.3	2.8	17.3	3.4	2.4	C03-06
Salivary glands	2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.0	0.0	0.0	2.3	1.6	0.0	2.8	2.2	0.5	0.4	C07-08
Tonsil	6	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	4.5	4.0	2.3	3.1	0.0	2.8	6.5	1.4	1.0	C09
Other oropharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	1.0	0.0	1.6	0.0	2.8	0.0	0.4	0.3	C10
Nasopharynx	10	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.2	1.0	4.5	3.0	4.6	6.3	6.7	5.5	8.6	2.3	1.7	C11
Hypopharynx	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.9	3.6	6.0	11.4	4.7	6.7	5.5	2.2	2.5	1.8	C12-13
Pharynx unspecified	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	0.0	0.1	0.1	C14
Oesophagus	32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	4.9	12.7	14.0	28.5	20.4	11.1	16.5	25.9	7.3	5.0	C15
Stomach	18	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.1	5.9	4.5	9.0	4.6	4.7	17.8	19.3	23.8	4.2	3.0	C16
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	6.5	0.6	0.4	C17
Colon	45	0.0	0.0	0.0	0.0	0.0	1.3	0.0	2.2	5.9	9.9	11.0	18.2	26.7	51.1	63.4	51.8	10.2	7.4	C18
Rectum	33	0.0	0.0	0.0	0.0	1.0	0.0	3.7	3.3	5.9	3.6	12.0	10.3	26.7	28.9	46.8	30.2	7.5	5.6	C19-20
Anus	0	0.0	0.0	0.0	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	0.1	0.0	C21
Liver and bile duct	146	0.0	1.1	0.0	0.0	0.0	3.9	9.8	15.4	25.4	48.8	56.9	92.4	103.8	93.3	104.7	101.5	33.3	24.0	C22,C24
Gallbladder	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.6	2.2	5.5	8.6	0.8	0.5	C23
Pancreas	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.7	4.0	3.4	3.1	2.2	22.0	6.5	2.0	1.4	C25
Nose, sinuses etc.	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	2.2	0.0	0.0	0.2	0.1	C30-31
Larynx	14	0.0	1.1	0.0	0.0	1.0	0.0	0.0	0.0	2.0	1.8	3.0	9.1	6.3	6.7	19.3	23.8	3.2	2.2	C32
Trachea, Bronchus and lung	113	0.0	0.0	0.0	0.0	2.0	0.0	3.7	3.3	6.8	14.5	27.9	41.0	72.3	80.0	179.1	207.3	25.7	17.9	C33-34
Other thoracic organs	1	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	2.8	0.0	0.2	0.1	C37-38
Bone	5	1.2	1.1	1.0	0.0	1.0	0.0	1.2	1.1	0.0	0.9	2.0	2.3	1.6	0.0	2.8	6.5	1.2	1.1	C40-C41
Melanoma of skin	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.0	1.1	0.0	2.2	2.8	2.2	0.5	0.3	C43
Other skin	16	0.0	0.0	0.0	0.0	1.0	2.6	0.0	1.1	2.0	2.7	3.0	3.4	12.6	6.7	19.3	30.2	3.6	2.6	C44
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	2.2	0.1	0.0	C45
Connective tissue	6	1.2	0.0	0.0	1.0	0.0	0.0	0.0	1.1	0.0	0.9	2.0	3.4	4.7	6.7	5.5	2.2	1.4	1.1	C47,C49
Breast	5	1.2	0.0	0.0	1.9	0.0	0.0	0.0	1.1	1.0	1.8	2.0	1.1	1.6	0.0	2.8	8.6	1.2	1.0	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	7	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.0	4.6	11.0	4.4	8.3	6.5	1.6	1.2	C60
Prostate	37	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.7	3.0	9.1	23.6	35.6	46.8	99.4	8.4	5.7	C61
Testis	2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.6	2.2	0.0	2.2	0.4	0.4	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	1.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C63
Kidney	9	2.4	0.0	0.0	0.0	0.0	1.3	1.2	0.0	2.0	0.0	4.0	1.1	15.7	4.4	0.0	8.6	2.1	1.8	C64
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
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
Bladder	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	3.0	5.7	12.6	24.4	49.6	51.8	5.4	3.8	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	1.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C68
Eye	2	2.4	0.0	0.0	0.0	1.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.5	0.6	C69
Brain, nervous system	11	3.7	0.0	0.0	1.0	1.0	1.3	2.5	1.1	2.0	0.9	3.0	8.0	7.9	2.2	5.5	4.3	2.4	2.1	C70-72
Thyroid	4	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.0	0.9	1.0	2.3	0.0	4.4	2.8	6.5	0.9	0.6	C73
Adrenal gland	2	2.4	1.1	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	C74
Other endocrine	0	0.0	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	0.1	0.1	C75
Hodgkin disease	2	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.0	0.0	1.6	0.0	0.0	2.2	0.5	0.5	C81
Non-Hodgkin lymphoma	33	0.0	2.2	1.0	1.0	1.0	3.9	2.5	5.5	9.8	12.7	14.0	8.0	14.2	20.0	19.3	28.1	7.5	5.8	C82-85,C96
Multiple myeloma	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	4.0	2.3	0.0	4.4	2.8	0.0	0.8	0.6	C90
Lymphoid leukemia	8	4.9	1.1	1.0	1.0	1.0	1.3	0.0	0.0	1.0	0.0	2.0	2.3	3.1	0.0	13.8	4.3	1.8	1.8	C91
Myeloid leukemia	13	1.2	2.2	0.0	0.0	0.0	0.0	0.0	3.3	1.0	2.7	4.0	2.3	9.4	8.9	22.0	8.6	2.9	2.3	C92-94
Leukemia unspecified	5	3.7	0.0	3.1	0.0	0.0	0.0	1.2	0.0	1.0	0.9	1.0	1.1	0.0	2.2	5.5	2.2	1.1	1.2	C95
Other and unspecified	58	1.2	0.0	1.0	0.0	2.0	2.6	4.9	4.4	2.0	8.1	12.0	26.2	33.0	48.9	68.9	97.2	13.2	9.5	O&U
<b>All sites</b>	<b>729</b>	<b>26.8</b>	<b>14.5</b>	<b>8.3</b>	<b>7.8</b>	<b>13.8</b>	<b>21.0</b>	<b>39.4</b>	<b>53.7</b>	<b>95.8</b>	<b>164.6</b>	<b>230.5</b>	<b>328.4</b>	<b>454.4</b>	<b>506.7</b>	<b>787.9</b>	<b>913.6</b>	<b>166.5</b>	<b>122.2</b>	<b>ALL</b>

**Table 3.4.2** Phitsanulok (2011), Mean annual ASR per 100,000 (2010-2012) 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	11	0.0	0.0	0.0	0.9	1.1	0.0	0.0	0.0	0.0	1.6	0.0	2.1	5.7	5.6	2.3	29.5	2.4	1.4	C00
Tongue	10	1.3	0.0	0.0	0.0	0.0	0.0	1.2	3.1	0.0	0.0	2.8	2.1	7.1	5.6	11.7	10.3	2.2	1.5	C01-02
Mouth	16	0.0	0.0	0.0	0.0	1.1	0.0	1.2	0.0	1.8	0.8	0.9	3.1	7.1	7.5	14.0	34.0	3.4	2.0	C03-06
Salivary glands	4	0.0	0.0	0.0	0.9	0.0	0.0	2.4	1.0	0.0	0.0	0.9	2.1	2.8	1.9	0.0	4.4	0.9	0.7	C07-08
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.1	0.1	C09
Other oropharynx	1	0.0	0.0	0.0	0.9	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	0.2	C10
Nasopharynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	3.7	3.1	0.0	0.0	2.3	0.0	0.7	0.5	C11
Hypopharynx	1	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	3.8	0.0	0.0	0.2	0.2	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.8	1.0	1.4	1.9	2.3	7.4	0.9	0.5	C15
Stomach	15	0.0	0.0	0.0	0.0	0.0	1.4	2.4	1.0	7.2	6.5	6.4	3.1	4.3	9.4	7.0	7.4	3.3	2.3	C16
Small intestine	3	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.0	2.8	5.6	0.0	0.0	0.6	0.5	C17
Colon	45	2.6	0.0	0.0	0.0	1.1	4.1	2.4	2.0	6.3	9.8	11.0	14.5	28.4	28.2	35.0	45.8	9.8	6.7	C18
Rectum	24	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.1	5.4	8.2	5.5	10.4	8.5	15.0	23.3	19.2	5.3	3.4	C19-20
Anus	1	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C21
Liver and bile duct	49	1.3	0.0	0.0	0.0	0.0	1.4	1.2	1.0	4.5	9.0	11.9	16.6	24.2	47.0	65.3	42.8	10.7	7.0	C22,C24
Gallbladder	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	0.9	2.1	2.8	5.6	4.7	4.4	1.1	0.7	C23
Pancreas	11	0.0	0.0	0.0	0.9	0.0	0.0	0.0	1.0	1.8	0.8	1.8	3.1	7.1	15.0	7.0	8.9	2.3	1.6	C25
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	0.0	0.0	2.3	1.5	0.1	0.1	C30-31
Larynx	1	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	2.3	1.5	0.3	0.2	C32
Trachea, Bronchus and lung	55	1.3	0.0	0.0	0.9	2.2	1.4	3.5	8.2	9.8	5.7	14.7	21.8	29.9	33.8	44.3	54.7	11.9	8.0	C33-34
Other thoracic organs	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	0.0	0.0	0.1	0.1	C37-38
Bone	3	0.0	0.0	1.1	0.9	0.0	2.8	0.0	1.0	0.9	0.0	0.0	0.0	0.0	1.9	4.7	0.0	0.6	0.7	C40-C41
Melanoma of skin	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	0.0	2.8	3.8	2.3	1.5	0.6	0.4	C43
Other skin	34	0.0	0.0	0.0	0.0	1.1	0.0	0.0	3.1	0.9	0.8	9.2	12.5	14.2	22.6	18.6	63.5	7.3	4.2	C44
Mesothelioma	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	0.0	0.0	0.1	0.1	C45
Connective tissue	7	0.0	0.0	0.0	0.9	3.2	0.0	0.0	2.0	0.9	0.8	0.0	5.2	1.4	7.5	2.3	3.0	1.5	1.2	C47,C49
Breast	176	0.0	0.0	2.2	0.9	1.1	12.4	27.2	41.8	58.2	73.6	78.9	83.1	68.3	65.8	46.6	38.4	37.9	27.1	C50
Vulva	2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.9	1.0	0.0	0.0	0.0	3.0	0.4	0.2	C51
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C52
Cervix uteri	77	0.0	0.0	0.0	0.0	3.2	2.8	5.9	13.3	21.5	36.0	30.3	41.5	28.4	30.1	25.6	31.0	16.7	11.4	C53
Corpus uteri	24	0.0	0.0	0.0	0.0	0.0	1.4	0.0	4.1	2.7	6.5	10.1	16.6	15.6	16.9	14.0	4.4	5.2	3.6	C54
Uterus unspecified	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	2.8	3.8	0.0	1.5	0.4	0.3	C55
Ovary	36	0.0	0.0	2.2	1.8	3.2	4.1	8.3	5.1	9.0	11.5	14.7	15.6	17.1	18.8	7.0	7.4	7.7	5.9	C56
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.1	0.1	C57
Placenta	1	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.2	0.2	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	4	1.3	1.2	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	1.0	1.4	3.8	4.7	4.4	0.9	0.8	C64
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	1.5	0.1	0.0	C65
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	2.3	0.0	0.1	0.0	C66
Bladder	6	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	3.3	1.8	0.0	1.4	0.0	4.7	10.3	1.2	0.7	C67
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.1	0.0	C68
Eye	2	1.3	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.9	0.0	2.8	0.0	2.3	0.0	0.4	0.4	C69
Brain, nervous system	17	3.9	2.3	0.0	0.0	2.2	4.1	0.0	1.0	9.8	1.6	8.3	2.1	7.1	3.8	7.0	7.4	3.6	3.1	C70-72
Thyroid	24	0.0	0.0	1.1	0.9	1.1	6.9	3.5	10.2	8.1	6.5	5.5	7.3	10.0	3.8	14.0	7.4	5.1	4.0	C73
Adrenal gland	2	3.9	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.4	1.9	0.0	0.0	0.5	0.7	C74
Other endocrine	1	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C75
Hodgkin disease	2	1.3	0.0	1.1	0.9	0.0	2.8	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6	C81
Non-Hodgkin lymphoma	25	1.3	0.0	0.0	0.9	3.2	1.4	3.5	3.1	5.4	4.1	8.3	7.3	14.2	15.0	9.3	20.7	5.4	3.9	C82-85,C96
Multiple myeloma	7	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.8	2.5	4.6	4.2	1.4	5.6	4.7	1.5	1.6	1.1	C90
Lymphoid leukemia	8	3.9	0.0	1.1	0.9	1.1	2.8	0.0	2.0	0.0	0.8	0.9	0.0	0.0	3.8	2.3	11.8	1.7	1.6	C91
Myeloid leukemia	10	2.6	0.0	0.0	0.9	1.1	2.8	0.0	0.0	0.9	1.6	3.7	3.1	4.3	7.5	7.0	4.4	2.1	1.8	C92-94
Leukemia unspecified	6	1.3	1.2	0.0	0.9	3.2	1.4	1.2	2.0	2.7	0.0	0.9	0.0	1.4	1.9	2.3	3.0	1.4	1.3	C95
Other and unspecified	60	0.0	0.0	1.1	0.9	0.0	4.1	10.6	6.1	9.8	13.9	14.7	16.6	18.5	26.3	74.6	62.0	13.0	8.6	O&U
<b>All sites</b>	<b>802</b>	<b>27.3</b>	<b>6.9</b>	<b>10.8</b>	<b>16.0</b>	<b>30.2</b>	<b>57.9</b>	<b>85.0</b>	<b>120.4</b>	<b>172.8</b>	<b>211.1</b>	<b>259.6</b>	<b>306.3</b>	<b>349.9</b>	<b>430.5</b>	<b>484.8</b>	<b>561.3</b>	<b>173.2</b>	<b>121.9</b>	<b>ALL</b>

**Table 3.4.3** Mean annual incidence, Phitsanulok, 2010-2012

Site	Male						Female					
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate	
					0-64	0-74					0-64	0-74
					(per 100,000)						(percent)	
Lip	0	0.0	0.1	0.1	0.0	0.0	11	1.4	2.4	1.4	0.1	0.1
Tongue	11	1.6	2.6	2.0	0.1	0.2	10	1.2	2.2	1.5	0.1	0.2
Mouth	15	2.1	3.4	2.4	0.2	0.2	16	2.0	3.4	2.0	0.1	0.2
Salivary glands	2	0.3	0.5	0.4	0.0	0.0	4	0.5	0.9	0.7	0.1	0.1
Tonsil	6	0.9	1.4	1.0	0.1	0.1	1	0.1	0.1	0.1	0.0	0.0
Other oropharynx	2	0.2	0.4	0.3	0.0	0.0	1	0.1	0.2	0.2	0.0	0.0
Nasopharynx	10	1.4	2.3	1.7	0.1	0.2	3	0.4	0.7	0.5	0.0	0.1
Hypopharynx	11	1.5	2.5	1.8	0.1	0.2	1	0.1	0.2	0.2	0.0	0.0
Pharynx unspecified	0	0.0	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Oesophagus	32	4.4	7.3	5.0	0.4	0.6	4	0.5	0.9	0.5	0.0	0.0
Stomach	18	2.5	4.2	3.0	0.2	0.3	15	1.9	3.3	2.3	0.2	0.2
Small intestine	3	0.4	0.6	0.4	0.0	0.0	3	0.3	0.6	0.5	0.0	0.1
Colon	45	6.1	10.2	7.4	0.4	0.9	45	5.7	9.8	6.7	0.4	0.7
Rectum	33	4.5	7.5	5.6	0.3	0.7	24	3.0	5.3	3.4	0.2	0.4
Anus	0	0.0	0.1	0.0	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Liver and bile duct	146	20.0	33.3	24.0	1.8	2.8	49	6.1	10.7	7.0	0.4	0.9
Gallbladder	3	0.5	0.8	0.5	0.0	0.1	5	0.6	1.1	0.7	0.0	0.1
Pancreas	9	1.2	2.0	1.4	0.1	0.2	11	1.3	2.3	1.6	0.1	0.2
Nose, sinuses etc.	1	0.1	0.2	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Larynx	14	1.9	3.2	2.2	0.1	0.3	1	0.2	0.3	0.2	0.0	0.0
Trachea, Bronchus and lung	113	15.5	25.7	17.9	0.9	2.2	55	6.9	11.9	8.0	0.5	0.9
Other thoracic organs	1	0.1	0.2	0.1	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0
Bone	5	0.7	1.2	1.1	0.1	0.1	3	0.4	0.6	0.7	0.0	0.1
Melanoma of skin	2	0.3	0.5	0.3	0.0	0.0	3	0.3	0.6	0.4	0.0	0.1
Other skin	16	2.1	3.6	2.6	0.1	0.3	34	4.2	7.3	4.2	0.2	0.4
Mesothelioma	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0
Connective tissue	6	0.8	1.4	1.1	0.1	0.1	7	0.9	1.5	1.2	0.1	0.1
Breast	5	0.7	1.2	1.0	0.1	0.1	176	21.9	37.9	27.1	2.2	2.8
Vulva							2	0.2	0.4	0.2	0.0	0.0
Vagina							1	0.1	0.1	0.1	0.0	0.0
Cervix uteri							77	9.6	16.7	11.4	0.9	1.2
Corpus uteri							24	3.0	5.2	3.6	0.3	0.4
Uterus unspecified							2	0.2	0.4	0.3	0.0	0.0
Ovary							36	4.4	7.7	5.9	0.5	0.6
Other female genital organs							1	0.1	0.1	0.1	0.0	0.0
Placenta							1	0.1	0.2	0.2	0.0	0.0
Penis	7	1.0	1.6	1.2	0.1	0.2						
Prostate	37	5.0	8.4	5.7	0.2	0.6						
Testis	2	0.2	0.4	0.4	0.0	0.0						
Other male genital organs	0	0.0	0.1	0.0	0.0	0.0						
Kidney	9	1.2	2.1	1.8	0.1	0.2	4	0.5	0.9	0.8	0.0	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0
Ureter	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0
Bladder	24	3.2	5.4	3.8	0.1	0.5	6	0.7	1.2	0.7	0.0	0.1
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
Eye	2	0.3	0.5	0.6	0.0	0.0	2	0.2	0.4	0.4	0.0	0.0
Brain, nervous system	11	1.5	2.4	2.1	0.2	0.2	17	2.1	3.6	3.1	0.2	0.3
Thyroid	4	0.5	0.9	0.6	0.0	0.1	24	2.9	5.1	4.0	0.3	0.4
Adrenal gland	2	0.2	0.4	0.5	0.0	0.0	2	0.3	0.5	0.7	0.0	0.0
Other endocrine	0	0.0	0.1	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Hodgkin disease	2	0.3	0.5	0.5	0.0	0.0	2	0.2	0.4	0.6	0.0	0.0
Non-Hodgkin lymphoma	33	4.5	7.5	5.8	0.4	0.6	25	3.1	5.4	3.9	0.3	0.4
Multiple myeloma	4	0.5	0.8	0.6	0.0	0.1	7	0.9	1.6	1.1	0.1	0.1
Lymphoid leukemia	8	1.1	1.8	1.8	0.1	0.2	8	1.0	1.7	1.6	0.1	0.1
Myeloid leukemia	13	1.7	2.9	2.3	0.1	0.3	10	1.2	2.1	1.8	0.1	0.2
Leukemia unspecified	5	0.7	1.1	1.2	0.1	0.1	6	0.8	1.4	1.3	0.1	0.1
Other and unspecified	58	7.9	13.2	9.5	0.5	1.1	60	7.5	13.0	8.6	0.5	1.0
<b>All sites</b>	<b>729</b>	<b>100.0</b>	<b>166.5</b>	<b>122.2</b>	<b>7.3</b>	<b>13.8</b>	<b>802</b>	<b>100.0</b>	<b>173.2</b>	<b>121.9</b>	<b>8.3</b>	<b>12.8</b>

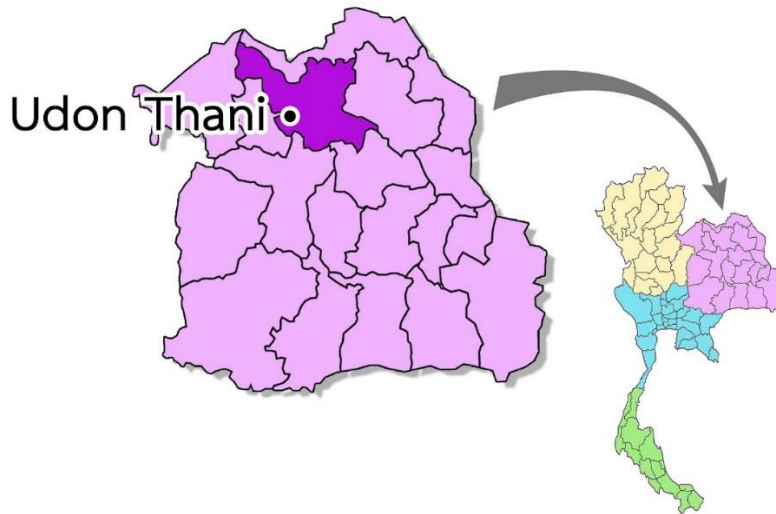
**Table 3.4.4** Percentage of morphologically verified and death certificate only cases, Phitsanulok

Site	Male			Female			ICD-10
	Cases 3 Year	% MV	% DCO	Cases 3 Year	% MV	% DCO	
Oral cavity	87	81.6	3.4	124	71.0	3.2	C00-C08
Oropharynx	25	76.0	8.0	5	20.0	20.0	C09-C10,C14
Nasopharynx	30	86.7	6.7	10	80.0	0.0	C11
Hypopharynx	33	90.9	0.0	3	100.0	0.0	C12-C13
Esophagus	96	74.0	12.5	12	75.0	25.0	C15
Stomach	55	63.6	20.0	46	67.4	17.4	C16
Small intestine	8	87.5	0.0	8	37.5	12.5	C17
Colon and rectum	234	68.4	4.7	211	64.9	6.2	C18-C21
Liver and bile duct	437	24.3	28.6	148	26.4	26.4	C22,C24
Gallbladder	10	20.0	30.0	15	53.3	13.3	C23
pancreas	26	26.9	3.8	32	31.3	21.9	C25
Nose,sinuses etc	2	100.0	0.0	2	100.0	0.0	C30-C31
Larynx	42	81.0	7.1	4	25.0	0.0	C32
Trachea, bronchus and lung	338	56.2	13.0	166	59.0	10.2	C33-C34
Other thoracic organs	2	50.0	50.0	1	100.0	0.0	C37-C38
Bone	16	6.3	12.5	9	0.0	33.3	C40-C41
Melanoma of skin	6	100.0	0.0	8	87.5	0.0	C43
Other skin	47	74.5	2.1	101	85.1	2.0	C44
Mesothelioma	1	100.0	0.0	1	100.0	0.0	C45
Kaposi sarcoma	0		0.0	0	0.0	0.0	C46
Connective and soft tissue	18	55.6	16.7	21	23.8	4.8	C47,C49
Breast	16	12.5	0.0	527	78.7	2.8	C50
Vulva				5	60.0	0.0	C51
Vagina				2	50.0	50.0	C52
Cervix uteri				232	70.3	3.4	C53
Corpus uteri				72	77.8	1.4	C54
Uterus unspecified				6	33.3	33.3	C55
Ovary				107	71.0	5.6	C56
Other female genital organs				2	0.0	0.0	C57
Placenta				3	0.0	0.0	C58
Penis	21	76.2	4.8				C60
Prostate	110	65.5	6.4				C61
Testis	5	40.0	0.0				C62
Other male genital organs	1	0.0	100.0				C63
Kidney	27	63.0	7.4	13	46.2	0.0	C64
Renal pelvis	0	0.0	0.0	1	100.0	0.0	C65
Ureter	0	0.0	0.0	1	0.0	0.0	C66
Bladder	71	78.9	4.2	17	58.8	5.9	C67
Other urinary organs	1	0.0	100.0	1	0.0	0.0	C68
Eye	7	0.0	14.3	6	0.0	0.0	C69
Brain, nervous system	32	34.4	31.3	50	58.0	8.0	C70-C72
Thyroid	12	83.3	0.0	71	73.2	0.0	C73
Adrenal gland	5	0.0	0.0	7	28.6	0.0	C74
Other endocrine	1	0.0	0.0	2	0.0	0.0	C75
Hodgkin disease	7	100.0	0.0	6	100.0	0.0	C81
Non-Hodgkin lymphoma	98	90.8	0.0	75	94.7	0.0	C82-C85,C96
Immunoproliferative diseases	0		0.0	0	0.0	0.0	C88
Multiple myeloma	11	100.0	0.0	22	100.0	0.0	C90
Leukemia	76	100.0	0.0	71	100.0	0.0	C91-C95
Myelodysplastic	0		0.0	0	0.0	0.0	D45-D47
Other and unspecified	173	51.4	24.9	181	45.3	18.2	O&U
<b>All sites</b>	<b>2,187</b>	<b>58.2</b>	<b>13.4</b>	<b>2,407</b>	<b>66.7</b>	<b>7.1</b>	<b>All</b>

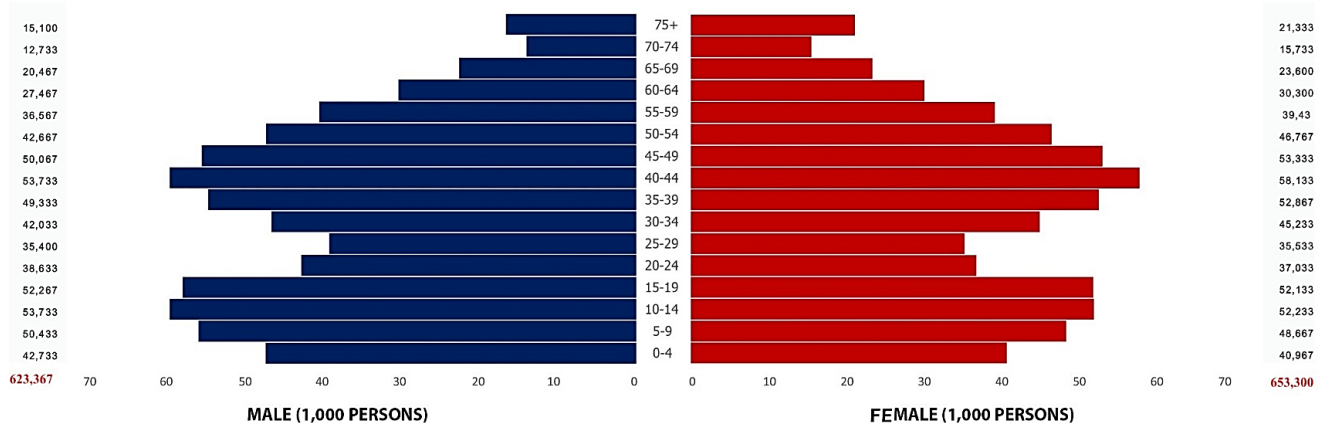
# Udon Thani Cancer Registry

## 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 18 districts and 2 sub-districts. The estimated population in the year 2008 was 1,486,198. About 95% of the population are Buddhists. The remainder are mainly Christians and Moslems.



Population pyramid, Udon Thani  
estimated population in 2011 (average 2010-2012)



## **Cancer care facilities**

Community hospitals are provided in all 18 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**

Udon Thani cancer registry was established in 2002 at the Udon Thani regional cancer center, and is funded by the Thai National Cancer Institute. It provides treatment facilities, training and education for health personals in the upper northeastern part of Thailand. The registry unit has one part - time expert consultant (Dr. Hutcha Sriplung), a part - time doctor, 3 part - time nurses, one computer statistician and 2 full time clerks.

The data registry are 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 programme, CanReg4.

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.

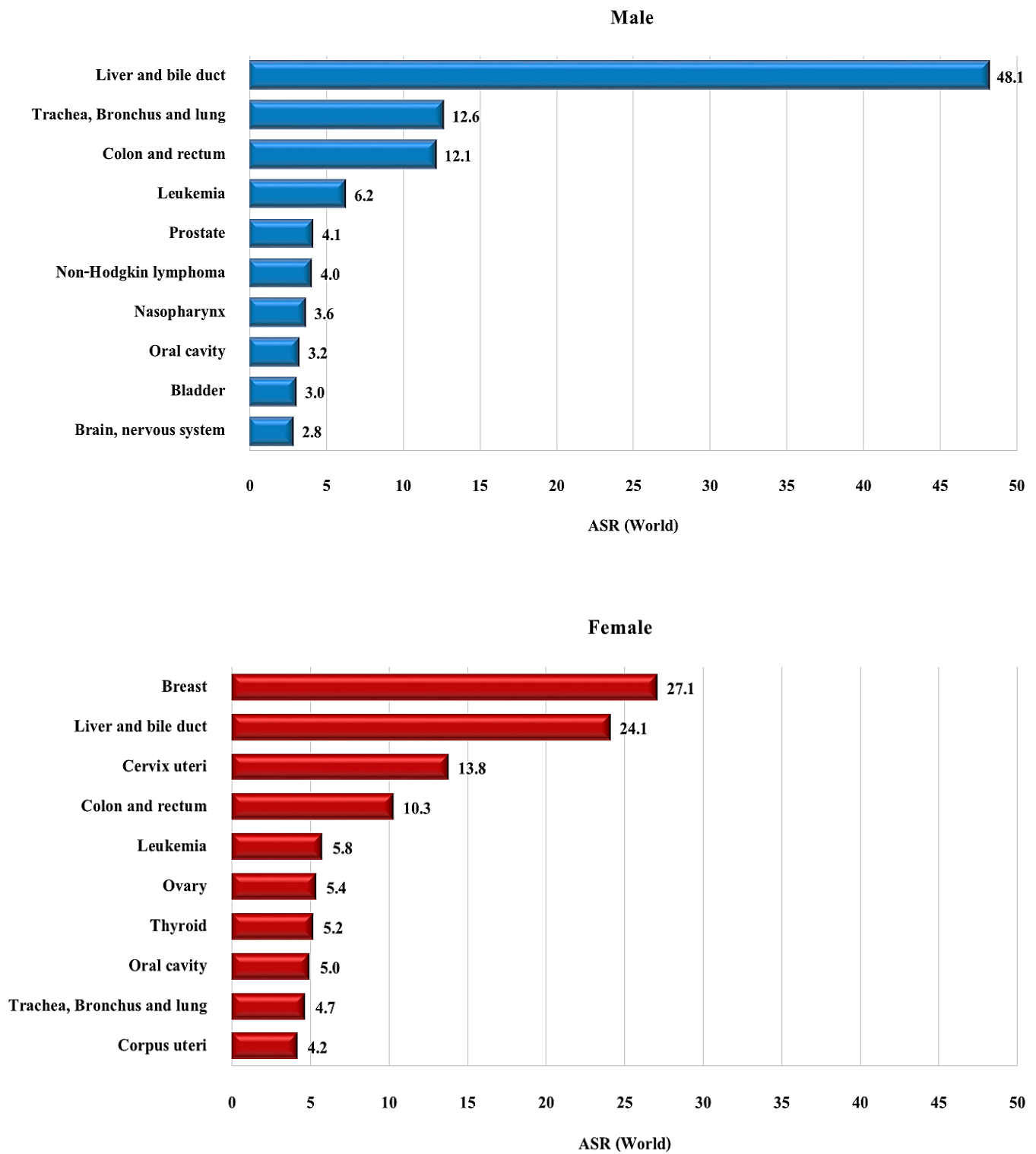
## **Summary of results**

New cases registered in 2011, 929 were males and 1,086 were females, making 2,015 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 125.4 per 100,000, with liver and bile duct cancer ranking first (ASR = 48.1) followed by lung (ASR = 12.6) and colon and rectum (ASR = 12.1). The ASR of all cancer sites in females was 129.5 per 100,000, the three leading cancer sites being breast (ASR = 27.1), liver and bile duct (ASR = 24.1) and cervix (ASR = 13.8).

## **Notification**

The age-standardized incidence rate (ASR) of all cancer sites in male in this volume, ASR = 125.4 (2010-2012) was decreased compared to the last volume, ASR = 161.8 (2007-2009). Particularly, for liver cancer the ASR was significantly dropped from 73.2 in the last volume to 48.1 in this volume. While the declined can not be entirely explained, it may in part be due to imprecisements in the validity of the liver cancer data: the MV% has increased from 15.8 % to 17.0 % and the DCO% has increased from 8.9 % to 11.9 %.

**Figure 3.5** Leading cancer in Udon Thani (mean annual ASR 2010-2012)



**Table 3.5.1** Udon Thani (2011), Mean annual ASR per 100,000 (2010-2012) 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	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	1.6	2.6	6.6	0.3	0.2	C00
Tongue	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.7	3.9	5.5	1.2	4.9	7.9	8.8	1.3	1.1	C01-02
Mouth	9	1.6	0.0	0.6	0.0	1.7	0.0	0.0	0.7	0.0	0.7	4.7	5.5	2.4	3.3	7.9	2.2	1.4	1.3	C03-06
Salivary glands	4	0.0	0.0	0.0	0.0	0.9	0.0	1.6	0.0	0.6	0.0	1.6	1.8	4.9	1.6	0.0	0.0	0.7	0.6	C07-08
Tonsil	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	1.3	0.8	0.0	0.0	1.6	2.6	6.6	0.5	0.4	C09
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	0.9	0.0	1.6	2.6	0.0	0.2	0.1	C10
Nasopharynx	27	0.0	0.0	0.6	0.0	1.7	2.8	0.0	2.0	1.2	4.7	14.1	9.1	20.6	16.3	2.6	13.2	4.3	3.6	C11
Hypopharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.0	0.9	0.0	0.0	3.3	0.0	2.2	0.3	0.3	C12-13
Pharynx unspecified	1	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	0.0	0.1	0.1	C14
Oesophagus	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.8	0.9	4.9	1.6	2.6	6.6	0.7	0.6	C15
Stomach	19	0.0	0.0	0.0	0.0	0.0	0.9	0.8	3.4	3.1	3.3	7.8	7.3	6.1	13.0	15.7	8.8	3.1	2.5	C16
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.4	0.0	0.0	0.8	0.9	0.0	0.0	2.6	0.0	0.3	0.3	C17
Colon	48	0.8	0.0	0.6	0.6	0.0	0.9	3.2	5.4	9.3	6.0	15.6	13.7	23.1	34.2	23.6	44.2	7.7	6.3	C18
Rectum	41	0.0	0.0	0.0	0.0	0.0	0.0	2.4	3.4	5.6	9.3	8.6	11.9	26.7	26.1	41.9	33.1	6.6	5.5	C19-20
Anus	2	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	1.6	0.0	6.6	0.3	0.3	C21
Liver and bile duct	362	2.3	0.7	0.0	0.0	1.7	9.4	16.7	27.0	44.0	71.2	96.9	137.6	174.8	280.1	295.8	282.6	58.1	48.1	C22,C24
Gallbladder	9	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.7	0.0	0.7	3.1	0.9	6.1	3.3	15.7	4.4	1.4	1.2	C23
Pancreas	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.3	1.6	0.9	4.9	4.9	5.2	8.8	1.2	1.0	C25
Nose, sinuses etc.	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.8	1.2	4.9	0.0	2.2	0.4	0.3	C30-31
Larynx	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.2	2.7	3.1	1.8	4.9	9.8	5.2	6.6	1.5	1.2	C32
Trachea, Bronchus and lung	94	0.0	0.0	0.0	0.6	1.7	0.9	0.8	7.4	11.2	17.3	25.0	31.0	58.3	60.3	96.9	77.3	15.1	12.6	C33-34
Other thoracic organs	4	0.0	0.0	0.6	0.0	0.9	0.0	0.0	0.0	0.6	1.3	1.6	0.9	2.4	3.3	0.0	0.0	0.6	0.6	C37-38
Bone	8	0.8	0.7	0.0	3.8	1.7	0.0	0.8	0.7	1.9	1.3	1.6	2.7	0.0	1.6	2.6	2.2	1.3	1.3	C40-C41
Melanoma of skin	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.1	0.1	C43
Other skin	17	0.0	0.0	0.0	0.0	0.0	0.9	0.0	2.7	1.9	6.0	1.6	7.3	6.1	13.0	13.1	15.5	2.8	2.3	C44
Mesothelioma	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	1.2	0.0	0.0	0.0	0.1	0.1	C45
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	0.1	0.0	C46
Connective tissue	7	0.0	0.0	0.0	1.3	0.0	0.9	1.6	0.0	0.6	2.7	0.0	1.8	1.2	6.5	0.0	6.6	1.1	0.9	C47,C49
Breast	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	1.6	0.9	1.2	0.0	0.0	2.2	0.4	0.3	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	10	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	1.9	2.0	2.3	4.6	6.1	6.5	5.2	6.6	1.6	1.3	C60
Prostate	30	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.4	1.9	1.3	5.5	6.4	17.0	29.3	41.9	41.9	4.8	4.1	C61
Testis	3	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.7	0.6	0.7	0.8	0.0	0.0	3.3	0.0	4.4	0.5	0.4	C62
Other male genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.6	0.0	0.0	0.1	0.1	C63
Kidney	9	0.0	0.0	0.6	0.0	0.0	0.9	0.0	0.7	1.2	3.3	0.8	6.4	2.4	1.6	10.5	4.4	1.4	1.2	C64
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.9	1.2	0.0	0.0	2.2	0.2	0.2	C65
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	2.2	0.1	0.0	C66
Bladder	23	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.0	1.9	2.7	5.5	11.9	12.1	9.8	23.6	24.3	3.6	3.0	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	0.0	0.0	1.2	0.0	0.0	0.0	0.1	0.0	C68
Eye	4	2.3	0.7	0.0	0.0	0.0	0.0	0.8	0.7	1.2	0.7	0.0	1.8	0.0	0.0	2.6	2.2	0.7	0.7	C69
Brain, nervous system	19	1.6	0.7	0.0	1.9	5.2	1.9	0.0	2.7	2.5	0.7	8.6	8.2	8.5	1.6	10.5	4.4	3.0	2.8	C70-72
Thyroid	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.3	3.1	0.9	4.9	4.9	10.5	4.4	1.1	1.0	C73
Adrenal gland	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	1.2	0.0	2.6	0.0	0.2	0.1	C74
Other endocrine	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	0.1	0.0	C75
Hodgkin disease	1	0.0	0.7	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	0.1	0.1	C81
Non-Hodgkin lymphoma	29	1.6	1.3	1.2	2.6	0.9	1.9	0.8	2.7	7.4	3.3	4.7	9.1	13.3	11.4	13.1	26.5	4.6	4.0	C82-85,C96
Multiple myeloma	5	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.7	0.6	2.0	1.6	3.6	2.4	0.0	0.0	4.4	0.9	0.7	C90
Lymphoid leukemia	6	3.1	2.0	3.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.2	3.3	0.0	0.0	1.0	1.2	C91
Myeloid leukemia	8	0.0	0.0	1.9	0.6	0.9	0.9	0.0	2.0	0.0	2.0	3.9	0.9	1.2	1.6	5.2	6.6	1.3	1.2	C92-94
Leukemia unspecified	26	1.6	1.3	0.6	2.6	2.6	1.9	4.0	2.7	4.3	2.0	3.1	6.4	15.8	6.5	18.3	22.1	4.2	3.8	C95
Myelodysplastic disease	4	0.8	0.0	0.0	0.6	1.7	0.9	0.0	0.0	0.0	0.7	0.8	1.8	1.2	3.3	2.6	0.0	0.7	0.7	D45-D47
Other and unspecified	41	0.0	0.0	0.6	0.6	0.0	0.9	2.4	2.7	3.1	10.0	11.7	8.2	27.9	21.2	49.7	33.1	6.6	5.6	O&U
<b>All sites</b>	<b>929</b>	<b>17.2</b>	<b>7.9</b>	<b>10.5</b>	<b>17.2</b>	<b>21.6</b>	<b>28.2</b>	<b>42.0</b>	<b>80.4</b>	<b>112.9</b>	<b>169.1</b>	<b>250.0</b>	<b>317.2</b>	<b>472.1</b>	<b>604.2</b>	<b>743.5</b>	<b>737.3</b>	<b>149.0</b>	<b>125.4</b>	<b>ALL</b>

**Table 3.5.2** Udon Thani (2011), Mean annual ASR per 100,000 (2010-2012) 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	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.1	1.2	0.7	0.8	2.2	2.8	8.5	7.8	1.0	0.7	C00	
Tongue	7	0.0	0.0	0.0	0.6	0.0	0.0	0.7	0.6	2.3	1.2	2.1	0.0	1.1	8.5	2.1	1.6	1.1	0.8	C01-02	
Mouth	23	0.8	0.0	0.6	0.0	0.0	0.0	1.5	2.5	2.3	2.5	3.6	5.9	8.8	18.4	8.5	25.0	3.5	2.7	C03-06	
Salivary glands	6	0.0	0.7	0.6	0.6	0.9	0.9	0.0	0.0	0.6	2.5	1.4	0.8	1.1	0.0	2.1	3.1	0.9	0.8	C07-08	
Tonsil	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	0.0	0.1	0.1	C09	
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	
Nasopharynx	12	0.0	0.0	0.0	0.0	0.9	0.0	0.7	2.5	1.7	1.9	4.3	5.1	7.7	2.8	8.5	0.0	1.9	1.5	C11	
Hypopharynx	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	0.0	1.4	0.0	0.0	0.1	0.1	C12-13	
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.1	0.1	C14	
Oesophagus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.7	0.0	0.0	1.4	0.0	1.6	0.3	0.2	C15	
Stomach	10	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	2.3	1.9	2.9	3.4	1.1	9.9	8.5	3.1	1.6	1.3	C16	
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	0.8	0.0	2.8	2.1	1.6	0.3	0.2	C17	
Colon	56	0.0	0.0	0.0	0.6	1.8	1.9	1.5	3.2	6.9	10.6	18.5	16.9	17.6	29.7	46.6	34.4	8.6	6.5	C18	
Rectum	30	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.6	4.0	3.7	7.1	14.4	11.0	15.5	25.4	23.4	4.6	3.5	C19-20	
Anus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.2	0.7	0.0	0.0	2.8	0.0	1.6	0.4	0.3	C21	
Liver and bile duct	208	0.8	0.0	0.6	0.0	0.0	5.6	11.1	10.7	26.4	31.2	44.9	84.5	91.3	134.2	148.3	121.9	31.9	24.1	C22,C24	
Gallbladder	9	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.6	1.9	0.0	6.8	5.5	2.8	2.1	9.4	1.4	1.0	C23	
Pancreas	5	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.6	0.6	1.2	0.0	0.8	0.0	2.8	10.6	3.1	0.8	0.6	C25	
Nose, sinuses etc.	3	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.6	1.1	0.6	0.0	0.0	1.1	1.4	2.1	1.6	0.5	0.4	C30-31	
Larynx	1	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	0.0	0.0	0.0	0.1	0.1	C32	
Trachea, Bronchus and lung	42	0.0	0.0	0.0	0.0	0.0	0.9	2.2	1.3	4.6	8.8	10.0	16.1	24.2	14.1	21.2	34.4	6.4	4.7	C33-34	
Other thoracic organs	2	0.8	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.4	2.1	1.6	0.4	0.4	C37-38	
Bone	8	0.0	1.4	1.3	1.3	2.7	1.9	0.0	1.9	0.0	1.2	0.7	0.8	1.1	1.4	0.0	4.7	1.2	1.2	C40-C41	
Melanoma of skin	4	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.3	0.6	0.6	0.0	0.0	3.3	1.4	0.0	4.7	0.6	0.5	C43	
Other skin	26	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.3	2.3	5.0	5.0	8.5	13.2	8.5	33.9	20.3	4.0	3.0	C44	
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	
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	
Connective tissue	9	0.0	0.7	0.0	0.0	0.0	0.0	0.7	0.0	1.1	2.5	2.9	3.4	1.1	1.4	4.2	9.4	1.3	1.0	C47,C49	
Breast	234	0.0	0.0	0.0	1.3	4.5	10.3	14.0	27.1	33.8	63.8	63.4	82.8	100.1	91.8	105.9	107.8	35.9	27.1	C50	
Vulva	4	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.2	0.7	0.0	1.1	2.8	2.1	4.7	0.6	0.4	C51	
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.8	2.2	0.0	0.0	0.0	0.2	0.2	C52	
Cervix uteri	118	0.0	0.0	0.6	1.3	3.6	4.7	6.6	15.1	22.4	17.5	23.5	40.6	53.9	62.1	69.9	54.7	18.1	13.8	C53	
Corpus uteri	35	0.0	0.0	0.0	0.6	0.0	0.0	1.9	1.5	0.0	2.9	9.4	12.1	12.7	20.9	22.6	12.7	12.5	5.4	4.2	C54
Uterus unspecified	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	3.3	0.0	2.1	1.6	0.3	0.2	C55	
Ovary	44	0.0	0.7	0.6	3.2	4.5	2.8	4.4	5.0	4.0	8.1	13.5	12.7	12.1	16.9	27.5	18.8	6.7	5.4	C56	
Other female genital organs	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	0.1	0.0	C57	
Placenta	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.8	0.0	0.0	0.0	1.6	0.2	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	5	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	3.6	2.5	2.2	1.4	2.1	3.1	0.8	0.6	C64	
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.8	0.0	0.0	0.0	1.6	0.2	0.1	C65	
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	
Bladder	2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.6	0.7	0.8	1.1	1.4	0.0	0.0	0.3	0.2	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	0.0	0.8	0.0	0.0	0.0	0.0	0.1	0.0	C68	
Eye	4	0.8	0.0	0.6	0.0	0.0	0.9	0.0	0.0	0.0	0.0	1.4	1.7	1.1	2.8	0.0	1.6	0.6	0.5	C69	
Brain, nervous system	15	0.8	2.1	2.6	1.3	1.8	2.8	1.5	0.6	0.6	2.5	0.7	4.2	4.4	2.8	6.4	10.9	2.3	2.1	C70-72	
Thyroid	41	0.0	0.0	0.0	0.6	4.5	8.4	7.4	5.0	5.2	6.2	12.8	11.0	9.9	9.9	23.3	20.3	6.3	5.2	C73	
Adrenal gland	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	0.0	1.6	0.1	0.1	C74	
Other endocrine	1	0.0	0.0	0.0	0.0	1.8	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	
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	0.0	0.0	0.0	0.0	0.0	C81	
Non-Hodgkin lymphoma	20	0.8	0.0	0.0	1.3	0.0	0.0	2.9	2.5	4.0	5.6	6.4	3.4	5.5	8.5	6.4	7.8	3.0	2.3	C82-85,C96	
Multiple myeloma	3	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.4	0.0	1.1	1.4	2.1	1.6	0.5	0.4	C90	
Lymphoid leukemia	10	4.1	4.8	4.5	1.9	0.0	0.9	0.0	0.0	0.0	0.6	0.7	0.8	1.1	0.0	0.0	3.1	1.5	1.8	C91	
Myeloid leukemia	7	2.4	0.0	0.0	0.6	0.9	0.0	0.7	0.6	0.0	0.6	0.7	1.7	3.3	4.2	4.2	3.1	1.1	1.1	C92-94	
Leukemia unspecified	21	2.4	2.1	0.6	2.6	2.7	1.9	1.5	1.9	2.3	3.1	7.1	5.9	5.5	2.8	6.4	7.8	3.2	2.9	C95	
Myelodysplastic disease	5	1.6	0.0	0.6	0.0	0.0	0.0	1.5	1.9	0.0	1.2	0.7	1.7	0.0	2.8	0.0	1.6	0.8	0.7	D45-D47	
Other and unspecified	36	0.0	0.0	0.6	0.0	1.8	0.9	2.2	5.0	4.6	5.0	8.6	9.3	18.7	25.4	19.1	15.6	5.5	4.3	O&U	
<b>All sites</b>	<b>1,086</b>	<b>16.3</b>	<b>12.3</b>	<b>15.3</b>	<b>19.2</b>	<b>34.2</b>	<b>53.5</b>	<b>64.8</b>	<b>93.9</b>	<b>142.2</b>	<b>207.5</b>	<b>265.1</b>	<b>367.7</b>	<b>438.9</b>	<b>525.4</b>	<b>627.1</b>	<b>595.3</b>	<b>166.3</b>	<b>129.5</b>	<b>ALL</b>	

**Table 3.5.3** Mean annual incidence, Udon Thani, 2010-2012

Site	Male						Female					
	No.Cases Year	Freq. (%)	Crude rate  (per 100,000)	ASR world	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate  (per 100,000)	ASR world	Cum.Rate	
					0-64	0-74					0-64	0-74
					(percent)						(percent)	
Lip	2	0.2	0.3	0.2	0.0	0.0	7	0.6	1.0	0.7	0.0	0.1
Tongue	8	0.9	1.3	1.1	0.1	0.1	7	0.6	1.1	0.8	0.0	0.1
Mouth	9	1.0	1.4	1.3	0.1	0.1	23	2.1	3.5	2.7	0.1	0.3
Salivary glands	4	0.5	0.7	0.6	0.1	0.1	6	0.5	0.9	0.8	0.1	0.1
Tonsil	3	0.4	0.5	0.4	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0
Other oropharynx	1	0.1	0.2	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Nasopharynx	27	2.9	4.3	3.6	0.3	0.4	12	1.1	1.9	1.5	0.1	0.2
Hypopharynx	2	0.2	0.3	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Pharynx unspecified	1	0.1	0.1	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Oesophagus	5	0.5	0.7	0.6	0.0	0.1	2	0.2	0.3	0.2	0.0	0.0
Stomach	19	2.1	3.1	2.5	0.2	0.3	10	1.0	1.6	1.3	0.1	0.2
Small intestine	2	0.2	0.3	0.3	0.0	0.0	2	0.2	0.3	0.2	0.0	0.0
Colon	48	5.2	7.7	6.3	0.4	0.7	56	5.2	8.6	6.5	0.4	0.8
Rectum	41	4.4	6.6	5.5	0.3	0.7	30	2.8	4.6	3.5	0.2	0.4
Anus	2	0.2	0.3	0.3	0.0	0.0	3	0.2	0.4	0.3	0.0	0.0
Liver and bile duct	362	39.0	58.1	48.1	2.9	5.8	208	19.2	31.9	24.1	1.5	2.9
Gallbladder	9	0.9	1.4	1.2	0.1	0.2	9	0.8	1.4	1.0	0.1	0.1
Pancreas	8	0.8	1.2	1.0	0.1	0.1	5	0.5	0.8	0.6	0.0	0.1
Nose, sinuses etc.	3	0.3	0.4	0.3	0.0	0.0	3	0.3	0.5	0.4	0.0	0.0
Larynx	9	1.0	1.5	1.2	0.1	0.1	1	0.1	0.1	0.1	0.0	0.0
Trachea, Bronchus and lung	94	10.2	15.1	12.6	0.8	1.6	42	3.8	6.4	4.7	0.3	0.5
Other thoracic organs	4	0.4	0.6	0.6	0.0	0.1	2	0.2	0.4	0.4	0.0	0.0
Bone	8	0.9	1.3	1.3	0.1	0.1	8	0.7	1.2	1.2	0.1	0.1
Melanoma of skin	1	0.1	0.1	0.1	0.0	0.0	4	0.4	0.6	0.5	0.0	0.0
Other skin	17	1.9	2.8	2.3	0.1	0.3	26	2.4	4.0	3.0	0.2	0.4
Mesothelioma	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Kaposi's sarcoma	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Connective tissue	7	0.7	1.1	0.9	0.1	0.1	9	0.8	1.3	1.0	0.1	0.1
Breast	2	0.3	0.4	0.3	0.0	0.0	234	21.6	35.9	27.1	2.0	3.0
Vulva							4	0.3	0.6	0.4	0.0	0.0
Vagina							1	0.1	0.2	0.2	0.0	0.0
Cervix uteri							118	10.9	18.1	13.8	0.9	1.6
Corpus uteri							35	3.3	5.4	4.2	0.3	0.5
Uterus unspecified							2	0.2	0.3	0.2	0.0	0.0
Ovary							44	4.0	6.7	5.4	0.4	0.6
Other female genital organs							0	0.0	0.1	0.0	0.0	0.0
Placenta							1	0.1	0.2	0.1	0.0	0.0
Penis	10	1.1	1.6	1.3	0.1	0.2						
Prostate	30	3.2	4.8	4.1	0.2	0.5						
Testis	3	0.4	0.5	0.4	0.0	0.0						
Other male genital organs	1	0.1	0.1	0.1	0.0	0.0						
Kidney	9	1.0	1.4	1.2	0.1	0.1	5	0.5	0.8	0.6	0.0	0.1
Renal pelvis	1	0.1	0.2	0.2	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0
Ureter	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Bladder	23	2.4	3.6	3.0	0.2	0.4	2	0.2	0.3	0.2	0.0	0.0
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
Eye	4	0.5	0.7	0.7	0.0	0.1	4	0.3	0.6	0.5	0.0	0.0
Brain, nervous system	19	2.0	3.0	2.8	0.2	0.3	15	1.4	2.3	2.1	0.1	0.2
Thyroid	7	0.8	1.1	1.0	0.1	0.1	41	3.8	6.3	5.2	0.4	0.5
Adrenal gland	1	0.1	0.2	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Other endocrine	0	0.0	0.1	0.0	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Hodgkin disease	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Non-Hodgkin lymphoma	29	3.1	4.6	4.0	0.3	0.4	20	1.8	3.0	2.3	0.2	0.2
Multiple myeloma	5	0.6	0.9	0.7	0.1	0.1	3	0.3	0.5	0.4	0.0	0.0
Lymphoid leukemia	6	0.6	1.0	1.2	0.1	0.1	10	0.9	1.5	1.8	0.1	0.1
Myeloid leukemia	8	0.9	1.3	1.2	0.1	0.1	7	0.6	1.1	1.1	0.1	0.1
Leukemia unspecified	26	2.8	4.2	3.8	0.2	0.4	21	1.9	3.2	2.9	0.2	0.2
Myelodysplastic disease	4	0.5	0.7	0.7	0.0	0.1	5	0.5	0.8	0.7	0.0	0.1
Other and unspecified	41	4.4	6.6	5.6	0.3	0.7	36	3.3	5.5	4.3	0.3	0.5
<b>All sites</b>	<b>929</b>	<b>100.0</b>	<b>149.0</b>	<b>125.4</b>	<b>7.7</b>	<b>14.5</b>	<b>1,086</b>	<b>100.0</b>	<b>166.3</b>	<b>129.5</b>	<b>8.7</b>	<b>14.4</b>

**Table 3.5.4** Percentage of morphologically verified and death certificate only cases, Udon Thani

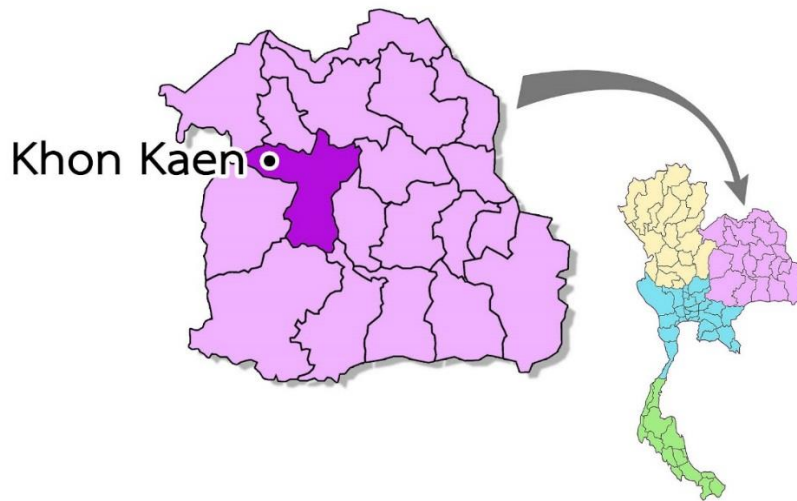
Site	Male			Female			ICD-10
	Cases 3 Year	% MV	% DCO	Cases 3 Year	% MV	% DCO	
Oral cavity	70	72.9	0.0	127	63.8	0.8	C00-C08
Oropharynx	15	80.0	0.0	3	33.3	0.0	C09-C10,C14
Nasopharynx	80	81.3	0.0	37	75.7	2.7	C11
Hypopharynx	6	100.0	0.0	2	100.0	0.0	C12-C13
Esophagus	14	85.7	0.0	5	80.0	0.0	C15
Stomach	58	81.0	1.7	31	58.1	9.7	C16
Small intestine	6	50.0	0.0	6	83.3	16.7	C17
Colon and rectum	273	82.8	0.7	267	85.8	0.0	C18-C21
Liver and bile duct	1,087	17.0	11.9	625	16.5	7.4	C22,C24
Gallbladder	26	42.3	15.4	27	51.9	11.1	C23
pancrease	23	39.1	8.7	15	80.0	0.0	C25
Nose,sinuses etc	8	100.0	0.0	9	44.4	0.0	C30-C31
Larynx	28	75.0	10.7	2	100.0	0.0	C32
Trachea, brochus and lung	283	49.5	10.6	125	49.6	7.2	C33-C34
Other thoracic organs	12	58.3	0.0	7	42.9	0.0	C37-C38
Bone	25	52.0	16.0	23	39.1	8.7	C40-C41
Melanoma of skin	2	100.0	0.0	12	100.0	0.0	C43
Other skin	52	84.6	0.0	79	82.3	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	20	90.0	0.0	26	96.2	0.0	C47,C49
Breast	7	100.0	0.0	703	91.2	0.9	C50
Vulva				11	90.9	0.0	C51
Vagina				4	75.0	0.0	C52
Cervix uteri				354	95.8	1.1	C53
Corpus uteri				106	96.2	0.0	C54
Uterus unspecified				5	80.0	20.0	C55
Ovary				131	82.4	0.8	C56
Other female genital organs				1	100.0	0.0	C57
Placenta				3	0.0	0.0	C58
Penis	30	76.7	0.0				C60
Prostate	89	83.1	0.0				C61
Testis	10	70.0	0.0				C62
Other male genital organs	2	50.0	0.0				C63
Kidney	27	66.7	0.0	15	73.3	0.0	C64
Renal pelvis	4	75.0	0.0	4	75.0	0.0	C65
Ureter	1	100.0	0.0	0	0.0	0.0	C66
Bladder	68	89.7	0.0	6	100.0	0.0	C67
Other urinary organs	1	100.0	0.0	1	0.0	0.0	C68
Eye	13	46.2	0.0	11	36.4	0.0	C69
Brain, nervous system	57	50.9	5.3	45	62.2	4.4	C70-C72
Thyroid	21	90.5	0.0	123	74.0	0.0	C73
Adrenal gland	3	0.0	0.0	2	50.0	0.0	C74
Other endocrine	1	100.0	0.0	2	100.0	0.0	C75
Hodgkin disease	2	100.0	0.0	0	0.0	0.0	C81
Non-Hodgkin lymphoma	86	100.0	0.0	59	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	9	100.0	0.0	C90
Leukemia	121	100.0	0.0	112	100.0	0.0	C91-C95
Myelodysplastic	13	100.0	0.0	16	100.0	0.0	D45-D47
Other and unspecified	124	41.9	22.6	108	38.9	25.0	O&U
<b>All sites</b>	<b>2,787</b>	<b>51.1</b>	<b>7.4</b>	<b>3,259</b>	<b>69.7</b>	<b>3.3</b>	<b>All</b>

# Khon Kaen Cancer Registry

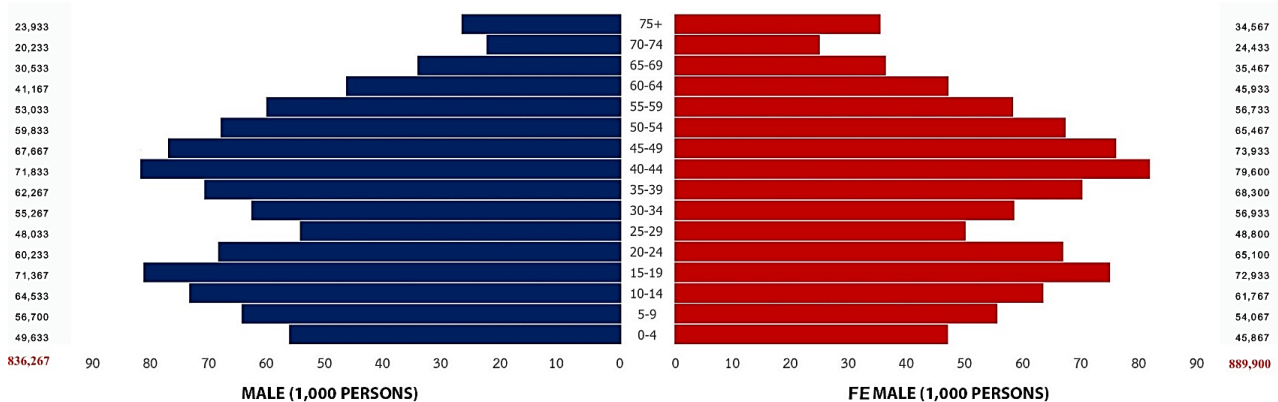
## Registration area

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 (Figure 1). 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.

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 2011 (average 2010-2012)



## **Cancer care facilities**

Most of the public hospitals in Khon Kaen belong to the Ministry of Health; others include a university hospital and an 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.

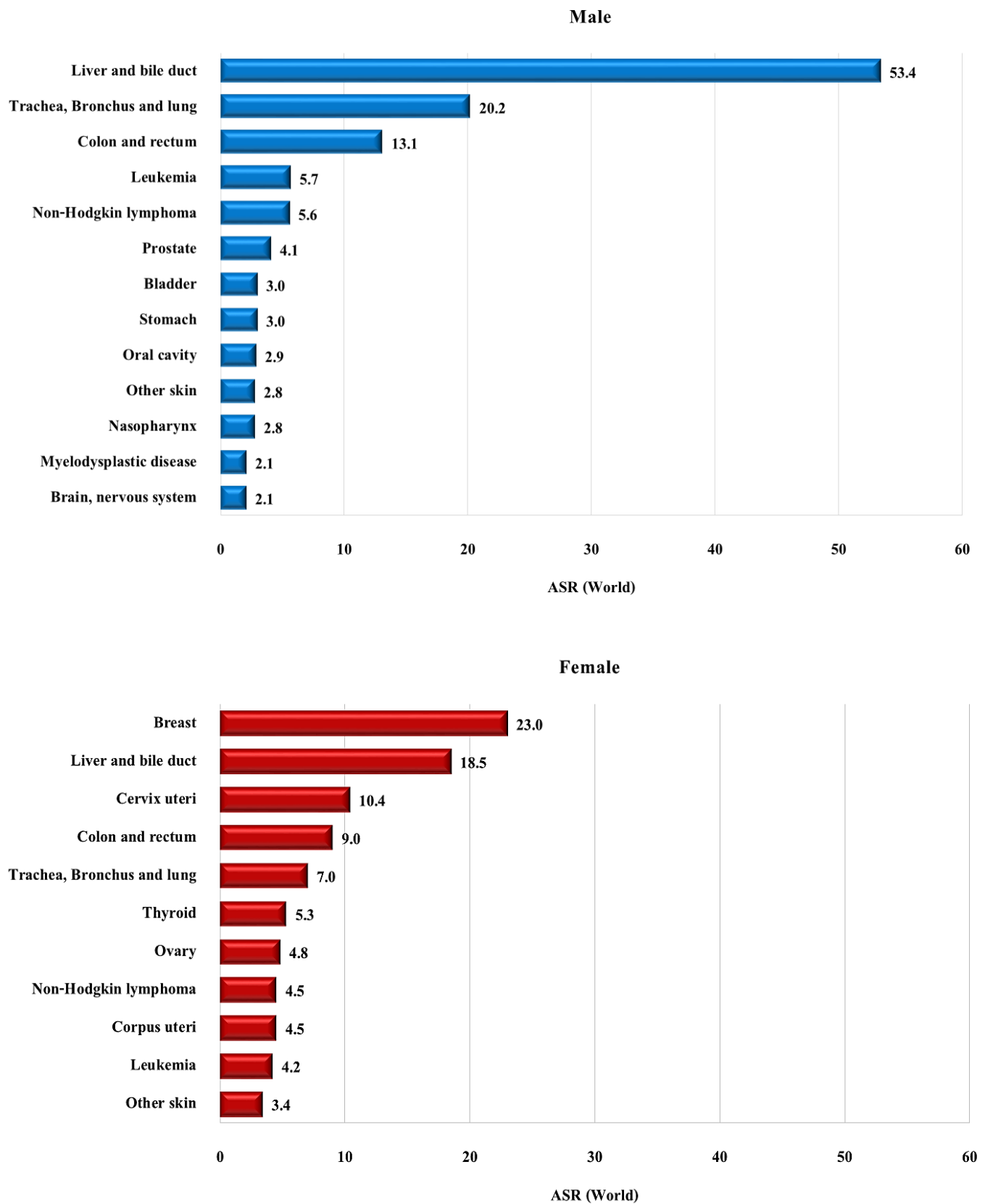
## **Registry procedures**

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), 1 army 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 CanReg4 software.

## **Summary of results**

New cases registered in 2011, 1,583 were males and 1,458 were females, making 3,041 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males is 145.5 per 100,000, with liver and bile duct cancer ranking first (ASR = 53.4) followed by lung (ASR = 20.2) and colon and rectum (ASR = 13.1). The ASR for all cancer sites in females was 117.5 per 100,000, the three leading cancer sites in females being breast (ASR = 23.0), liver and bile duct (ASR = 18.5) and cervix (ASR = 10.4).

**Figure 3.6** Leading cancer in Khon Kaen (mean annual ASR 2010-2012)



**Table 3.6.1** Khon Kaen (2011), Mean annual ASR per 100,000 (2010-2012) 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	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	0.8	0.0	4.9	7.0	0.4	0.3	C00
Tongue	17	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.1	2.3	2.5	3.3	6.3	4.9	6.6	4.9	7.0	2.0	1.5	C01-02
Mouth	9	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	1.5	2.8	2.5	3.2	1.1	3.3	8.4	1.0	0.8	C03-06
Salivary glands	3	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.5	0.5	1.1	1.3	0.8	0.0	1.6	0.0	0.4	0.3	C07-08
Tonsil	5	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.1	0.0	1.0	1.7	0.6	0.8	3.3	0.0	2.8	0.6	0.5	C09
Nasopharynx	30	0.0	0.0	0.5	0.9	1.1	1.4	0.6	1.6	2.8	5.4	7.2	7.5	13.0	8.7	4.9	15.3	3.6	2.8	C11
Hypopharynx	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.5	2.8	3.1	2.4	3.3	1.6	5.6	1.0	0.7	C12-13
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	0.6	1.6	0.0	0.0	1.4	0.2	0.2	C14
Oesophagus	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.9	3.0	3.3	4.4	8.9	12.0	1.6	2.8	1.9	1.4	C15
Stomach	33	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.1	2.3	5.4	4.5	8.2	20.2	16.4	16.5	13.9	4.0	3.0	C16
Small intestine	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	3.0	0.0	1.3	0.8	5.5	3.3	0.0	0.8	0.6	C17
Colon	76	0.0	0.0	0.0	0.5	0.6	0.7	1.8	2.7	5.6	9.9	13.9	17.6	23.5	43.7	39.5	54.3	9.1	6.9	C18
Rectum	66	0.0	0.0	0.0	0.5	0.6	0.7	0.0	1.6	6.0	7.4	13.9	20.1	23.5	27.3	37.9	41.8	7.9	5.9	C19-20
Anus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.9	0.0	0.6	0.0	0.0	1.1	3.3	4.2	0.4	0.3	C21
Liver and bile duct	595	0.0	0.0	1.0	0.5	0.6	3.5	7.8	18.7	29.7	68.0	141.5	153.4	228.3	278.4	365.7	376.0	71.2	53.4	C22,C24
Gallbladder	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.2	4.4	4.0	7.6	13.2	12.5	1.6	1.2	C23
Pancreas	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.5	2.8	1.9	4.9	7.6	4.9	7.0	1.3	1.0	C25
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.1	0.5	0.5	0.6	0.0	0.0	0.0	3.3	7.0	0.5	0.4	C30-31
Larynx	16	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.5	1.4	1.0	2.2	5.7	5.7	7.6	9.9	12.5	2.0	1.5	C32
Trachea, Bronchus and lung	224	0.0	0.0	0.0	0.0	0.0	1.4	4.2	6.4	11.1	14.3	27.9	60.3	74.5	131.0	181.2	179.7	26.7	20.2	C33-34
Other thoracic organs	5	0.0	0.0	0.5	0.9	1.1	0.0	0.0	0.5	0.9	0.5	0.0	1.3	1.6	1.1	1.6	1.4	0.6	0.5	C37-38
Bone	9	0.0	0.6	0.0	1.9	0.6	0.0	0.6	0.5	1.4	0.5	1.7	1.3	2.4	2.2	3.3	4.2	1.1	0.9	C40-C41
Melanoma of skin	6	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.5	0.9	0.0	0.0	2.5	0.8	1.1	4.9	8.4	0.8	0.6	C43
Other skin	32	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.1	0.9	2.0	4.5	6.3	10.5	5.5	28.0	46.0	3.8	2.8	C44
Connective tissue	10	0.0	0.0	0.5	0.0	0.0	0.0	0.6	0.5	2.3	2.5	2.2	2.5	2.4	1.1	4.9	1.4	1.2	0.9	C47,C49
Breast	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.6	2.2	0.0	1.4	0.2	0.2	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	17	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.1	2.3	2.0	1.7	3.1	4.0	3.3	11.5	19.5	2.1	1.5	C60
Prostate	46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	6.9	9.7	26.2	51.1	78.0	5.5	4.1	C61
Testis	6	2.0	0.0	0.0	1.4	0.0	2.1	1.8	0.5	0.5	0.0	1.1	1.9	0.0	0.0	0.0	0.0	0.8	0.8	C62
Kidney	17	0.7	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.5	2.0	3.3	6.3	8.9	7.6	9.9	4.2	2.0	1.6	C64
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	1.3	0.0	1.1	0.0	1.4	0.2	0.1	C65
Bladder	33	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	2.3	2.0	1.1	5.0	14.6	10.9	37.9	36.2	3.9	3.0	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	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	C68
Eye	3	1.3	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.6	0.6	0.8	0.0	0.0	2.8	0.3	0.3	C69
Brain, nervous system	20	2.7	1.2	1.0	0.9	0.6	1.4	1.2	1.6	2.3	4.4	3.9	3.1	2.4	5.5	6.6	4.2	2.4	2.1	C70-72
Thyroid	14	0.0	0.0	0.5	0.5	0.6	0.0	0.0	0.0	1.9	1.0	3.9	1.9	3.2	6.6	8.2	11.1	1.7	1.3	C73
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	0.0	0.0	0.0	0.0	0.0	0.1	0.2	C74
Other endocrine	2	0.0	0.0	0.0	1.4	0.0	0.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C75
Hodgkin disease	4	0.0	0.0	0.0	0.9	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.8	2.2	0.0	4.2	0.5	0.4	C81
Non-Hodgkin lymphoma	59	0.7	1.8	0.5	0.9	2.8	4.2	1.8	5.9	6.5	4.4	10.0	20.7	14.6	24.0	21.4	25.1	7.1	5.6	C82-85,C96
Multiple myeloma	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.4	1.0	5.6	5.0	3.2	7.6	11.5	11.1	2.0	1.5	C90
Lymphoid leukemia	16	5.4	2.4	2.1	1.4	0.0	0.7	1.2	1.1	0.9	0.0	1.1	1.9	0.8	5.5	9.9	8.4	2.0	2.1	C91
Myeloid leukemia	29	2.7	1.2	1.0	0.5	0.6	3.5	2.4	3.7	1.9	2.5	3.3	5.0	8.1	16.4	6.6	11.1	3.4	3.1	C92-94
Leukemia unspecified	3	2.0	0.6	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.6	0.8	0.0	0.0	1.4	0.4	0.5	C95
Myelodysplastic disease	23	0.0	0.0	0.0	0.0	1.1	0.7	1.2	0.5	0.9	2.5	3.3	3.8	5.7	12.0	8.2	29.2	2.8	2.1	D45-D47
Other and unspecified	66	2.0	0.0	0.0	0.5	1.1	2.1	1.2	2.7	4.6	6.9	13.9	15.7	22.7	24.0	28.0	55.7	7.9	6.1	O&U
<b>All sites</b>	<b>1,583</b>	<b>20.8</b>	<b>8.2</b>	<b>7.7</b>	<b>14.0</b>	<b>12.7</b>	<b>26.4</b>	<b>32.0</b>	<b>61.0</b>	<b>99.3</b>	<b>162.6</b>	<b>295.3</b>	<b>398.5</b>	<b>541.7</b>	<b>727.1</b>	<b>955.5</b>	<b>1125.3</b>	<b>189.3</b>	<b>145.5</b>	<b>ALL</b>

**Table 3.6.2** Khon Kaen (2011), Mean annual ASR per 100,000 (2010-2012) 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	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.0	0.0	1.5	5.6	15.0	22.2	1.6	1.0	C00
Tongue	10	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0	1.3	0.9	1.0	2.4	4.4	1.9	1.4	5.8	1.1	0.7	C01-02
Mouth	15	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.6	5.1	2.8	5.5	26.0	1.6	1.0	C03-06
Salivary glands	5	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.9	1.5	0.6	0.7	2.8	2.7	1.0	0.5	0.4	C07-08
Tonsil	1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C09
Nasopharynx	11	0.0	0.0	0.5	0.5	0.0	0.7	0.0	2.0	0.4	0.5	3.1	1.2	2.9	6.6	2.7	1.9	1.2	0.9	C11
Hypopharynx	2	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	0.9	0.0	1.9	0.2	0.1	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	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.0	0.9	1.4	0.0	0.1	0.1	C15
Stomach	28	0.0	0.0	0.0	0.0	0.0	0.7	0.6	2.0	2.9	3.6	4.1	8.2	8.7	5.6	10.9	13.5	3.1	2.1	C16
Small intestine	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	1.5	1.9	4.1	1.9	0.4	0.3	C17
Colon	74	0.0	0.0	0.0	0.0	1.5	0.0	1.2	1.0	5.9	8.6	13.2	13.5	20.3	30.1	47.7	37.6	8.4	5.7	C18
Rectum	41	0.0	0.0	0.0	0.0	0.5	1.4	1.2	2.0	3.8	2.3	7.1	10.0	10.9	16.0	16.4	24.1	4.6	3.2	C19-20
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.2	0.9	0.0	0.0	0.2	0.1	C21
Liver and bile duct	241	2.2	0.0	0.0	0.0	0.0	1.4	1.2	2.0	6.3	11.7	26.0	49.4	83.5	127.8	159.6	162.0	27.1	18.5	C22,C24
Gallbladder	17	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.0	1.8	1.0	2.9	5.8	8.5	9.5	13.5	1.9	1.3	C23
Pancreas	13	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.0	1.3	1.8	1.0	4.1	4.4	7.5	1.4	4.8	1.5	1.0	C25
Nose, sinuses etc.	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.6	2.2	0.9	1.4	1.0	0.4	0.3	C30-31
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	0.0	0.0	1.9	0.1	0.0	C32
Trachea, Bronchus and lung	91	0.0	0.0	0.0	0.5	0.5	0.7	1.8	2.9	7.5	11.3	10.2	20.6	23.2	41.4	51.8	48.2	10.3	7.0	C33-34
Other thoracic organs	2	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	1.2	0.7	0.9	0.0	0.0	0.2	0.2	C37-38
Bone	5	0.0	0.0	1.6	0.0	0.5	0.7	0.6	0.0	0.0	0.9	1.0	0.6	0.7	0.0	1.4	1.0	0.5	0.5	C40-C41
Melanoma of skin	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.4	0.9	1.5	0.6	2.9	0.0	2.7	3.9	0.7	0.5	C43
Other skin	47	0.0	0.0	0.5	0.5	0.5	0.7	0.0	0.0	1.7	1.8	6.6	5.3	7.3	20.7	19.1	59.8	5.3	3.4	C44
Connective tissue	8	0.7	0.0	0.0	0.0	0.5	0.0	0.0	1.5	1.3	1.8	1.0	0.6	1.5	2.8	2.7	1.0	0.9	0.7	C47,C49
Breast	288	0.0	0.0	0.0	0.0	0.5	8.2	15.2	20.0	54.4	74.4	70.3	79.9	71.1	53.6	28.6	38.6	32.4	23.0	C50
Vulva	6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.5	1.0	1.8	1.5	5.6	0.0	1.9	0.6	0.4	C51
Vagina	3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.0	0.9	0.5	1.2	0.0	0.9	1.4	1.0	0.4	0.3	C52
Cervix uteri	129	0.0	0.0	0.0	0.0	1.0	2.7	8.2	18.1	20.1	25.7	28.0	29.4	31.9	25.4	34.1	24.1	14.5	10.4	C53
Corpus uteri	56	0.0	0.0	0.0	0.0	0.5	1.4	0.6	1.0	4.6	9.9	12.7	26.4	23.2	12.2	10.9	6.8	6.3	4.5	C54
Uterus unspecified	4	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	1.7	0.0	2.0	0.6	0.7	0.0	1.4	1.9	0.5	0.3	C55
Ovary	57	0.0	1.2	1.1	0.5	1.5	3.4	2.9	5.9	7.1	9.0	11.7	11.2	19.6	11.3	12.3	12.5	6.4	4.8	C56
Other female genital organs	3	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.4	0.5	0.0	0.6	2.2	0.0	0.0	0.0	0.3	0.3	C57
Placenta	1	0.0	0.0	0.0	0.0	0.5	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	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
Kidney	7	0.7	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.5	0.0	1.2	3.6	4.7	5.5	1.9	0.8	0.7	C64
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
Bladder	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.8	1.5	0.9	2.7	9.6	0.7	0.5	C67
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	0.7	0.0	1.4	0.0	0.1	0.1	C68
Eye	2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.9	0.0	2.9	0.2	0.2	C69
Brain, nervous system	16	4.4	2.5	1.6	0.5	2.0	0.7	1.8	1.5	2.1	2.3	1.5	1.2	2.2	0.0	2.7	2.9	1.8	2.0	C70-72
Thyroid	59	0.0	0.0	0.0	2.7	3.1	9.6	7.6	7.8	7.5	9.0	12.2	10.0	11.6	10.3	8.2	10.6	6.7	5.3	C73
Adrenal gland	1	1.5	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.1	0.2	C74
Other endocrine	0	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	0.0	0.0	0.1	C75
Hodgkin disease	2	0.0	0.0	0.0	0.5	0.5	0.7	0.0	0.5	0.0	0.0	0.5	0.6	0.0	0.9	0.0	0.0	0.3	0.2	C81
Non-Hodgkin lymphoma	54	0.0	0.0	2.2	1.4	1.5	4.1	1.2	3.4	3.8	5.4	6.1	11.8	15.2	18.8	21.8	25.1	6.0	4.5	C82-85,C96
Multiple myeloma	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	2.5	2.9	2.9	4.7	8.2	3.9	1.2	0.8	C90
Lymphoid leukemia	8	5.1	0.6	2.2	0.9	0.5	0.0	1.2	1.0	0.0	0.9	0.5	0.0	0.7	0.0	0.0	1.9	0.9	1.3	C91
Myeloid leukemia	27	2.2	1.2	0.0	0.9	2.0	2.0	3.5	2.0	4.2	4.5	0.5	7.6	5.1	3.8	5.5	7.7	3.0	2.6	C92-94
Leukemia unspecified	4	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.9	0.5	0.6	0.7	1.9	0.0	2.9	0.4	0.3	C95
Myelodysplastic disease	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	1.0	2.4	6.5	12.2	17.7	11.6	2.1	1.5	D45-D47
Other and unspecified	50	0.7	0.0	0.5	0.0	0.0	0.7	0.6	3.4	1.3	5.0	5.6	9.4	15.2	18.8	25.9	36.6	5.6	3.9	O&U
<b>All sites</b>	<b>1,458</b>	<b>18.9</b>	<b>6.2</b>	<b>10.8</b>	<b>9.1</b>	<b>19.5</b>	<b>42.3</b>	<b>53.3</b>	<b>81.5</b>	<b>142.8</b>	<b>203.3</b>	<b>237.8</b>	<b>324.9</b>	<b>407.8</b>	<b>473.7</b>	<b>545.7</b>	<b>637.4</b>	<b>163.8</b>	<b>117.5</b>	<b>ALL</b>

**Table 3.6.3** Mean annual incidence, Khon Kaen, 2010-2012

Site	Male						Female					
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate	
					0-64	0-74					0-64	0-74
					(per 100,000)						(percent)	
Lip	3	0.2	0.4	0.3	0.0	0.0	15	1.0	1.6	1.0	0.0	0.1
Tongue	17	1.1	2.0	1.5	0.1	0.2	10	0.7	1.1	0.7	0.1	0.1
Mouth	9	0.5	1.0	0.8	0.1	0.1	15	1.0	1.6	1.0	0.0	0.1
Salivary glands	3	0.2	0.4	0.3	0.0	0.0	5	0.3	0.5	0.4	0.0	0.0
Tonsil	5	0.3	0.6	0.5	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Nasopharynx	30	1.9	3.6	2.8	0.2	0.3	11	0.7	1.2	0.9	0.1	0.1
Hypopharynx	9	0.5	1.0	0.7	0.1	0.1	2	0.1	0.2	0.1	0.0	0.0
Pharynx unspecified	2	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Oesophagus	16	1.0	1.9	1.4	0.1	0.2	1	0.1	0.1	0.1	0.0	0.0
Stomach	33	2.1	4.0	3.0	0.2	0.4	28	1.9	3.1	2.1	0.2	0.2
Small intestine	6	0.4	0.8	0.6	0.0	0.1	4	0.3	0.4	0.3	0.0	0.0
Colon	76	4.8	9.1	6.9	0.4	0.8	74	5.1	8.4	5.7	0.3	0.7
Rectum	66	4.2	7.9	5.9	0.4	0.7	41	2.8	4.6	3.2	0.2	0.4
Anus	3	0.2	0.4	0.3	0.0	0.0	2	0.1	0.2	0.1	0.0	0.0
Liver and bile duct	595	37.6	71.2	53.4	3.3	6.5	241	16.5	27.1	18.5	0.9	2.4
Gallbladder	14	0.9	1.6	1.2	0.1	0.2	17	1.2	1.9	1.3	0.1	0.2
Pancreas	11	0.7	1.3	1.0	0.1	0.1	13	0.9	1.5	1.0	0.1	0.1
Nose, sinuses etc.	4	0.3	0.5	0.4	0.0	0.0	3	0.2	0.4	0.3	0.0	0.0
Larynx	16	1.0	2.0	1.5	0.1	0.2	1	0.0	0.1	0.0	0.0	0.0
Trachea, Bronchus and lung	224	14.1	26.7	20.2	1.0	2.6	91	6.3	10.3	7.0	0.4	0.9
Other thoracic organs	5	0.3	0.6	0.5	0.0	0.1	2	0.1	0.2	0.2	0.0	0.0
Bone	9	0.6	1.1	0.9	0.1	0.1	5	0.3	0.5	0.5	0.0	0.0
Melanoma of skin	6	0.4	0.8	0.6	0.0	0.1	6	0.4	0.7	0.5	0.0	0.1
Other skin	32	2.0	3.8	2.8	0.1	0.3	47	3.2	5.3	3.4	0.1	0.3
Connective tissue	10	0.6	1.2	0.9	0.1	0.1	8	0.5	0.9	0.7	0.0	0.1
Breast	2	0.1	0.2	0.2	0.0	0.0	288	19.8	32.4	23.0	2.0	2.4
Vulva							6	0.4	0.6	0.4	0.0	0.1
Vagina							3	0.2	0.4	0.3	0.0	0.0
Cervix uteri							129	8.9	14.5	10.4	0.8	1.1
Corpus uteri							56	3.9	6.3	4.5	0.4	0.5
Uterus unspecified							4	0.3	0.5	0.3	0.0	0.0
Ovary							57	3.9	6.4	4.8	0.4	0.5
Other female genital organs							3	0.2	0.3	0.3	0.0	0.0
Placenta							1	0.1	0.1	0.2	0.0	0.0
Penis	17	1.1	2.1	1.5	0.1	0.2						
Prostate	46	2.9	5.5	4.1	0.1	0.5						
Testis	6	0.4	0.8	0.8	0.1	0.1						
Kidney	17	1.1	2.0	1.6	0.1	0.2	7	0.5	0.8	0.7	0.0	0.1
Renal pelvis	1	0.1	0.2	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Bladder	33	2.1	3.9	3.0	0.1	0.4	7	0.5	0.7	0.5	0.0	0.0
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.1	0.1	0.0	0.0
Eye	3	0.2	0.3	0.3	0.0	0.0	2	0.1	0.2	0.2	0.0	0.0
Brain, nervous system	20	1.2	2.4	2.1	0.1	0.2	16	1.1	1.8	2.0	0.1	0.1
Thyroid	14	0.9	1.7	1.3	0.1	0.1	59	4.1	6.7	5.3	0.4	0.5
Adrenal gland	1	0.0	0.1	0.2	0.0	0.0	1	0.1	0.1	0.2	0.0	0.0
Other endocrine	2	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.1	0.0	0.0
Hodgkin disease	4	0.3	0.5	0.4	0.0	0.0	2	0.2	0.3	0.2	0.0	0.0
Non-Hodgkin lymphoma	59	3.7	7.1	5.6	0.4	0.6	54	3.7	6.0	4.5	0.3	0.5
Multiple myeloma	17	1.1	2.0	1.5	0.1	0.2	11	0.8	1.2	0.8	0.1	0.1
Lymphoid leukemia	16	1.0	2.0	2.1	0.1	0.2	8	0.6	0.9	1.3	0.1	0.1
Myeloid leukemia	29	1.8	3.4	3.1	0.2	0.3	27	1.9	3.0	2.6	0.2	0.2
Leukemia unspecified	3	0.2	0.4	0.5	0.0	0.0	4	0.3	0.4	0.3	0.0	0.0
Myelodysplastic disease	23	1.5	2.8	2.1	0.1	0.2	19	1.3	2.1	1.5	0.1	0.2
Other and unspecified	66	4.1	7.9	6.1	0.4	0.6	50	3.4	5.6	3.9	0.2	0.4
<b>All sites</b>	<b>1,583</b>	<b>100.0</b>	<b>189.3</b>	<b>145.5</b>	<b>8.4</b>	<b>16.8</b>	<b>1,458</b>	<b>100.0</b>	<b>163.8</b>	<b>117.5</b>	<b>7.8</b>	<b>12.9</b>

**Table 3.6.4** Percentage of morphologically verified and death certificate only cases, Khon Kaen

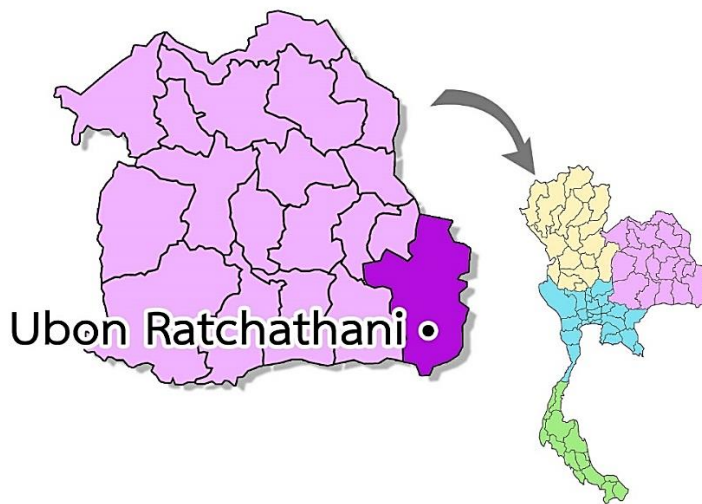
Site	Cases 3 Year	Male		Female			ICD-10
		% MV	% DCO	Cases 3 Year	% MV	% DCO	
Oral cavity	96	95.8	0.0	131	95.4	0.8	C00-C08
Oropharynx	21	95.2	0.0	4	75.0	0.0	C09-C10,C14
Nasopharynx	91	94.5	0.0	32	96.9	0.0	C11
Hypopharynx	26	96.2	0.0	5	100.0	0.0	C12-C13
Esophagus	47	78.7	2.1	4	50.0	0.0	C15
Stomach	100	85.0	2.0	83	78.3	1.2	C16
Small intestine	19	100.0	0.0	11	100.0	0.0	C17
Colon and rectum	436	85.3	0.2	351	85.2	0.3	C18-C21
Liver and bile duct	1,786	9.2	4.9	723	10.7	2.4	C22,C24
Gallbladder	41	53.7	12.2	51	51.0	5.9	C23
pancreas	33	9.1	3.0	39	30.8	0.0	C25
Nose,sinuses etc	13	69.2	0.0	10	90.0	0.0	C30-C31
Larynx	49	89.8	2.0	2	100.0	0.0	C32
Trachea, brochus and lung	671	48.4	3.4	274	58.4	1.5	C33-C34
Other thoracic organs	16	68.8	0.0	6	100.0	0.0	C37-C38
Bone	27	70.4	18.5	14	71.4	7.1	C40-C41
Melanoma of skin	19	100.0	0.0	19	100.0	0.0	C43
Other skin	95	98.9	0.0	142	98.6	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	29	100.0	0.0	23	95.7	0.0	C47,C49
Breast	6	83.3	0.0	865	94.3	0.2	C50
Vulva				17	94.1	0.0	C51
Vagina				10	80.0	0.0	C52
Cervix uteri				388	93.8	0.5	C53
Corpus uteri				169	98.8	0.0	C54
Uterus unspecified				13	76.9	15.4	C55
Ovary				170	85.3	1.8	C56
Other female genital organs				8	87.5	0.0	C57
Placenta				3	66.7	0.0	C58
Penis	52	94.2	0.0				C60
Prostate	137	75.2	1.5				C61
Testis	19	89.5	0.0				C62
Other male genital organs	0	0.0	0.0				C63
Kidney	51	88.2	0.0	22	81.8	4.5	C64
Renal pelvis	4	75.0	0.0	0	0.0	0.0	C65
Ureter	0	0.0	0.0	0	0.0	0.0	C66
Bladder	98	86.7	0.0	20	85.0	0.0	C67
Other urinary organs	1	0.0	100.0	2	100.0	0.0	C68
Eye	8	87.5	0.0	6	50.0	0.0	C69
Brain, nervous system	59	62.7	8.5	48	60.4	4.2	C70-C72
Thyroid	42	92.9	0.0	178	96.6	0.0	C73
Adrenal gland	2	100.0	0.0	4	50.0	0.0	C74
Other endocrine	5	100.0	0.0	1	100.0	0.0	C75
Hodgkin disease	12	100.0	0.0	7	100.0	0.0	C81
Non-Hodgkin lymphoma	177	99.4	0.0	161	99.4	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	50	100.0	0.0	33	97.0	0.0	C90
Leukemia	145	100.0	0.0	117	95.7	0.0	C91-C95
Myelodysplastic	69	100.0	0.0	57	98.2	0.0	D45-D47
Other and unspecified	197	43.7	13.7	150	44.7	8.7	O&U
<b>All sites</b>	<b>4,749</b>	<b>50.7</b>	<b>3.4</b>	<b>4,373</b>	<b>74.0</b>	<b>1.2</b>	<b>All</b>

# Ubon Ratchathani Cancer Registry

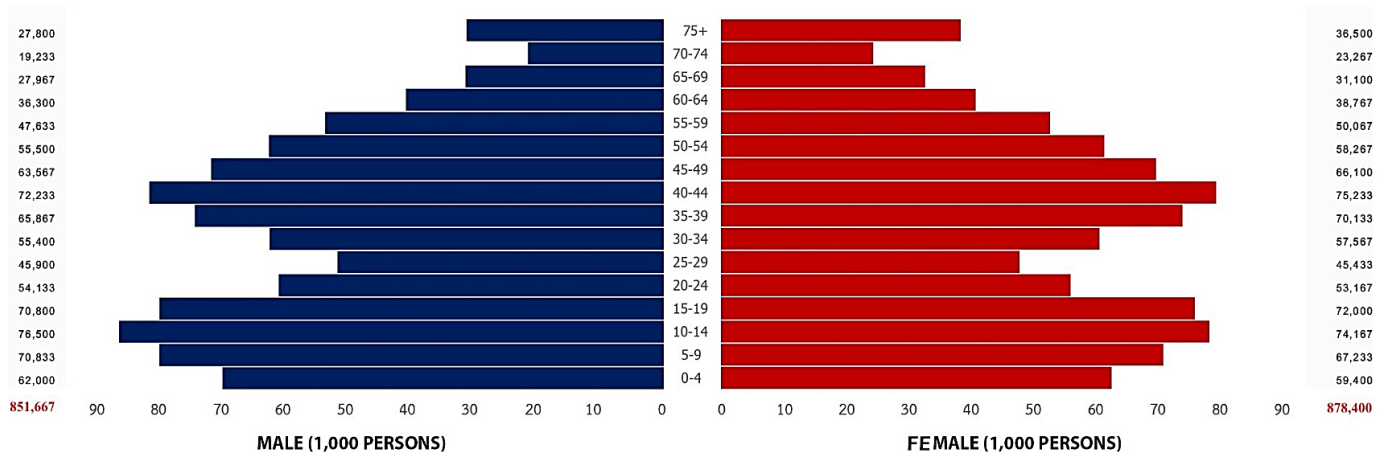
## Registration area

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.

There were 1,816,057 people in the year 2011. 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 2011 (average 2010-2012)



## **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 Sappasitthiprasong 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 and two private hospitals that can provide surgery and some chemotherapy.

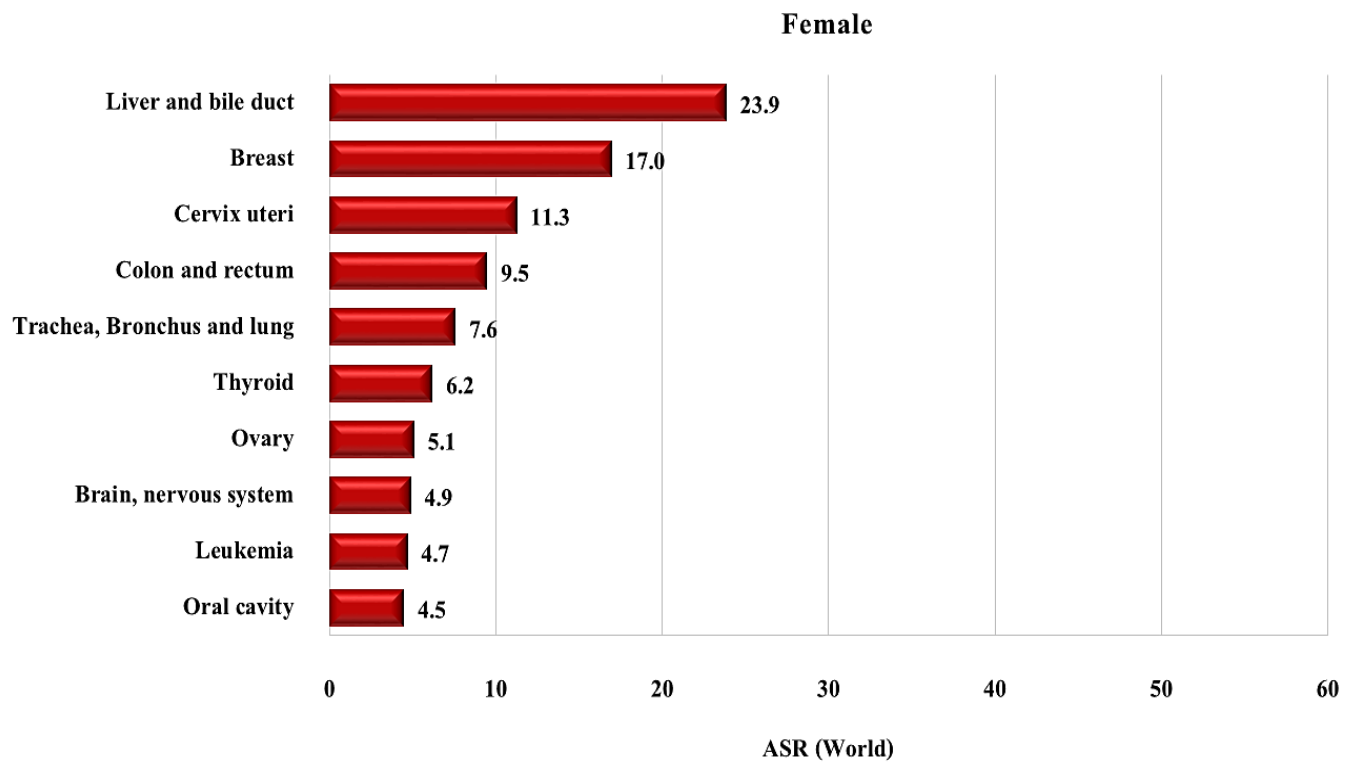
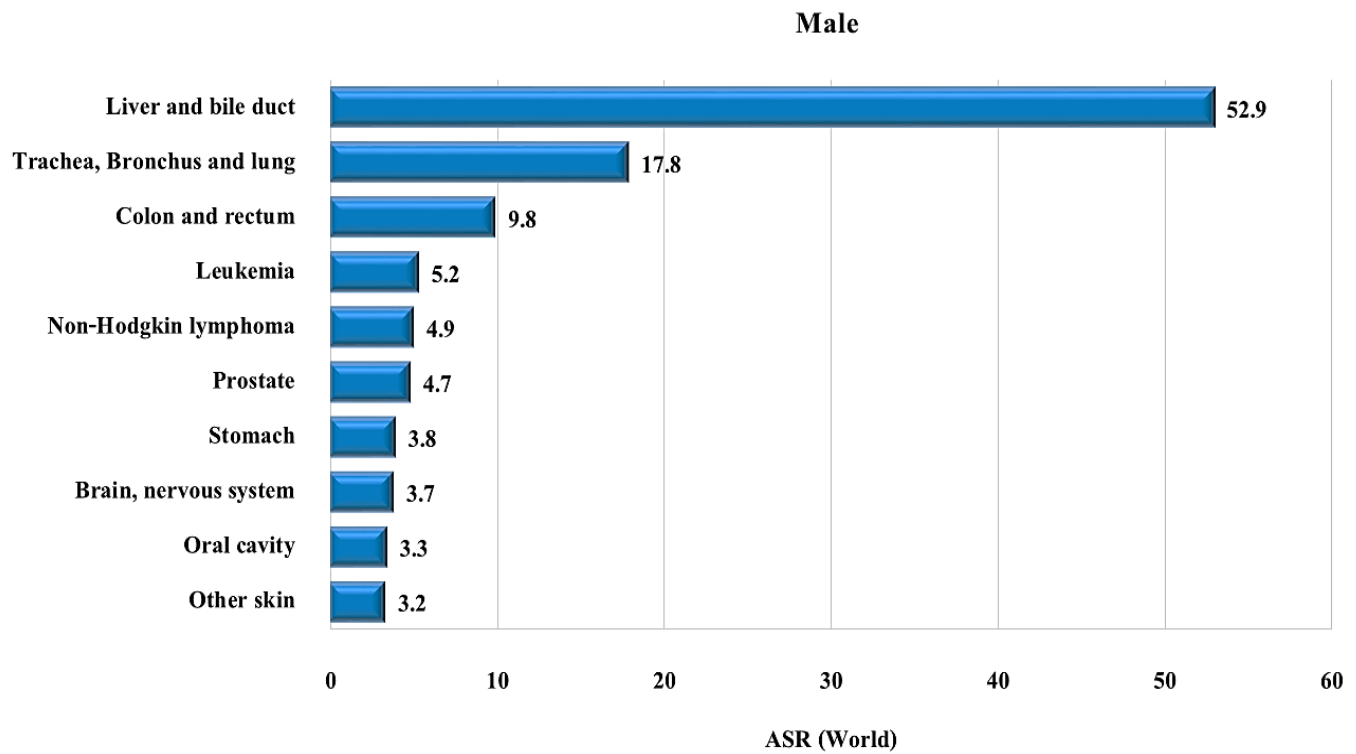
## **Registry procedures**

The population-based cancer registry of Ubon Ratchathani was set up at Ubon Ratchathani cancer hospitals. The sources of data are from all community hospitals, Sappasitthiprasong hospital, Ubon Ratchathani cancer hospitals, the military hospital and the 2 private hospitals.

## **Summary of results**

New cases registered in 2011, 1,533 were males and 1,471 were females, making 3,004 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 145.8 per 100,000, with liver and bile duct cancer ranking first (ASR = 52.9) followed by lung (ASR = 17.8) and colon and rectum (ASR = 9.8). The ASR of all cancer sites in females was 127.6 per 100,000, the three leading cancer sites in females being liver and bile duct (ASR = 23.9), breast (ASR = 17.0) and cervix (ASR = 11.3).

**Figure 3.7** Leading cancer in Ubon Ratchathani (mean annual ASR 2010-2012)



**Table 3.7.1** Ubon Ratchathani (2011), Mean annual ASR per 100,000 (2010-2012) 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	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.4	1.8	0.0	5.2	3.6	0.4	0.3	C00
Tongue	12	0.0	0.5	0.0	0.0	0.0	0.0	1.2	2.0	0.0	1.0	3.6	2.8	2.8	0.0	8.7	12.0	1.4	1.1	C01-02
Mouth	12	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.5	0.0	1.6	1.2	2.8	5.5	2.4	12.1	10.8	1.4	1.1	C03-06
Salivary glands	8	0.5	0.0	0.0	0.5	0.6	0.7	0.6	1.5	0.0	1.6	0.0	0.7	0.9	7.2	1.7	3.6	0.9	0.8	C07-08
Tonsil	7	0.0	0.9	0.0	0.5	0.6	0.0	0.0	0.0	0.5	0.5	3.0	0.7	0.9	1.2	8.7	3.6	0.9	0.7	C09
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	0.9	0.0	3.5	1.2	0.2	0.1	C10
Nasopharynx	29	0.0	0.0	0.0	0.0	2.5	1.5	0.0	2.0	3.2	3.1	4.8	9.1	11.0	14.3	24.3	7.0	3.4	2.9	C11
Hypopharynx	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.0	0.0	0.7	1.8	6.0	3.5	8.4	0.8	0.6	C12-13
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	0.9	1.2	3.5	0.0	0.2	0.1	C14
Oesophagus	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	1.6	4.2	1.4	6.4	13.1	3.5	7.2	1.6	1.3	C15
Stomach	41	0.0	0.0	0.0	0.0	0.6	0.7	0.6	2.0	1.8	6.3	4.8	11.9	14.7	17.9	20.8	38.4	4.8	3.8	C16
Small intestine	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	2.1	4.6	0.0	1.7	4.8	0.6	0.5	C17
Colon	59	0.0	0.0	0.0	0.5	1.2	4.4	1.8	3.5	4.2	8.4	10.2	16.8	16.5	20.3	31.2	48.0	7.0	5.6	C18
Rectum	42	0.0	0.0	0.0	0.0	0.0	2.2	0.6	1.5	2.3	4.2	6.0	11.9	21.1	19.1	34.7	25.2	5.0	4.1	C19-20
Anus	1	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C21
Liver and bile duct	567	0.0	0.0	0.9	0.0	1.2	5.8	12.0	21.8	35.5	64.0	117.1	172.8	218.5	272.9	350.1	379.7	66.5	52.9	C22,C24
Gallbladder	18	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.0	0.5	1.6	1.2	4.2	5.5	7.2	15.6	22.8	2.2	1.7	C23
Pancreas	15	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.8	2.1	1.8	4.9	6.4	11.9	3.5	7.2	1.7	1.4	C25
Nose, sinuses etc.	8	0.5	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.8	2.1	2.4	0.0	2.8	1.2	1.7	4.8	0.9	0.7	C30-31
Larynx	15	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.9	2.6	2.4	3.5	4.6	8.3	19.1	6.0	1.8	1.5	C32
Trachea, Bronchus and lung	190	0.0	0.0	0.0	0.0	1.8	1.5	4.2	5.1	11.1	13.6	24.6	42.7	62.4	118.0	164.6	160.5	22.3	17.8	C33-34
Other thoracic organs	4	0.0	0.0	0.0	0.5	1.2	0.7	0.0	0.0	0.5	0.0	0.6	3.5	0.9	0.0	1.7	0.0	0.5	0.5	C37-38
Bone	21	0.0	0.5	2.6	1.9	1.8	0.7	0.0	0.5	1.8	2.6	1.8	3.5	6.4	3.6	10.4	15.6	2.4	2.1	C40-C41
Melanoma of skin	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	1.0	1.2	1.4	0.0	1.2	0.0	1.2	0.5	0.4	C43
Other skin	35	0.5	0.0	0.0	0.5	0.0	0.0	1.2	2.0	1.4	2.1	1.8	7.7	15.6	7.2	26.0	45.6	4.1	3.2	C44
Mesothelioma	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.0	0.0	0.0	0.0	0.0	0.1	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	11	0.0	0.0	0.4	0.5	0.6	2.2	3.6	1.0	0.9	0.0	2.4	2.8	3.7	1.2	1.7	4.8	1.3	1.2	C47,C49
Breast	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.9	0.5	0.6	0.7	2.8	1.2	0.0	4.8	0.5	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	17	0.5	0.5	0.4	0.0	0.6	0.0	0.6	2.0	1.4	3.7	1.8	4.9	4.6	6.0	6.9	9.6	2.0	1.6	C60
Prostate	53	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.5	0.0	1.0	2.4	2.1	17.4	23.8	57.2	91.1	6.2	4.7	C61
Testis	8	1.1	0.0	0.0	0.5	1.8	1.5	3.6	1.0	1.4	1.0	0.0	0.7	0.9	0.0	0.0	2.4	1.0	1.0	C62
Kidney	22	0.5	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	3.1	4.2	7.0	8.3	17.9	17.3	9.4	2.6	2.2	C64
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	1.7	0.0	0.0	0.0	C65
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	2.4	0.1	0.0	C66
Bladder	31	0.0	0.5	0.0	0.0	0.0	0.7	0.0	1.0	1.4	1.6	4.8	4.9	11.0	15.5	26.0	34.8	3.7	2.9	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68
Eye	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	1.4	1.8	1.2	3.5	1.2	0.4	0.3	C69
Brain, nervous system	36	2.2	0.9	0.0	1.9	4.3	1.5	2.4	2.0	2.8	5.8	7.2	4.9	9.2	8.3	15.6	21.6	4.2	3.7	C70-72
Thyroid	15	0.5	0.0	0.0	1.4	0.6	2.2	1.2	2.5	1.8	2.1	1.8	1.4	1.8	3.6	10.4	8.4	1.8	1.6	C73
Adrenal gland	2	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.6	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C74
Other endocrine	2	0.0	0.0	2.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C75
Hodgkin disease	2	0.0	0.0	0.4	0.0	0.0	0.0	0.6	0.5	0.5	0.5	0.0	0.0	0.9	0.0	0.0	1.2	0.3	0.2	C81
Non-Hodgkin lymphoma	49	1.6	1.9	0.4	1.9	1.2	1.5	2.4	2.5	3.2	5.8	6.6	14.7	11.0	28.6	27.7	24.8	5.7	4.9	C82-85,C96
Multiple myeloma	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	4.2	6.4	2.4	6.9	7.2	1.2	1.0	C90
Lymphoid leukemia	9	3.8	0.9	2.2	0.0	3.1	1.5	0.0	0.5	0.0	0.0	0.0	0.7	0.9	0.0	1.7	2.4	1.1	1.3	C91
Myeloid leukemia	18	0.5	0.5	1.3	0.5	1.2	2.2	2.4	1.5	1.4	1.6	0.6	5.6	6.4	1.2	15.6	6.0	2.2	1.9	C92-94
Leukemia unspecified	18	2.7	0.5	0.9	0.9	0.0	2.2	1.2	1.5	0.9	2.1	3.6	2.8	1.8	3.6	12.1	9.6	2.1	2.0	C95
Myelodysplastic disease	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	1.2	0.0	1.8	2.4	0.0	0.0	0.3	0.3	D45-D47
Other and unspecified	94	1.1	0.5	0.4	0.5	0.6	2.9	3.6	5.6	7.4	7.3	17.4	23.1	26.6	41.7	76.3	67.1	11.1	9.0	O&U
<b>All sites</b>	<b>1,533</b>	<b>16.7</b>	<b>8.5</b>	<b>12.6</b>	<b>12.7</b>	<b>26.5</b>	<b>38.5</b>	<b>46.3</b>	<b>69.3</b>	<b>95.1</b>	<b>159.9</b>	<b>252.3</b>	<b>388.4</b>	<b>530.8</b>	<b>692.5</b>	<b>1036.4</b>	<b>1126.0</b>	<b>179.7</b>	<b>145.8</b>	<b>ALL</b>

**Table 3.7.2** Ubon Ratchathani (2011), Mean annual ASR per 100,000 (2010-2012) 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	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	2.7	7.7	6.4	11.5	15.5	1.7	1.2	C00
Tongue	9	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.5	1.3	0.5	1.1	3.3	0.9	4.3	5.7	3.7	1.0	0.7	C01-02
Mouth	26	0.0	0.0	0.4	0.0	0.0	0.7	0.0	0.0	0.4	2.0	0.0	4.7	12.0	10.7	15.8	27.4	3.0	2.1	C03-06
Salivary glands	5	0.6	0.0	0.0	0.9	0.0	0.0	0.6	1.0	1.3	0.5	0.0	1.3	0.0	1.1	1.4	0.0	0.5	0.5	C07-08
Tonsil	4	0.6	0.0	0.0	0.9	0.6	0.0	0.0	1.0	0.4	1.0	0.6	2.0	0.0	0.0	0.0	0.0	0.5	0.5	C09
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	0.9	0.0	C10
Nasopharynx	11	0.0	0.0	0.0	0.5	0.6	2.2	1.7	0.0	0.9	0.5	1.7	6.0	2.6	4.3	0.0	2.7	1.3	1.1	C11
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	1.4	0.9	0.1	0.1	0.1	C12-13
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C14
Oesophagus	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.3	3.4	0.0	2.9	2.7	0.5	0.3	C15
Stomach	36	0.0	0.0	0.0	0.0	0.0	1.5	1.2	3.3	3.1	4.0	5.1	6.7	8.6	5.4	25.8	26.5	4.1	2.9	C16
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.0	0.6	0.7	1.7	1.1	2.9	0.0	0.4	0.3	C17
Colon	65	0.0	0.0	0.0	0.0	0.0	2.2	2.3	1.4	2.7	6.6	8.6	24.0	21.5	23.6	37.2	37.4	7.4	5.4	C18
Rectum	47	0.0	0.0	0.0	0.0	0.0	0.7	0.0	2.9	3.5	5.0	10.9	12.0	13.8	19.3	25.8	23.7	5.3	3.9	C19-20
Anus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.7	0.9	1.1	0.0	2.7	0.3	0.2	C21
Liver and bile duct	290	0.0	0.0	0.4	0.9	0.0	0.0	4.6	10.9	10.6	22.2	43.5	59.9	113.5	135.0	196.3	189.0	33.0	23.9	C22,C24
Gallbladder	23	0.0	0.0	0.0	0.5	0.0	0.0	0.6	0.0	0.4	0.5	0.6	4.7	11.2	10.7	12.9	22.8	2.6	1.8	C23
Pancreas	10	0.0	0.5	0.0	0.5	0.0	0.0	0.6	0.5	0.4	1.5	1.1	1.3	0.9	4.3	8.6	6.4	1.1	0.8	C25
Nose, sinuses etc.	5	0.0	0.0	0.0	0.0	1.3	0.7	0.0	0.0	0.4	0.5	1.7	0.7	0.9	1.1	4.3	0.9	0.6	0.5	C30-31
Larynx	3	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.5	0.4	0.5	0.0	0.0	0.0	1.1	1.4	2.7	0.3	0.3	C32
Trachea, Bronchus and lung	92	0.0	0.0	0.4	0.0	1.9	2.9	0.6	3.8	5.3	6.6	13.7	24.0	27.5	40.7	53.0	60.3	10.4	7.6	C33-34
Other thoracic organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.7	0.9	1.1	1.4	1.8	0.3	0.2	C37-38
Bone	20	0.0	1.0	2.2	1.9	1.3	0.7	0.6	1.0	1.3	1.5	2.9	4.0	1.7	10.7	10.0	5.5	2.2	1.9	C40-C41
Melanoma of skin	5	0.6	0.0	0.0	0.0	0.0	0.7	0.0	0.5	0.0	0.0	0.0	0.0	3.4	2.1	2.9	2.7	0.5	0.5	C43
Other skin	33	0.6	0.0	0.0	0.5	0.0	0.0	1.2	0.5	1.3	5.5	1.7	8.7	2.6	12.9	22.9	30.1	3.8	2.6	C44
Mesothelioma	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	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	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	9	0.6	0.0	0.0	0.5	0.6	0.0	1.2	1.9	0.9	1.0	2.9	0.7	1.7	1.1	4.3	0.9	1.0	0.8	C47,C49
Breast	194	0.0	0.0	0.0	0.0	0.6	2.9	15.6	24.2	35.0	58.5	48.6	51.3	50.7	37.5	24.4	29.2	22.1	17.0	C50
Vulva	7	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.4	1.0	1.1	4.0	1.7	1.1	1.4	3.7	0.8	0.6	C51
Vagina	3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.4	1.0	0.6	0.7	0.0	0.0	2.9	0.9	0.3	0.3	C52
Cervix uteri	130	0.0	0.0	0.0	0.9	1.9	2.9	13.3	21.9	33.2	27.7	24.6	31.3	28.4	15.0	21.5	27.4	14.8	11.3	C53
Corpus uteri	29	0.0	0.0	0.0	0.5	0.0	1.5	0.6	1.0	2.7	5.0	11.4	10.7	10.3	8.6	7.2	3.7	3.3	2.6	C54
Uterus unspecified	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.8	0.5	3.4	2.0	1.7	2.1	0.0	5.5	1.0	0.7	C55
Ovary	54	0.0	0.5	1.3	1.4	3.8	4.4	6.4	7.1	6.6	11.6	13.2	8.0	13.8	12.9	10.0	7.3	6.1	5.1	C56
Other female genital organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.7	1.7	0.0	1.4	0.0	0.2	0.2	C57
Placenta	1	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.4	0.0	0.0	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
Kidney	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.5	0.6	1.3	1.7	2.1	5.7	0.9	0.6	0.5	C64
Renal pelvis	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	1.4	0.0	0.1	0.1	C65
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	1.4	0.0	0.0	0.0	C66
Bladder	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.5	1.7	0.7	2.6	4.3	4.3	7.3	1.1	0.8	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	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	C68
Eye	2	0.6	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	3.7	0.3	0.2	C69
Brain, nervous system	51	0.6	2.0	1.3	1.9	3.8	3.7	4.6	5.2	7.5	10.1	10.3	10.0	10.3	6.4	15.8	11.9	5.8	4.9	C70-72
Thyroid	67	0.0	0.0	0.9	2.8	3.8	8.8	7.5	13.3	12.8	9.6	13.7	8.0	12.9	5.4	12.9	19.3	7.6	6.2	C73
Adrenal gland	1	1.1	0.5	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	0.2	0.2	C74
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
Hodgkin disease	4	0.6	0.0	0.9	0.5	1.3	1.5	0.6	0.0	0.0	0.0	0.6	0.7	0.0	0.0	0.0	0.0	0.4	0.5	C81
Non-Hodgkin lymphoma	39	1.7	0.0	0.4	0.5	2.5	2.2	0.6	4.3	4.4	4.0	4.6	10.0	12.9	18.2	14.3	11.9	4.5	3.7	C82-85,C96
Multiple myeloma	11	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.4	1.5	1.7	3.3	4.3	4.3	8.6	5.5	1.3	1.0	C90
Lymphoid leukemia	10	2.8	1.5	1.3	0.9	0.0	0.0	1.2	0.5	0.4	0.5	1.1	1.3	2.6	1.1	2.9	2.7	1.2	1.2	C91
Myeloid leukemia	20	1.1	1.0	1.3	0.9	0.0	1.5	0.0	1.9	2.2	4.5	4.0	3.3	6.9	0.0	4.3	6.4	2.2	1.9	C92-94
Leukemia unspecified	17	1.7	1.0	0.4	0.5	0.0	0.7	2.9	1.0	1.3	1.0	2.9	2.0	4.3	6.4	2.9	8.3	1.9	1.6	C95
Myelodysplastic disease	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.0	1.3	0.0	2.1	1.4	0.9	0.3	0.2	D45-D47
Other and unspecified	80	0.0	0.5	0.4	0.9	0.6	2.2	3.5	3.3	5.8	7.1	12.0	11.3	26.7	28.9	55.9	52.1	9.1	6.7	O&U
<b>All sites</b>	<b>1,471</b>	<b>12.9</b>	<b>8.4</b>	<b>12.6</b>	<b>18.5</b>	<b>26.3</b>	<b>45.5</b>	<b>73.0</b>	<b>115.0</b>	<b>152.9</b>	<b>210.3</b>	<b>258.6</b>	<b>331.6</b>	<b>432.5</b>	<b>454.4</b>	<b>649.0</b>	<b>676.7</b>	<b>167.4</b>	<b>127.6</b>	<b>ALL</b>

**Table 3.7.3** Mean annual incidence, Ubon Ratchathani, 2010-2012

Site	Male					Female						
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate	
					0-64	0-74					0-64	0-74
					(per 100,000)						(percent)	
Lip	4	0.2	0.4	0.3	0.0	0.0	15	1.0	1.7	1.2	0.1	0.1
Tongue	12	0.8	1.4	1.1	0.1	0.1	9	0.6	1.0	0.7	0.0	0.1
Mouth	12	0.8	1.4	1.1	0.1	0.1	26	1.8	3.0	2.1	0.1	0.2
Salivary glands	8	0.5	0.9	0.8	0.0	0.1	5	0.3	0.5	0.5	0.0	0.0
Tonsil	7	0.5	0.9	0.7	0.0	0.1	4	0.3	0.5	0.5	0.0	0.0
Other oropharynx	1	0.1	0.2	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Nasopharynx	29	1.9	3.4	2.9	0.2	0.4	11	0.7	1.3	1.1	0.1	0.1
Hypopharynx	7	0.5	0.8	0.6	0.0	0.1	1	0.1	0.1	0.1	0.0	0.0
Pharynx unspecified	1	0.1	0.2	0.1	0.0	0.0	1	0.0	0.1	0.1	0.0	0.0
Oesophagus	13	0.9	1.6	1.3	0.1	0.2	4	0.3	0.5	0.3	0.0	0.0
Stomach	41	2.7	4.8	3.8	0.2	0.4	36	2.4	4.1	2.9	0.2	0.3
Small intestine	5	0.3	0.6	0.5	0.0	0.0	3	0.2	0.4	0.3	0.0	0.0
Colon	59	3.9	7.0	5.6	0.3	0.6	65	4.4	7.4	5.4	0.3	0.7
Rectum	42	2.8	5.0	4.1	0.2	0.5	47	3.2	5.3	3.9	0.2	0.5
Anus	1	0.1	0.1	0.1	0.0	0.0	3	0.2	0.3	0.2	0.0	0.0
Liver and bile duct	567	37.0	66.5	52.9	3.2	6.4	290	19.7	33.0	23.9	1.3	3.0
Gallbladder	18	1.2	2.2	1.7	0.1	0.2	23	1.6	2.6	1.8	0.1	0.2
Pancreas	15	1.0	1.7	1.4	0.1	0.2	10	0.7	1.1	0.8	0.0	0.1
Nose, sinuses etc.	8	0.5	0.9	0.7	0.1	0.1	5	0.3	0.6	0.5	0.0	0.1
Larynx	15	1.0	1.8	1.5	0.1	0.2	3	0.2	0.3	0.3	0.0	0.0
Trachea, Bronchus and lung	190	12.4	22.3	17.8	0.8	2.2	92	6.2	10.4	7.6	0.4	0.9
Other thoracic organs	4	0.3	0.5	0.5	0.0	0.0	2	0.2	0.3	0.2	0.0	0.0
Bone	21	1.3	2.4	2.1	0.1	0.2	20	1.3	2.2	1.9	0.1	0.2
Melanoma of skin	4	0.3	0.5	0.4	0.0	0.0	5	0.3	0.5	0.5	0.0	0.1
Other skin	35	2.3	4.1	3.2	0.2	0.3	33	2.2	3.8	2.6	0.1	0.3
Mesothelioma	1	0.0	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	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
Connective tissue	11	0.7	1.3	1.2	0.1	0.1	9	0.6	1.0	0.8	0.1	0.1
Breast	5	0.3	0.5	0.4	0.0	0.0	194	13.2	22.1	17.0	1.4	1.7
Vulva							7	0.5	0.8	0.6	0.0	0.1
Vagina							3	0.2	0.3	0.3	0.0	0.0
Cervix uteri							130	8.8	14.8	11.3	0.9	1.1
Corpus uteri							29	2.0	3.3	2.6	0.2	0.3
Uterus unspecified							9	0.6	1.0	0.7	0.1	0.1
Ovary							54	3.6	6.1	5.1	0.4	0.5
Other female genital organs							2	0.1	0.2	0.2	0.0	0.0
Placenta							1	0.0	0.1	0.1	0.0	0.0
Penis	17	1.1	2.0	1.6	0.1	0.2						
Prostate	53	3.5	6.2	4.7	0.1	0.5						
Testis	8	0.5	1.0	1.0	0.1	0.1						
Kidney	22	1.5	2.6	2.2	0.1	0.3	5	0.4	0.6	0.5	0.0	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.1	0.1	0.0	0.0
Ureter	1	0.0	0.1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Bladder	31	2.0	3.7	2.9	0.1	0.3	10	0.7	1.1	0.8	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
Eye	3	0.2	0.4	0.3	0.0	0.0	2	0.2	0.3	0.2	0.0	0.0
Brain, nervous system	36	2.3	4.2	3.7	0.2	0.3	51	3.5	5.8	4.9	0.4	0.5
Thyroid	15	1.0	1.8	1.6	0.1	0.2	67	4.6	7.6	6.2	0.5	0.6
Adrenal gland	2	0.1	0.2	0.2	0.0	0.0	1	0.1	0.2	0.2	0.0	0.0
Other endocrine	2	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Hodgkin disease	2	0.2	0.3	0.2	0.0	0.0	4	0.2	0.4	0.5	0.0	0.0
Non-Hodgkin lymphoma	49	3.2	5.7	4.9	0.3	0.6	39	2.7	4.5	3.7	0.2	0.4
Multiple myeloma	10	0.7	1.2	1.0	0.1	0.1	11	0.8	1.3	1.0	0.1	0.1
Lymphoid leukemia	9	0.6	1.1	1.3	0.1	0.1	10	0.7	1.2	1.2	0.1	0.1
Myeloid leukemia	18	1.2	2.2	1.9	0.1	0.2	20	1.3	2.2	1.9	0.1	0.2
Leukemia unspecified	18	1.2	2.1	2.0	0.1	0.2	17	1.1	1.9	1.6	0.1	0.1
Myelodysplastic disease	3	0.2	0.3	0.3	0.0	0.0	3	0.2	0.3	0.2	0.0	0.0
Other and unspecified	94	6.2	11.1	9.0	0.5	1.1	80	5.4	9.1	6.7	0.4	0.8
<b>All sites</b>	<b>1,533</b>	<b>100.0</b>	<b>179.7</b>	<b>145.8</b>	<b>8.3</b>	<b>16.9</b>	<b>1,471</b>	<b>100.0</b>	<b>167.4</b>	<b>127.6</b>	<b>8.5</b>	<b>14.0</b>

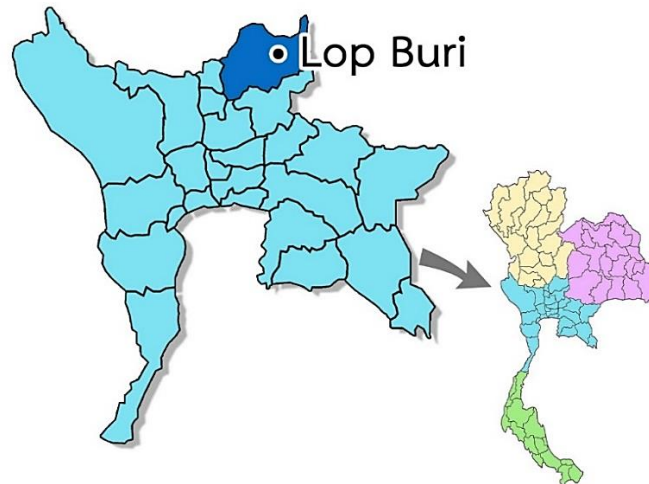
**Table 3.7.4** Percentage of morphologically verified and death certificate only cases, Ubon Ratchathani

Site	Male			Female			ICD-10
	Cases 3 Year	% MV	% DCO	Cases 3 Year	% MV	% DCO	
Oral cavity	106	74.5	2.8	165	88.5	1.2	C00-C08
Oropharynx	30	80.0	0.0	16	43.8	0.0	C09-C10,C14
Nasopharynx	88	89.8	2.3	33	81.8	0.0	C11
Hypopharynx	21	81.0	0.0	3	66.7	0.0	C12-C13
Esophagus	40	62.5	7.5	12	75.0	8.3	C15
Stomach	123	77.2	10.6	107	71.0	11.2	C16
Small intestine	15	80.0	6.7	10	80.0	0.0	C17
Colon and rectum	308	73.1	3.6	342	78.9	5.0	C18-C21
Liver and bile duct	1,702	8.7	20.9	870	9.8	20.1	C22,C24
Gallbladder	55	36.4	23.6	69	40.6	18.8	C23
pancrease	44	36.4	6.8	30	40.0	6.7	C25
Nose,sinuses etc	23	69.6	0.0	15	60.0	0.0	C30-C31
Larynx	45	82.2	2.2	9	55.6	0.0	C32
Trachea, brochus and lung	570	43.9	13.5	275	40.7	14.2	C33-C34
Other thoracic organs	13	76.9	7.7	7	42.9	0.0	C37-C38
Bone	62	22.6	24.2	59	18.6	22.0	C40-C41
Melanoma of skin	12	100.0	0.0	14	100.0	0.0	C43
Other skin	105	76.2	1.9	99	74.7	4.0	C44
Mesothelioma	2	100.0	0.0	1	100.0	0.0	C45
Kaposi sarcoma	0	0.0	0.0	1	100.0	0.0	C46
Connective and soft tissue	34	85.3	0.0	26	88.5	0.0	C47,C49
Breast	14	78.6	14.3	583	93.8	1.9	C50
Vulva				20	80.0	0.0	C51
Vagina				9	44.4	11.1	C52
Cervix uteri				390	92.6	0.8	C53
Corpus uteri				87	88.5	0.0	C54
Uterus unspecified				26	42.3	19.2	C55
Ovary				161	66.5	5.0	C56
Other female genital organs				6	100.0	0.0	C57
Placenta				2	100.0	0.0	C58
Penis	51	74.5	0.0				C60
Prostate	159	67.9	5.7				C61
Testis	25	76.0	0.0				C62
Other male genital organs	0		0.0				C63
Kidney	67	74.6	3.0	16	56.3	6.3	C64
Renal pelvis	1	0.0	0.0	2	50.0	0.0	C65
Ureter	2	100.0	0.0	1	100.0	0.0	C66
Bladder	94	72.3	1.1	29	72.4	0.0	C67
Other urinary organs	0	0.0	0.0	1	0.0	100.0	C68
Eye	10	50.0	0.0	7	71.4	14.3	C69
Brain, nervous system	107	39.3	19.6	154	47.4	11.0	C70-C72
Thyroid	46	69.6	2.2	201	71.6	1.0	C73
Adrenal gland	5	40.0	0.0	4	75.0	0.0	C74
Other endocrine	6	100.0	0.0	0	0.0	0.0	C75
Hodgkin disease	7	100.0	0.0	11	100.0	0.0	C81
Non-Hodgkin lymphoma	148	100.0	0.0	118	99.2	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	31	96.8	0.0	34	97.1	2.9	C90
Leukemia	136	80.1	14.7	140	82.9	15.0	C91-C95
Myelodysplastic	8	100.0	0.0	8	100.0	0.0	D45-D47
Other and unspecified	283	53.4	15.5	240	44.2	19.6	O&U
<b>All sites</b>	<b>4,598</b>	<b>44.1</b>	<b>13.0</b>	<b>4,413</b>	<b>61.2</b>	<b>9.0</b>	<b>All</b>

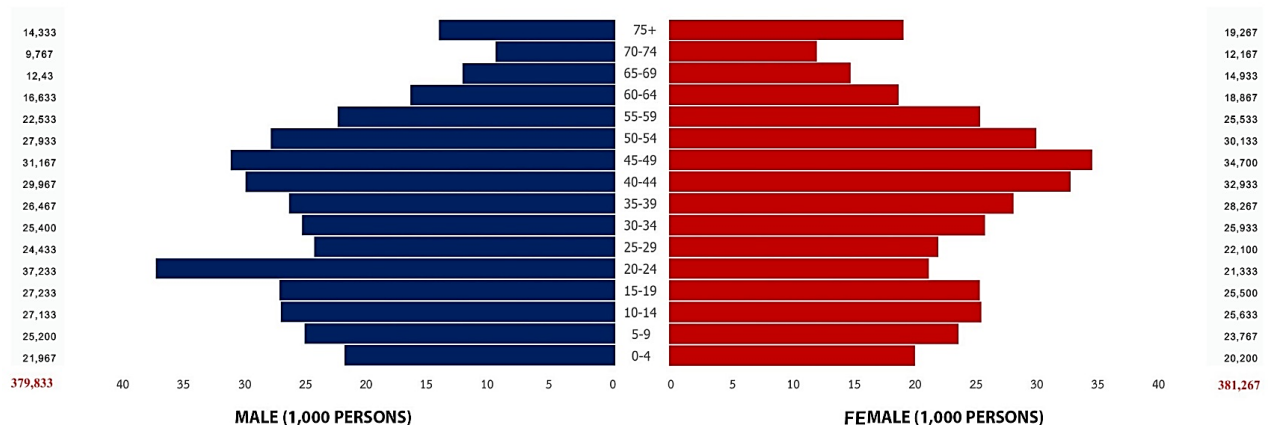
# Lop Buri Cancer Registry

## 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 Lopburi registry covers of 11 districts and a population estimated in 2008 at 800,928. 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 2011 (average 2010-2012)



## **Cancer care facilities**

The government of Thailand provides general health care in the region. Hospitals providing extensive cancer patient care include Lopburi cancer center, King Narai hospital, and Ananthamahidol (Army) Hospital. Facilities for surgery, chemotherapy, and radiotherapy are available. Two private hospitals, 1 Air Force hospital, and 10 community hospitals are capable of supplying basic care to cancer patients. As in other provinces in Thailand, an extensive network of health care facilities takes care of patients at the household level.

## **Registry procedures**

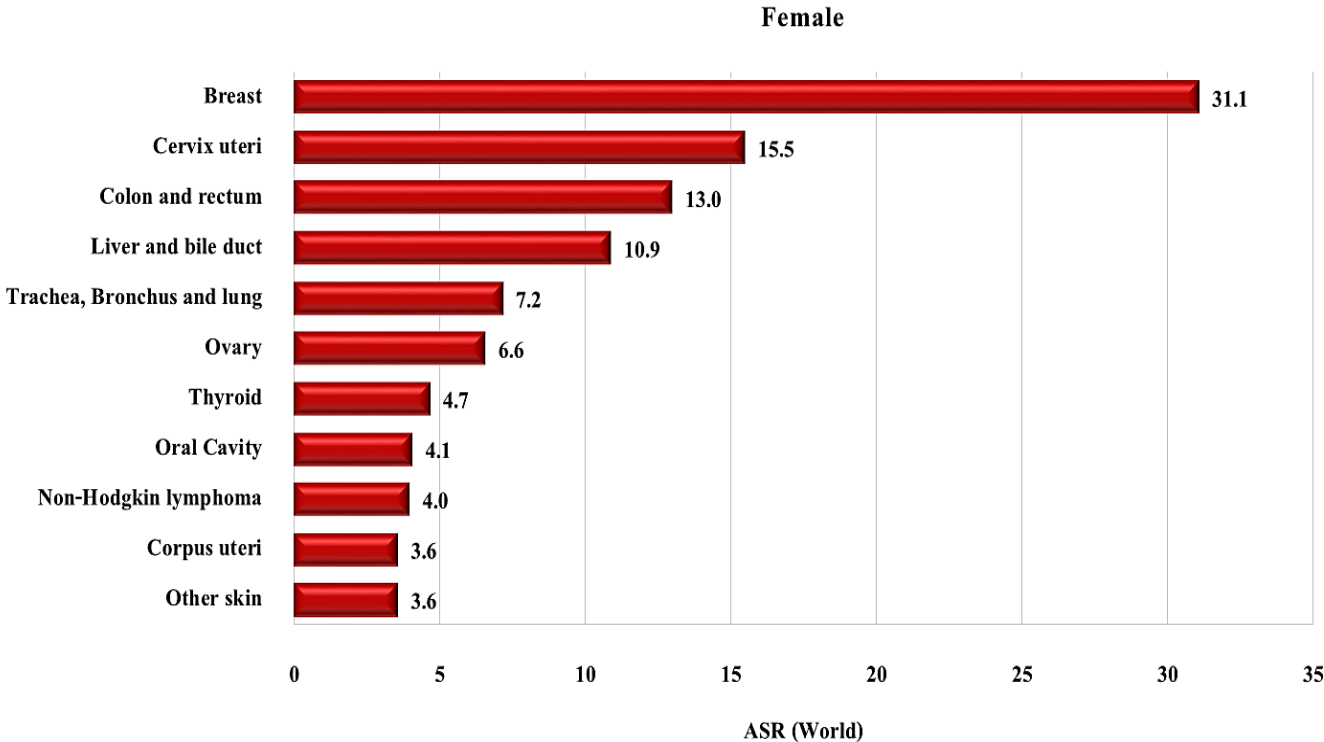
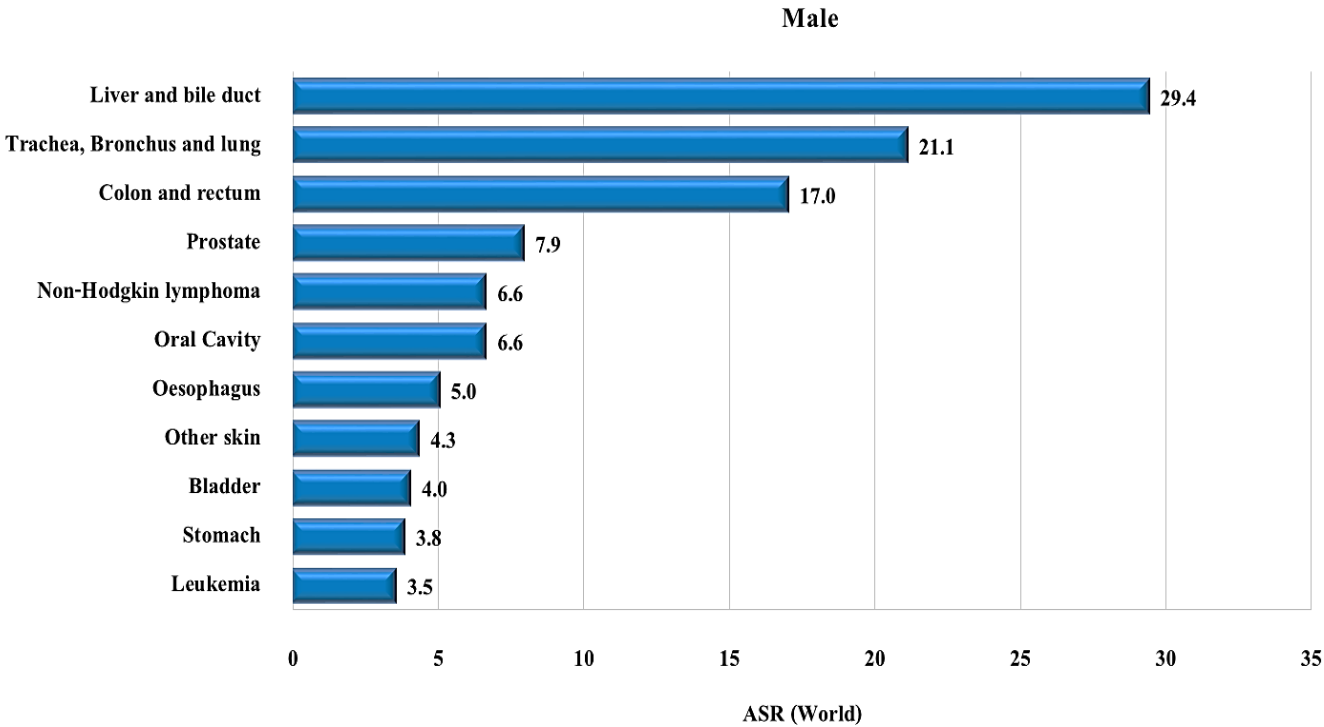
The registry is located within the Lopburi cancer center. The registry is staffed by one part - time medical doctor and a number of full - time registrars.

The Lopburi registry undertakes active case finding from sources of data consisting of the hospitals mentioned above. The completeness of death registration is acceptable but the cause of death data are not sufficiently 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.

## **Summary of results**

New cases registered in 2011, 725 were males and 723 were females, making 1,448 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 142.7 per 100,000, with liver and bile duct cancer ranking first (ASR = 29.4) followed by lung (ASR = 21.1) and colon and rectum (ASR = 17.0). The ASR of all cancer sites in females was 129.7 per 100,000, the three leading cancer sites being breast (ASR = 31.1), cervix (ASR = 15.5) and colon and rectum (ASR = 13.0).

**Figure 3.8** Leading cancer in Lop Buri, (mean annual ASR 2010-2012)



**Table 3.8.1** Lop Buri (2011), Mean annual ASR per 100,000 (2010-2012) 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	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.2	0.0	0.0	2.7	0.0	2.3	0.4	0.3	C00
Tongue	15	1.5	1.3	0.0	0.0	0.0	0.0	0.0	3.8	3.3	5.3	7.2	8.9	16.0	5.4	10.2	14.0	3.9	3.1	C01-02
Mouth	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.1	3.2	13.1	5.9	14.0	8.0	20.5	18.6	3.9	2.9	C03-06
Salivary glands	2	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	5.4	3.4	2.3	0.4	0.3	C07-08
Tonsil	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.2	2.1	9.5	1.5	2.0	8.0	6.8	2.3	1.8	1.4	C09
Other oropharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	3.0	2.0	2.7	0.0	2.3	0.6	0.5	C10
Nasopharynx	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.2	7.2	17.8	6.0	10.7	6.8	4.7	3.0	2.2	C11
Hypopharynx	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.2	6.4	11.9	11.8	12.0	8.0	3.4	9.3	3.6	2.6	C12-13
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	1.5	0.0	2.7	0.0	0.0	0.4	0.3	C14
Oesophagus	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.2	16.0	17.9	20.7	14.0	24.1	30.7	9.3	6.7	5.0	C15
Stomach	20	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	2.2	6.4	9.5	14.8	16.0	18.8	13.7	27.9	5.2	3.8	C16
Small intestine	3	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.3	0.0	0.0	0.0	1.5	6.0	0.0	0.0	7.0	0.8	0.6	C17
Colon	49	0.0	0.0	0.0	0.0	0.9	1.4	2.6	5.0	5.6	5.3	17.9	31.1	28.1	48.3	95.6	79.1	13.0	9.5	C18
Rectum	36	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.0	4.4	5.3	17.9	25.1	32.1	42.9	41.0	37.2	9.4	7.1	C19-20
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.1	0.0	1.2	3.0	0.0	0.0	3.4	2.3	0.6	0.4	C21
Liver and bile duct	150	0.0	0.0	1.2	1.2	0.0	2.7	5.2	13.9	30.0	57.8	77.6	105.0	104.2	123.3	180.9	148.8	39.6	29.4	C22,C24
Gallbladder	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	4.0	5.4	3.4	0.0	0.5	0.4	C23
Pancreas	10	0.0	0.0	0.0	0.0	0.0	1.4	1.3	0.0	1.1	3.2	3.6	3.0	6.0	16.1	10.2	16.3	2.6	2.0	C25
Nose, sinuses etc.	4	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.2	3.0	2.0	2.7	6.8	0.0	1.0	0.8	C30-31
Larynx	17	1.5	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.2	4.3	10.7	10.4	12.0	18.8	6.8	25.6	4.5	3.4	C32
Trachea, Bronchus and lung	109	1.5	0.0	0.0	0.0	0.9	1.4	2.6	7.6	4.4	13.9	20.3	59.2	90.2	123.3	198.0	218.6	28.8	21.1	C33-34
Other thoracic organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.2	3.0	0.0	0.0	0.0	2.3	0.4	0.3	C37-38
Bone	5	0.0	0.0	0.0	4.9	0.9	0.0	0.0	0.0	0.0	1.1	1.2	3.0	6.0	0.0	0.0	7.0	1.3	1.1	C40-C41
Melanoma of skin	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	5.3	1.2	0.0	6.0	2.7	6.8	2.3	1.2	1.0	C43
Other skin	22	1.5	0.0	0.0	0.0	0.0	1.4	3.9	2.5	3.3	1.1	3.6	10.4	14.0	18.8	23.9	58.1	5.9	4.3	C44
Kaposi's sarcoma	1	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	5.4	0.0	0.0	0.3	0.2	C46
Connective tissue	6	1.5	0.0	0.0	0.0	0.9	0.0	0.0	1.3	0.0	2.1	3.6	3.0	0.0	5.4	0.0	11.6	1.5	1.1	C47,C49
Breast	3	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	1.1	0.0	1.5	0.0	5.4	10.2	4.7	0.9	0.7	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	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.1	2.4	3.0	4.0	2.7	3.4	7.0	1.3	0.9	C60
Prostate	45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.1	7.2	7.4	16.0	56.3	75.1	162.8	11.8	7.9	C61
Testis	2	0.0	0.0	0.0	1.2	0.0	1.4	1.3	1.3	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.4	0.4	C62
Other male genital organs	2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	1.5	0.0	0.0	0.0	2.3	0.5	0.5	C63
Kidney	5	0.0	0.0	1.2	0.0	0.0	0.0	1.3	1.3	0.0	1.1	0.0	3.0	8.0	5.4	6.8	4.7	1.4	1.2	C64
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
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	2.3	0.1	0.0	C66
Bladder	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	3.2	6.0	8.9	14.0	21.4	34.1	58.1	5.8	4.0	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	0.0	0.0	2.0	0.0	0.0	0.0	0.1	0.1	C68
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	2.3	0.1	0.0	C69
Brain, nervous system	9	1.5	2.6	0.0	0.0	0.9	1.4	2.6	1.3	1.1	2.1	0.0	0.0	8.0	10.7	13.7	7.0	2.3	2.1	C70-72
Thyroid	7	0.0	0.0	0.0	1.2	0.0	2.7	1.3	1.3	2.2	3.2	6.0	1.5	6.0	2.7	0.0	2.3	1.8	1.5	C73
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
Other endocrine	1	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C75
Hodgkin disease	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	C81
Non-Hodgkin lymphoma	33	0.0	2.6	1.2	0.0	0.0	1.4	0.0	3.8	3.3	8.6	14.3	20.7	34.1	24.1	41.0	37.2	8.6	6.6	C82-85,C96
Multiple myeloma	4	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	2.2	0.0	1.2	4.4	2.0	5.4	6.8	0.0	1.1	0.9	C90
Lymphoid leukemia	4	3.0	0.0	6.1	0.0	0.0	1.4	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.7	0.0	2.3	1.1	1.3	C91
Myeloid leukemia	8	0.0	0.0	0.0	0.0	0.9	1.4	5.2	1.3	2.2	2.1	2.4	1.5	4.0	8.0	0.0	11.6	2.1	1.6	C92-94
Leukemia unspecified	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	4.0	5.4	3.4	9.3	0.9	0.6	C95
Myelodysplastic disease	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.2	1.5	4.0	2.7	3.4	4.7	0.8	0.6	D45-D47
Other and unspecified	32	0.0	0.0	0.0	0.0	0.9	1.4	3.9	1.3	6.7	4.3	9.5	20.7	28.1	34.9	44.4	39.5	8.3	6.3	O&U
<b>All sites</b>	<b>725</b>	<b>13.7</b>	<b>6.6</b>	<b>12.3</b>	<b>9.8</b>	<b>9.0</b>	<b>20.5</b>	<b>36.7</b>	<b>69.3</b>	<b>91.2</b>	<b>182.9</b>	<b>293.6</b>	<b>423.1</b>	<b>527.1</b>	<b>697.1</b>	<b>914.7</b>	<b>1067.4</b>	<b>190.9</b>	<b>142.7</b>	<b>ALL</b>

**Table 3.8.2** Lop Buri (2011), Mean annual ASR per 100,000 (2010-2012) 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	7	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.3	1.8	6.7	0.0	26.0	1.9	1.0	C00
Tongue	6	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	3.8	4.4	2.6	5.3	2.2	2.7	5.2	1.7	1.1	C01-02
Mouth	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	2.2	1.3	8.8	4.5	11.0	26.0	2.6	1.5	C03-06
Salivary glands	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.0	0.0	2.2	0.0	0.0	4.5	2.7	5.2	0.9	0.5	C07-08
Tonsil	2	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.8	0.0	0.0	1.7	0.4	0.3	C09
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	1.3	1.8	0.0	0.0	1.7	0.3	0.2	C10
Nasopharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	2.2	0.0	3.5	0.0	0.0	1.7	0.5	0.4	C11
Hypopharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.3	0.2	C12-13
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.2	0.1	C14
Oesophagus	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.9	0.0	8.9	8.2	6.9	1.4	0.8	C15
Stomach	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.0	3.8	4.4	2.6	3.5	17.9	16.4	8.7	2.9	1.9	C16
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.3	3.5	0.0	0.0	1.7	0.5	0.3	C17
Colon	44	0.0	0.0	0.0	1.3	0.0	0.0	0.0	4.7	6.1	4.8	11.1	20.9	33.6	44.6	63.0	48.4	11.5	7.4	C18
Rectum	30	0.0	0.0	0.0	0.0	0.0	3.0	2.6	1.2	2.0	6.7	11.1	11.7	30.0	31.2	35.6	24.2	8.0	5.3	C19-20
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.1	1.3	1.8	0.0	2.7	0.0	0.4	0.3	C21
Liver and bile duct	67	0.0	0.0	0.0	0.0	0.0	0.0	1.3	4.7	5.1	8.6	19.9	44.4	45.9	64.7	82.2	77.9	17.6	10.9	C22,C24
Gallbladder	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.1	1.3	5.3	0.0	11.0	8.7	1.4	0.8	C23
Pancreas	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.9	0.0	2.6	10.6	6.7	5.5	6.9	1.8	1.2	C25
Nose, sinuses etc.	2	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.0	0.0	0.0	2.6	0.0	0.0	0.0	3.5	0.5	0.3	C30-31
Larynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.3	0.0	2.2	0.0	3.5	0.4	0.2	C32
Trachea, Bronchus and lung	43	0.0	0.0	0.0	0.0	0.0	1.5	1.3	4.7	3.0	7.7	18.8	23.5	37.1	33.5	41.1	46.7	11.4	7.2	C33-34
Other thoracic organs	1	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	2.2	0.0	3.5	0.3	0.2	C37-38
Bone	5	0.0	0.0	0.0	1.3	1.6	1.5	1.3	0.0	1.0	1.9	2.2	0.0	3.5	4.5	0.0	1.7	1.2	1.0	C40-C41
Melanoma of skin	4	0.0	0.0	0.0	1.3	1.6	3.0	0.0	0.0	1.0	0.0	0.0	1.3	0.0	6.7	0.0	3.5	1.0	0.9	C43
Other skin	22	0.0	0.0	0.0	1.3	1.6	0.0	1.3	1.2	1.0	2.9	5.5	2.6	21.2	11.2	24.7	45.0	5.9	3.6	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	6	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.0	1.0	2.2	3.9	1.8	0.0	5.5	8.7	1.5	0.9	C47,C49
Breast	166	0.0	0.0	0.0	0.0	7.8	21.1	25.7	54.2	63.8	79.7	92.9	70.5	97.2	55.8	84.9	31.1	43.5	31.1	C50
Vulva	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.3	0.0	0.0	0.0	3.5	0.3	0.2	C51
Vagina	2	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	2.2	0.0	5.2	0.4	0.2	C52
Cervix uteri	86	0.0	0.0	0.0	0.0	4.7	4.5	11.6	33.0	39.5	42.3	46.5	33.9	30.0	31.2	41.1	29.4	22.5	15.5	C53
Corpus uteri	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	6.1	10.6	22.1	11.7	12.4	6.7	8.2	6.9	5.6	3.6	C54
Uterus unspecified	2	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	2.0	0.0	0.0	2.6	1.8	0.0	0.0	0.0	0.5	0.4	C55
Ovary	37	0.0	0.0	0.0	0.0	1.6	3.0	3.9	10.6	14.2	15.4	22.1	14.4	15.9	24.6	13.7	15.6	9.6	6.6	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	1.8	0.0	0.0	0.0	0.1	0.1	C57
Placenta	1	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	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	3	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.2	0.0	0.0	1.1	1.3	1.8	0.0	2.7	3.5	0.7	0.5	C64
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	1.7	0.1	0.0	C65
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	1.7	0.1	0.0	C66
Bladder	7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.3	3.5	8.9	5.5	17.3	1.8	1.2	C67
Other urinary organs	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	0.0	0.1	0.1	C68
Eye	2	3.3	0.0	0.0	0.0	0.0	1.5	0.0	1.2	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6	C69
Brain, nervous system	15	0.0	2.8	3.9	0.0	1.6	1.5	5.1	2.4	6.1	9.6	1.1	3.9	7.1	4.5	5.5	6.9	3.9	3.1	C70-72
Thyroid	23	0.0	0.0	0.0	2.6	3.1	6.0	7.7	10.6	8.1	9.6	7.7	7.8	5.3	6.7	21.9	1.7	6.0	4.7	C73
Adrenal gland	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.2	0.1	C74
Other endocrine	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	C75
Hodgkin disease	0	0.0	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	0.1	0.1	C81
Non-Hodgkin lymphoma	21	0.0	0.0	0.0	0.0	1.6	6.0	7.7	1.2	3.0	4.8	8.8	15.7	7.1	17.9	16.4	8.7	5.5	4.0	C82-85,C96
Multiple myeloma	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	5.2	3.5	8.9	2.7	3.5	1.3	0.9	C90
Lymphoid leukemia	3	1.7	2.8	1.3	1.3	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.3	0.0	2.2	2.7	1.7	0.9	1.0	C91
Myeloid leukemia	7	1.7	0.0	1.3	1.3	0.0	0.0	0.0	2.4	1.0	1.0	3.3	2.6	7.1	2.2	8.2	1.7	1.8	1.5	C92-94
Leukemia unspecified	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.0	1.9	0.0	1.3	1.8	4.5	2.7	5.2	1.0	0.7	C95
Myelodysplastic disease	1	0.0	0.0	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	2.7	0.0	0.3	0.4	D45-D47
Other and unspecified	22	1.7	0.0	0.0	0.0	1.6	3.0	0.0	4.7	4.0	2.9	8.8	9.1	12.4	11.2	27.4	24.2	5.8	3.9	O&U
<b>All sites</b>	<b>723</b>	<b>9.9</b>	<b>5.6</b>	<b>7.8</b>	<b>14.4</b>	<b>31.2</b>	<b>60.3</b>	<b>75.8</b>	<b>147.4</b>	<b>178.1</b>	<b>227.7</b>	<b>311.9</b>	<b>323.8</b>	<b>431.1</b>	<b>439.7</b>	<b>558.9</b>	<b>536.3</b>	<b>189.6</b>	<b>129.7</b>	<b>ALL</b>

**Table 3.8.3** Mean annual incidence, Lop Buri, 2010-2012

Site	No.Cases Year	Freq. (%)	Male				Female					
			Crude rate  (per 100,000)	ASR world  (per 100,000)	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate  (per 100,000)	ASR world  (per 100,000)	Cum.Rate	
					0-64	0-74					0-64	0-74
					(per 100,000)	(per 100,000)					(per 100,000)	(per 100,000)
Lip	2	0.2	0.4	0.3	0.0	0.0	7	1.0	1.9	1.0	0.0	0.1
Tongue	15	2.0	3.9	3.1	0.2	0.3	6	0.9	1.7	1.1	0.1	0.1
Mouth	15	2.1	3.9	2.9	0.2	0.3	10	1.4	2.6	1.5	0.1	0.1
Salivary glands	2	0.2	0.4	0.3	0.0	0.0	3	0.5	0.9	0.5	0.0	0.1
Tonsil	7	1.0	1.8	1.4	0.1	0.2	2	0.2	0.4	0.3	0.0	0.0
Other oropharynx	2	0.3	0.6	0.5	0.0	0.0	1	0.1	0.3	0.2	0.0	0.0
Nasopharynx	11	1.6	3.0	2.2	0.2	0.3	2	0.3	0.5	0.4	0.0	0.0
Hypopharynx	14	1.9	3.6	2.6	0.2	0.3	1	0.2	0.3	0.2	0.0	0.0
Pharynx unspecified	1	0.2	0.4	0.3	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0
Oesophagus	25	3.5	6.7	5.0	0.4	0.6	5	0.7	1.4	0.8	0.0	0.1
Stomach	20	2.7	5.2	3.8	0.3	0.4	11	1.5	2.9	1.9	0.1	0.3
Small intestine	3	0.4	0.8	0.6	0.0	0.0	2	0.3	0.5	0.3	0.0	0.0
Colon	49	6.8	13.0	9.5	0.5	1.2	44	6.1	11.5	7.4	0.4	1.0
Rectum	36	4.9	9.4	7.1	0.5	0.9	30	4.2	8.0	5.3	0.3	0.7
Anus	2	0.3	0.6	0.4	0.0	0.1	2	0.2	0.4	0.3	0.0	0.0
Liver and bile duct	150	20.7	39.6	29.4	2.0	3.5	67	9.3	17.6	10.9	0.6	1.4
Gallbladder	2	0.3	0.5	0.4	0.0	0.1	5	0.7	1.4	0.8	0.0	0.1
Pancreas	10	1.4	2.6	2.0	0.1	0.2	7	1.0	1.8	1.2	0.1	0.1
Nose, sinuses etc.	4	0.5	1.0	0.8	0.1	0.1	2	0.3	0.5	0.3	0.0	0.0
Larynx	17	2.3	4.5	3.4	0.2	0.3	2	0.2	0.4	0.2	0.0	0.0
Trachea, Bronchus and lung	109	15.1	28.8	21.1	1.0	2.6	43	6.0	11.4	7.2	0.5	0.9
Other thoracic organs	2	0.2	0.4	0.3	0.0	0.0	1	0.2	0.3	0.2	0.0	0.0
Bone	5	0.7	1.3	1.1	0.1	0.1	5	0.6	1.2	1.0	0.1	0.1
Melanoma of skin	5	0.6	1.2	1.0	0.1	0.1	4	0.5	1.0	0.9	0.0	0.1
Other skin	22	3.1	5.9	4.3	0.2	0.4	22	3.1	5.9	3.6	0.2	0.4
Kaposi's sarcoma	1	0.1	0.3	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Connective tissue	6	0.8	1.5	1.1	0.1	0.1	6	0.8	1.5	0.9	0.1	0.1
Breast	3	0.5	0.9	0.7	0.0	0.1	166	23.0	43.5	31.1	2.6	3.3
Vulva							1	0.2	0.3	0.2	0.0	0.0
Vagina							2	0.2	0.4	0.2	0.0	0.0
Cervix uteri							86	11.8	22.5	15.5	1.2	1.6
Corpus uteri							21	3.0	5.6	3.6	0.3	0.4
Uterus unspecified							2	0.3	0.5	0.4	0.0	0.0
Ovary							37	5.1	9.6	6.6	0.5	0.7
Other female genital organs							0	0.0	0.1	0.1	0.0	0.0
Placenta							1	0.1	0.2	0.2	0.0	0.0
Penis	5	0.7	1.3	0.9	0.1	0.1						
Prostate	45	6.2	11.8	7.9	0.2	0.8						
Testis	2	0.2	0.4	0.4	0.0	0.0						
Other male genital organs	2	0.3	0.5	0.5	0.0	0.0						
Kidney	5	0.7	1.4	1.2	0.1	0.1	3	0.4	0.7	0.5	0.0	0.0
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0
Ureter	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0
Bladder	22	3.0	5.8	4.0	0.2	0.5	7	1.0	1.8	1.2	0.0	0.1
Other urinary organs	0	0.0	0.1	0.1	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0
Eye	0	0.0	0.1	0.0	0.0	0.0	2	0.2	0.4	0.6	0.0	0.0
Brain, nervous system	9	1.2	2.3	2.1	0.1	0.2	15	2.1	3.9	3.1	0.2	0.3
Thyroid	7	1.0	1.8	1.5	0.1	0.1	23	3.2	6.0	4.7	0.3	0.5
Adrenal gland	0	0.0	0.0	0.0	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0
Other endocrine	1	0.1	0.2	0.2	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0
Hodgkin disease	0	0.0	0.1	0.1	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0
Non-Hodgkin lymphoma	33	4.5	8.6	6.6	0.5	0.8	21	2.9	5.5	4.0	0.3	0.5
Multiple myeloma	4	0.6	1.1	0.9	0.1	0.1	5	0.7	1.3	0.9	0.1	0.1
Lymphoid leukemia	4	0.6	1.1	1.3	0.1	0.1	3	0.5	0.9	1.0	0.0	0.1
Myeloid leukemia	8	1.1	2.1	1.6	0.1	0.1	7	1.0	1.8	1.5	0.1	0.2
Leukemia unspecified	3	0.5	0.9	0.6	0.0	0.1	4	0.6	1.0	0.7	0.0	0.1
Myelodysplastic disease	3	0.4	0.8	0.6	0.0	0.1	1	0.2	0.3	0.4	0.0	0.0
Other and unspecified	32	4.4	8.3	6.3	0.4	0.8	22	3.0	5.8	3.9	0.2	0.4
<b>All sites</b>	<b>725</b>	<b>100.0</b>	<b>190.9</b>	<b>142.7</b>	<b>8.5</b>	<b>16.5</b>	<b>723</b>	<b>100.0</b>	<b>189.6</b>	<b>129.7</b>	<b>9.1</b>	<b>14.1</b>

**Table 3.8.4** 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	99	82.8	5.1	81	79.0	2.5	C00-C08
Oropharynx	32	75.0	3.1	10	80.0	10.0	C09-C10,C14
Nasopharynx	34	79.4	0.0	6	50.0	0.0	C11
Hypopharynx	41	90.2	0.0	4	100.0	0.0	C12-C13
Esophagus	76	72.4	10.5	16	56.3	12.5	C15
Stomach	59	67.8	6.8	33	66.7	6.1	C16
Small intestine	9	66.7	11.1	6	83.3	0.0	C17
Colon and rectum	262	76.7	5.0	228	74.6	2.6	C18-C21
Liver and bile duct	451	22.4	27.5	201	23.9	24.9	C22,C24
Gallbladder	6	33.3	50.0	16	50.0	25.0	C23
pancreas	30	23.3	23.3	21	19.0	19.0	C25
Nose,sinuses etc	11	54.5	0.0	6	50.0	0.0	C30-C31
Larynx	51	68.6	3.9	5	80.0	0.0	C32
Trachea, bronchus and lung	328	51.8	21.6	130	49.2	20.0	C33-C34
Other thoracic organs	5	60.0	0.0	4	50.0	25.0	C37-C38
Bone	15	46.7	6.7	14	21.4	21.4	C40-C41
Melanoma of skin	14	100.0	0.0	11	100.0	0.0	C43
Other skin	67	80.6	7.5	67	71.6	3.0	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	17	70.6	0.0	17	58.8	0.0	C47,C49
Breast	10	70.0	0.0	498	88.8	1.6	C50
Vulva				4	100.0	0.0	C51
Vagina				5	60.0	0.0	C52
Cervix uteri				257	89.9	2.3	C53
Corpus uteri				64	90.6	1.6	C54
Uterus unspecified				6	66.7	0.0	C55
Ovary				110	53.6	10.0	C56
Other female genital organs				1	100.0	0.0	C57
Placenta				2	50.0	0.0	C58
Penis	15	73.3	13.3				C60
Prostate	134	78.4	3.0				C61
Testis	5	100.0	0.0				C62
Other male genital organs	6	16.7	0.0				C63
Kidney	16	50.0	18.8	8	62.5	0.0	C64
Renal pelvis	0	0.0	0.0	1	100.0	0.0	C65
Ureter	1	100.0	0.0	1	100.0	0.0	C66
Bladder	66	78.8	7.6	21	71.4	4.8	C67
Other urinary organs	1	0.0	0.0	1	100.0	0.0	C68
Eye	1	100.0	0.0	5	40.0	0.0	C69
Brain, nervous system	26	38.5	23.1	45	44.4	24.4	C70-C72
Thyroid	21	81.0	4.8	69	84.1	0.0	C73
Adrenal gland	0	0.0	0.0	2	0.0	50.0	C74
Other endocrine	2	100.0	0.0	1	0.0	0.0	C75
Hodgkin disease	1	100.0	0.0	1	100.0	0.0	C81
Non-Hodgkin lymphoma	98	98.0	1.0	63	96.8	1.6	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	12	100.0	0.0	15	100.0	0.0	C90
Leukemia	46	100.0	0.0	43	100.0	0.0	C91-C95
Myelodysplastic	9	100.0	0.0	4	100.0	0.0	D45-D47
Other and unspecified	95	20.0	49.5	66	27.3	36.4	O&U
<b>All sites</b>	<b>2,175</b>	<b>59.3</b>	<b>14.4</b>	<b>2,169</b>	<b>70.9</b>	<b>7.7</b>	<b>All</b>

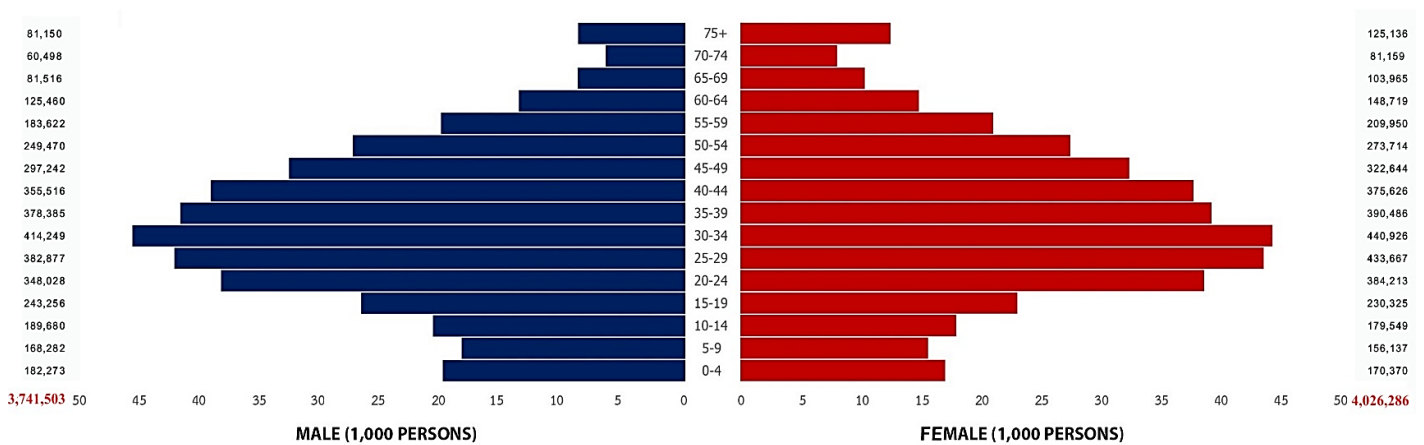
# Bangkok Cancer Registry

## 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 centre 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.



Population pyramid, Bangkok  
estimated population in 2011 (average 2010-2012)



## **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.

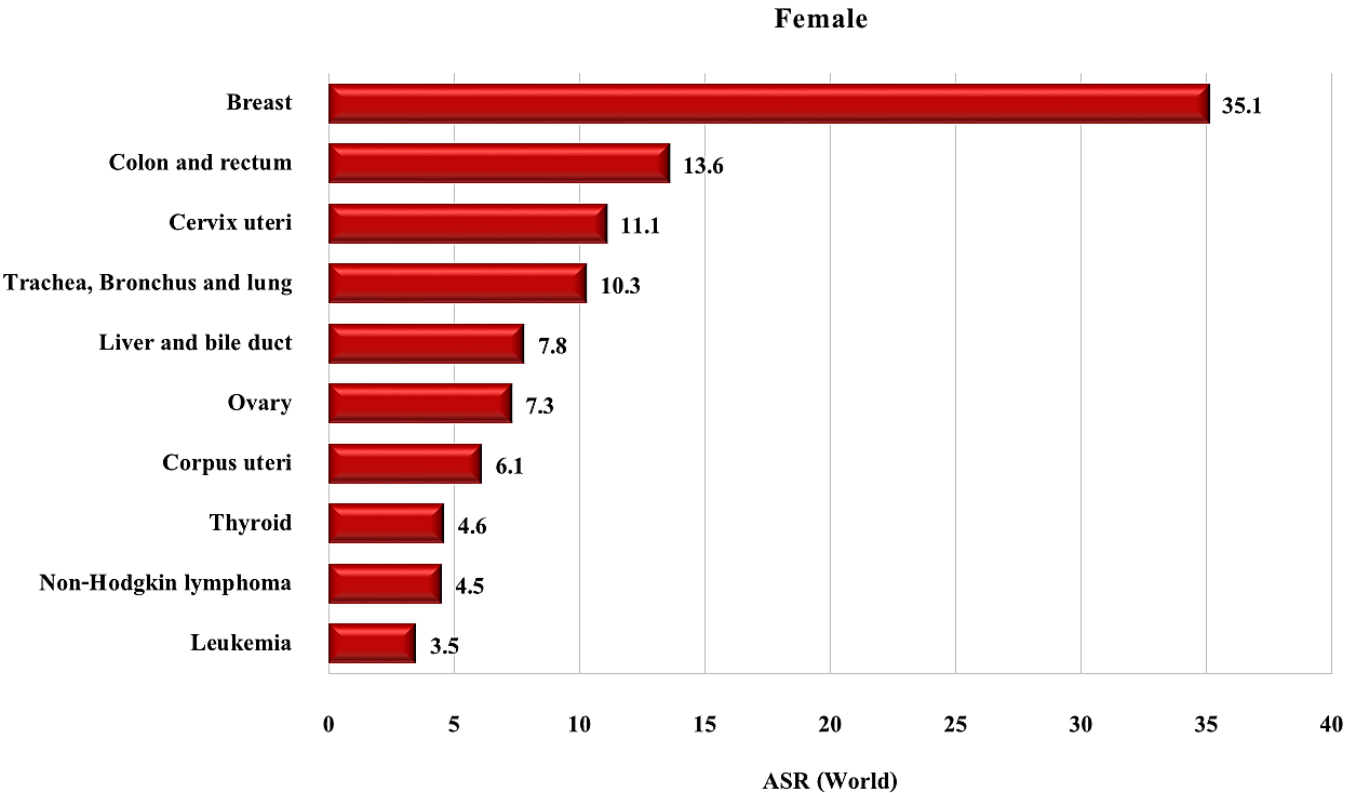
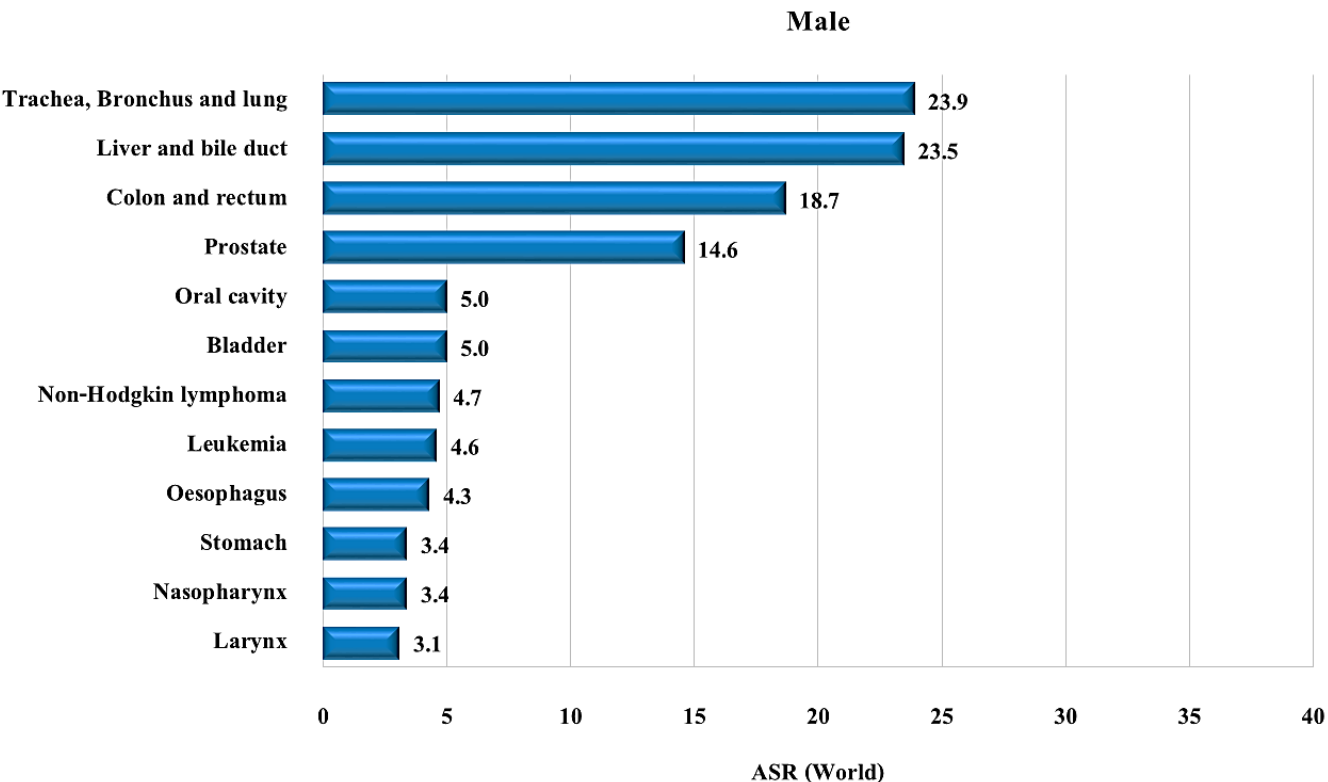
## **Registry procedures**

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 2011, 5,498 were males and 6,644 were females, making 12,142 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 146.2 per 100,000, with lung cancer ranking first (ASR = 23.9), followed by liver and bile duct (ASR = 23.5) and colon and rectum (ASR = 18.7). The ASR of all cancer sites in females was 136.9 per 100,000, the three leading cancer sites being breast (ASR = 35.1), colon and rectum (ASR = 13.6) and cervix (ASR = 11.1).

**Figure 3.9** Leading cancer in Bangkok (mean annual ASR 2010-2012)



**Table 3.9.1** Bangkok (2011), Mean annual ASR per 100,000 (2010-2012) 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	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.8	0.8	0.6	0.8	0.1	0.1	C00
Tongue	81	0.0	0.0	0.0	0.1	0.1	0.3	0.4	1.1	1.9	3.7	4.9	6.5	9.6	6.5	14.3	7.0	2.2	2.0	C01-02
Mouth	83	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.4	0.8	2.6	5.3	6.9	9.3	12.3	17.1	13.6	2.2	2.2	C03-06
Salivary glands	26	0.0	0.2	0.2	0.1	0.2	0.1	0.2	0.3	0.6	0.6	0.9	2.2	2.4	4.5	4.4	3.3	0.7	0.7	C07-08
Tonsil	40	0.0	0.0	0.2	0.0	0.1	0.1	0.3	0.6	0.8	2.1	3.5	2.9	2.9	5.3	2.2	3.7	1.1	0.9	C09
Other oropharynx	9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.7	0.7	0.5	1.1	1.6	0.6	0.8	0.2	0.2	C10
Nasopharynx	149	0.0	0.0	0.7	0.5	0.3	0.5	1.5	2.4	4.2	8.1	11.9	11.8	11.4	14.7	11.0	5.3	4.0	3.4	C11
Hypopharynx	44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	1.6	2.7	5.3	4.8	4.1	7.7	6.2	1.2	1.1	C12-13
Pharynx unspecified	11	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.3	0.7	1.1	0.8	2.0	1.7	1.2	0.3	0.3	C14
Oesophagus	161	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.7	1.9	4.8	9.0	13.4	21.3	34.3	21.5	26.3	4.3	4.3	C15
Stomach	132	0.2	0.0	0.2	0.3	0.2	0.3	0.2	0.9	2.2	3.9	6.4	8.5	12.2	12.3	27.5	39.0	3.5	3.4	C16
Small intestine	10	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.2	0.3	0.7	0.5	1.2	2.8	2.9	0.3	0.2	C17
Colon	432	0.0	0.0	0.2	0.0	0.2	0.3	0.7	3.1	3.8	8.0	15.2	31.6	49.9	76.1	100.3	119.1	11.5	11.7	C18
Rectum	250	0.2	0.0	0.0	0.1	0.0	0.3	0.6	1.9	2.9	6.2	10.3	19.2	28.2	39.3	65.6	51.3	6.7	6.7	C19-20
Anus	13	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.1	0.3	0.7	0.5	2.1	0.8	3.3	1.2	0.3	0.3	C21
Liver and bile duct	926	0.9	0.0	0.2	0.1	0.7	0.7	2.5	8.2	14.3	30.8	53.6	86.6	103.9	123.1	144.4	152.8	24.7	23.5	C22,C24
Gallbladder	19	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.1	1.1	0.5	1.9	3.3	4.4	7.0	0.5	0.5	C23
Pancreas	105	0.2	0.0	0.0	0.0	0.1	0.0	0.5	0.5	0.8	1.3	4.1	10.0	10.6	12.3	24.2	33.7	2.8	2.8	C25
Nose, sinuses etc.	19	0.2	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.3	0.7	1.2	1.6	1.6	2.9	2.2	2.5	0.5	0.5	C30-31
Larynx	117	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.8	3.3	6.8	8.0	13.6	18.8	28.1	23.4	3.1	3.1	C32
Trachea, Bronchus and lung	887	0.0	0.0	0.2	0.5	0.3	0.4	1.0	3.3	8.5	19.5	36.2	61.4	95.9	151.7	212.7	248.9	23.7	23.9	C33-34
Other thoracic organs	16	0.0	0.0	0.0	0.5	0.3	0.3	0.0	0.2	0.1	0.6	0.5	1.1	1.9	0.8	1.1	3.3	0.4	0.4	C37-38
Bone	37	0.5	0.8	1.6	2.3	1.3	0.3	0.2	0.2	0.8	0.7	0.9	0.5	1.6	2.9	2.8	5.8	1.0	1.1	C40-C41
Melanoma of skin	8	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.4	0.4	0.5	1.6	1.1	2.5	0.2	0.2	C43
Other skin	91	0.0	0.2	0.2	0.0	0.1	0.6	0.3	0.3	0.8	1.7	2.8	5.1	6.9	11.9	14.9	41.5	2.4	2.4	C44
Mesothelioma	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.4	0.0	0.0	C45
Kaposi's sarcoma	3	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C46
Connective tissue	59	0.9	1.0	0.4	0.7	0.9	0.5	0.8	1.4	1.1	2.0	2.1	3.3	4.5	4.5	2.8	8.6	1.6	1.5	C47,C49
Breast	12	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.2	0.4	0.6	0.1	0.7	1.1	0.8	1.7	2.9	0.3	0.3	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	17	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.3	0.4	1.3	1.3	2.4	1.6	0.6	3.7	0.5	0.4	C60
Prostate	501	0.2	0.0	0.0	0.4	0.3	0.1	0.2	0.2	0.5	1.7	4.7	22.0	55.5	97.7	185.7	218.1	13.4	14.6	C61
Testis	17	0.7	0.0	0.0	0.8	0.5	0.3	0.6	0.5	0.6	0.4	0.3	0.4	0.5	0.8	1.1	0.4	0.5	0.5	C62
Other male genital organs	4	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.3	0.4	0.0	0.0	1.1	0.4	0.1	0.1	C63
Kidney	79	0.5	0.2	0.0	0.0	0.0	0.1	0.5	0.4	1.2	2.1	3.9	6.5	7.4	8.6	15.4	19.3	2.1	2.1	C64
Renal pelvis	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.2	0.5	0.0	0.6	1.6	0.1	0.1	C65
Ureter	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.5	0.0	2.2	1.2	0.1	0.1	C66
Bladder	181	0.2	0.2	0.2	0.0	0.0	0.2	0.3	0.3	1.5	2.0	6.1	8.4	20.2	25.4	49.0	73.1	4.8	5.0	C67
Other urinary organs	10	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.4	0.4	1.1	1.2	2.8	2.9	0.3	0.3	C68
Eye	5	1.1	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.2	0.3	0.0	0.5	0.4	0.0	0.0	0.1	0.2	C69
Brain, nervous system	103	0.9	2.8	2.8	1.1	0.5	1.2	1.3	1.7	1.7	2.7	6.3	4.7	7.2	11.4	11.0	8.6	2.7	2.8	C70-72
Thyroid	62	0.0	0.2	0.0	0.4	0.6	1.0	1.2	1.3	1.7	1.9	2.0	3.3	5.8	7.4	6.6	6.6	1.7	1.5	C73
Adrenal gland	3	0.7	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.8	0.1	0.1	C74
Other endocrine	4	0.2	0.4	0.5	0.3	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.4	0.1	0.2	C75
Hodgkin disease	17	0.2	0.0	0.5	0.7	1.2	0.3	0.3	0.3	0.3	0.1	0.3	0.7	0.3	0.8	0.6	1.6	0.5	0.4	C81
Non-Hodgkin lymphoma	183	0.9	0.8	1.1	1.2	1.2	2.1	1.1	2.6	3.0	6.4	6.9	12.0	15.1	22.9	27.0	30.4	4.9	4.7	C82-85,C96
Multiple myeloma	35	0.2	0.2	0.0	0.3	0.2	0.0	0.2	0.4	0.4	1.0	0.9	1.8	4.5	4.9	8.3	7.4	0.9	1.0	C90
Lymphoid leukemia	39	4.0	2.2	1.1	1.5	0.5	0.2	0.2	0.4	0.3	0.8	0.4	1.5	1.9	2.0	3.9	5.3	1.0	1.5	C91
Myeloid leukemia	59	0.7	0.8	1.4	1.2	1.1	0.7	0.7	1.1	1.4	1.5	1.1	3.1	4.0	4.1	5.5	9.0	1.6	1.6	C92-94
Leukemia unspecified	54	0.5	0.8	0.9	0.5	0.2	0.5	0.4	0.9	0.9	1.1	0.9	3.4	3.5	6.5	10.5	12.3	1.5	1.5	C95
Myelodysplastic disease	23	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.2	0.5	0.6	0.8	1.5	1.3	3.3	3.3	8.6	0.6	0.6	D45-D47
Other and unspecified	352	0.5	0.0	0.2	1.0	0.9	1.7	1.8	2.4	5.6	9.9	13.9	21.1	35.6	53.2	67.8	87.5	9.4	9.2	O&U
<b>All sites</b>	<b>5,498</b>	<b>15.2</b>	<b>11.1</b>	<b>12.7</b>	<b>15.2</b>	<b>12.3</b>	<b>14.2</b>	<b>19.7</b>	<b>40.4</b>	<b>68.5</b>	<b>138.3</b>	<b>234.4</b>	<b>383.8</b>	<b>569.1</b>	<b>802.7</b>	<b>1123.4</b>	<b>1314.4</b>	<b>146.9</b>	<b>146.2</b>	<b>ALL</b>

**Table 3.9.2** Bangkok (2011), Mean annual ASR per 100,000 (2010-2012) 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	8	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.2	1.0	1.2	2.4	0.2	0.2	C00
Tongue	47	0.0	0.0	0.0	0.0	0.3	0.2	0.4	0.4	1.1	1.9	1.6	3.0	4.3	5.8	2.9	4.8	1.2	1.0	C01-02
Mouth	28	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.6	0.4	0.7	1.1	1.3	2.0	2.6	3.7	4.5	0.7	0.6	C03-06
Salivary glands	20	0.0	0.0	0.0	0.3	0.0	0.4	0.3	0.4	0.5	0.6	0.4	1.3	1.8	1.6	2.1	0.8	0.5	0.4	C07-08
Tonsil	7	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.4	1.0	0.4	0.3	1.2	0.5	0.2	0.1	C09
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	C10
Nasopharynx	61	0.0	0.0	0.0	0.3	0.4	0.3	1.1	1.3	2.4	2.4	3.9	4.0	2.9	3.5	2.9	1.1	1.5	1.2	C11
Hypopharynx	2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C12-13
Pharynx unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.0	0.4	0.5	0.0	0.0	C14
Oesophagus	24	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	1.3	2.9	2.2	2.1	7.2	0.6	0.5	C15
Stomach	158	0.0	0.0	0.2	0.3	0.2	0.6	1.1	1.4	2.6	5.1	5.4	8.6	11.7	15.4	19.3	28.2	3.9	3.2	C16
Small intestine	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.5	0.6	0.4	1.0	0.4	2.4	0.2	0.2	C17
Colon	427	0.0	0.0	0.0	0.1	0.4	0.5	1.4	2.2	3.7	7.6	14.6	25.7	32.3	43.9	70.6	99.4	10.6	8.8	C18
Rectum	214	0.0	0.0	0.0	0.0	0.3	0.2	0.5	1.5	2.5	4.9	10.8	13.0	18.6	25.0	32.4	32.8	5.3	4.5	C19-20
Anus	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.4	0.5	1.1	0.9	1.0	2.9	2.9	0.4	0.3	C21
Liver and bile duct	371	0.6	0.0	0.4	0.1	0.0	0.5	1.1	2.0	3.2	6.7	14.2	18.3	32.1	43.3	65.3	78.0	9.2	7.8	C22,C24
Gallbladder	31	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.6	0.9	1.9	2.2	4.2	2.9	9.6	0.8	0.6	C23
Pancreas	115	0.2	0.0	0.0	0.0	0.2	0.1	0.0	0.9	1.1	1.4	3.4	6.0	11.4	14.7	23.0	22.6	2.8	2.5	C25
Nose, sinuses etc.	17	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.5	0.3	1.0	0.5	1.3	0.0	1.0	2.1	2.4	0.4	0.3	C30-31
Larynx	10	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.6	0.7	1.0	0.8	2.4	0.3	0.2	C32
Trachea, Bronchus and lung	496	0.0	0.0	0.0	0.1	0.4	0.9	0.6	2.5	7.1	9.8	16.4	31.1	44.8	53.5	77.2	98.8	12.3	10.3	C33-34
Other thoracic organs	15	0.4	0.0	0.2	0.0	0.0	0.1	0.2	0.3	0.2	0.6	0.6	0.6	1.8	0.6	1.6	1.1	0.4	0.4	C37-38
Bone	31	0.2	0.2	1.7	1.4	0.1	0.3	0.3	0.3	0.4	1.0	1.3	1.0	1.3	1.3	2.1	2.9	0.8	0.8	C40-C41
Melanoma of skin	16	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.9	0.6	0.8	1.6	1.6	2.1	1.3	0.4	0.3	C43
Other skin	131	0.0	0.4	0.4	0.1	0.5	0.5	0.4	0.6	1.0	2.4	3.4	6.0	8.7	13.8	14.8	38.4	3.2	2.7	C44
Mesothelioma	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.0	0.0	0.5	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	63	0.4	0.4	0.6	1.4	0.8	1.1	1.1	1.1	0.9	1.7	2.6	3.7	3.4	2.2	4.1	5.3	1.6	1.4	C47,C49
Breast	1,769	0.2	0.0	0.0	0.9	0.9	3.3	13.5	24.6	53.7	91.2	104.5	120.5	132.9	126.6	119.9	105.5	43.9	35.1	C50
Vulva	12	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.1	0.6	1.1	0.4	0.6	2.5	1.9	0.3	0.2	C51
Vagina	14	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.0	0.2	0.4	1.0	1.3	1.9	0.8	3.2	0.3	0.3	C52
Cervix uteri	566	0.0	0.0	0.2	0.0	0.4	2.3	5.7	10.9	17.1	22.7	33.4	36.4	37.4	36.2	46.8	39.7	14.1	11.1	C53
Corpus uteri	291	0.0	0.0	0.0	0.0	0.3	0.6	1.1	2.4	4.7	8.3	16.3	26.2	32.3	27.3	28.8	23.2	7.2	6.1	C54
Uterus unspecified	26	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.4	0.7	0.9	2.1	2.2	2.9	3.7	4.0	0.6	0.5	C55
Ovary	356	0.0	0.0	2.2	2.5	1.6	2.2	4.1	5.5	9.0	14.2	19.1	23.2	26.4	26.3	22.6	21.0	8.9	7.3	C56
Other female genital organs	7	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.4	0.6	0.7	1.0	0.4	0.5	0.2	0.2	C57
Placenta	11	0.0	0.0	0.0	0.4	0.3	0.5	0.5	0.3	0.3	0.4	0.0	0.0	0.0	0.0	0.4	0.3	0.3	0.2	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	54	0.2	0.0	0.4	0.1	0.0	0.2	0.1	0.2	0.4	1.4	1.3	3.0	5.4	7.1	8.6	9.6	1.3	1.2	C64
Renal pelvis	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.7	0.6	1.2	0.0	0.1	0.1	C65
Ureter	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	1.0	0.4	3.2	0.2	0.1	C66
Bladder	90	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.6	0.9	1.0	1.9	3.5	6.3	10.6	18.5	24.5	2.2	1.9	C67
Other urinary organs	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.2	0.2	0.6	0.0	1.9	0.1	0.1	C68
Eye	6	1.6	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.8	0.5	0.1	0.3	C69
Brain, nervous system	101	2.5	1.3	1.3	0.6	0.6	1.1	0.9	2.0	1.4	3.9	3.5	5.4	4.7	6.1	8.6	9.9	2.5	2.4	C70-72
Thyroid	233	0.0	0.0	0.7	2.9	3.0	4.1	4.7	5.6	7.1	7.4	9.4	10.2	17.5	9.9	12.7	6.7	5.8	4.6	C73
Adrenal gland	6	0.6	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.6	0.3	0.2	0.6	0.4	0.0	0.1	0.2	C74
Other endocrine	6	0.2	0.0	0.2	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.5	0.7	0.0	1.2	0.3	0.2	0.2	C75
Hodgkin disease	13	0.0	0.0	1.1	0.1	0.0	0.9	0.4	0.5	0.2	0.1	0.2	0.2	0.2	0.6	0.0	0.3	0.3	0.3	C81
Non-Hodgkin lymphoma	207	1.2	0.9	0.7	2.9	0.7	1.6	2.3	2.7	4.0	3.1	7.4	12.2	15.2	21.8	22.6	24.5	5.1	4.5	C82-85,C96
Multiple myeloma	38	0.4	0.4	0.2	0.1	0.0	0.0	0.1	0.1	0.6	0.4	2.3	1.3	3.4	3.8	5.3	7.7	1.0	0.9	C90
Lymphoid leukemia	29	2.5	1.3	1.9	0.6	0.1	0.2	0.2	0.0	0.2	0.8	0.9	1.3	0.4	2.6	0.8	3.5	0.7	1.0	C91
Myeloid leukemia	60	0.4	0.2	0.4	1.6	0.6	0.5	0.6	1.1	1.8	2.3	1.9	3.0	3.6	2.2	4.5	4.8	1.5	1.3	C92-94
Leukemia unspecified	53	0.8	0.2	0.6	0.4	0.5	0.2	0.2	0.7	0.5	1.3	1.5	2.4	3.8	5.5	6.6	8.8	1.3	1.2	C95
Myelodysplastic disease	26	0.2	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.2	0.6	1.0	1.6	1.0	4.9	8.5	0.7	0.5	D45-D47
Other and unspecified	333	1.4	0.0	0.4	1.4	1.2	1.0	2.1	3.2	5.1	8.3	11.8	16.8	28.9	26.6	50.1	57.3	8.3	7.0	O&U
<b>All sites</b>	<b>6,644</b>	<b>13.9</b>	<b>5.6</b>	<b>14.3</b>	<b>19.4</b>	<b>14.7</b>	<b>26.0</b>	<b>46.1</b>	<b>77.9</b>	<b>136.0</b>	<b>219.3</b>	<b>304.7</b>	<b>406.4</b>	<b>513.7</b>	<b>564.3</b>	<b>711.4</b>	<b>822.0</b>	<b>165.0</b>	<b>136.9</b>	<b>ALL</b>

**Table 3.9.3** Mean annual incidence, Bangkok, 2010-2012

Site	Male						No.Cases Year	Freq. (%)	Crude rate  (per 100,000)	ASR world  (per 100,000)	Cum.Rate	
	No.Cases Year	Freq. (%)	Crude rate  (per 100,000)	ASR world  (per 100,000)	Cum.Rate							
					0-64 (percent)	0-74 (percent)						
Lip	4	0.1	0.1	0.1	0.0	0.0	8	0.1	0.2	0.2	0.2	0.2
Tongue	81	1.5	2.2	2.0	0.1	0.2	47	0.7	1.2	1.0	1.2	1.0
Mouth	83	1.5	2.2	2.2	0.1	0.3	28	0.4	0.7	0.6	0.7	0.6
Salivary glands	26	0.5	0.7	0.7	0.0	0.1	20	0.3	0.5	0.4	0.5	0.4
Tonsil	40	0.7	1.1	0.9	0.1	0.1	7	0.1	0.2	0.1	0.2	0.1
Other oropharynx	9	0.2	0.2	0.2	0.0	0.0	1	0.0	0.0	0.0	0.0	0.0
Nasopharynx	149	2.7	4.0	3.4	0.3	0.4	61	0.9	1.5	1.2	1.5	1.2
Hypopharynx	44	0.8	1.2	1.1	0.1	0.1	2	0.0	0.1	0.0	0.1	0.0
Pharynx unspecified	11	0.2	0.3	0.3	0.0	0.0	2	0.0	0.0	0.0	0.0	0.0
Oesophagus	161	2.9	4.3	4.3	0.3	0.5	24	0.4	0.6	0.5	0.6	0.5
Stomach	132	2.4	3.5	3.4	0.2	0.4	158	2.4	3.9	3.2	3.9	3.2
Small intestine	10	0.2	0.3	0.2	0.0	0.0	9	0.1	0.2	0.2	0.2	0.2
Colon	432	7.9	11.5	11.7	0.6	1.4	427	6.4	10.6	8.8	10.6	8.8
Rectum	250	4.5	6.7	6.7	0.3	0.9	214	3.2	5.3	4.5	5.3	4.5
Anus	13	0.2	0.3	0.3	0.0	0.0	14	0.2	0.4	0.3	0.4	0.3
Liver and bile duct	926	16.8	24.7	23.5	1.5	2.9	371	5.6	9.2	7.8	9.2	7.8
Gallbladder	19	0.3	0.5	0.5	0.0	0.1	31	0.5	0.8	0.6	0.8	0.6
Pancreas	105	1.9	2.8	2.8	0.1	0.3	115	1.7	2.8	2.5	2.8	2.5
Nose, sinuses etc.	19	0.3	0.5	0.5	0.0	0.1	17	0.3	0.4	0.3	0.4	0.3
Larynx	117	2.1	3.1	3.1	0.2	0.4	10	0.2	0.3	0.2	0.3	0.2
Trachea, Bronchus and lung	887	16.1	23.7	23.9	1.1	3.0	496	7.5	12.3	10.3	12.3	10.3
Other thoracic organs	16	0.3	0.4	0.4	0.0	0.0	15	0.2	0.4	0.4	0.4	0.4
Bone	37	0.7	1.0	1.1	0.1	0.1	31	0.5	0.8	0.8	0.8	0.8
Melanoma of skin	8	0.1	0.2	0.2	0.0	0.0	16	0.2	0.4	0.3	0.4	0.3
Other skin	91	1.7	2.4	2.4	0.1	0.2	131	2.0	3.2	2.7	3.2	2.7
Mesothelioma	1	0.0	0.0	0.0	0.0	0.0	2	0.0	0.0	0.0	0.0	0.0
Kaposi's sarcoma	3	0.1	0.1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Connective tissue	59	1.1	1.6	1.5	0.1	0.1	63	0.9	1.6	1.4	1.6	1.4
Breast	12	0.2	0.3	0.3	0.0	0.0	1,769	26.6	43.9	35.1	43.9	35.1
Vulva							12	0.2	0.3	0.2	0.3	0.2
Vagina							14	0.2	0.3	0.3	0.3	0.3
Cervix uteri							566	8.5	14.1	11.1	14.1	11.1
Corpus uteri							291	4.4	7.2	6.1	7.2	6.1
Uterus unspecified							26	0.4	0.6	0.5	0.6	0.5
Ovary							356	5.4	8.9	7.3	8.9	7.3
Other female genital organs							7	0.1	0.2	0.2	0.2	0.2
Placenta							11	0.2	0.3	0.2	0.3	0.2
Penis	17	0.3	0.5	0.4	0.0	0.0						
Prostate	501	9.1	13.4	14.6	0.4	1.8						
Testis	17	0.3	0.5	0.5	0.0	0.0						
Other male genital organs	4	0.1	0.1	0.1	0.0	0.0						
Kidney	79	1.4	2.1	2.1	0.1	0.2	54	0.8	1.3	1.2	1.3	1.2
Renal pelvis	4	0.1	0.1	0.1	0.0	0.0	5	0.1	0.1	0.1	0.1	0.1
Ureter	4	0.1	0.1	0.1	0.0	0.0	7	0.1	0.2	0.1	0.2	0.1
Bladder	181	3.3	4.8	5.0	0.2	0.6	90	1.3	2.2	1.9	2.2	1.9
Other urinary organs	10	0.2	0.3	0.3	0.0	0.0	5	0.1	0.1	0.1	0.1	0.1
Eye	5	0.1	0.1	0.2	0.0	0.0	6	0.1	0.1	0.3	0.1	0.3
Brain, nervous system	103	1.9	2.7	2.8	0.2	0.3	101	1.5	2.5	2.4	2.5	2.4
Thyroid	62	1.1	1.7	1.5	0.1	0.2	233	3.5	5.8	4.6	5.8	4.6
Adrenal gland	3	0.1	0.1	0.1	0.0	0.0	6	0.1	0.1	0.2	0.1	0.2
Other endocrine	4	0.1	0.1	0.2	0.0	0.0	6	0.1	0.2	0.2	0.2	0.2
Hodgkin disease	17	0.3	0.5	0.4	0.0	0.0	13	0.2	0.3	0.3	0.3	0.3
Non-Hodgkin lymphoma	183	3.3	4.9	4.7	0.3	0.5	207	3.1	5.1	4.5	5.1	4.5
Multiple myeloma	35	0.6	0.9	1.0	0.1	0.1	38	0.6	1.0	0.9	1.0	0.9
Lymphoid leukemia	39	0.7	1.0	1.5	0.1	0.1	29	0.4	0.7	1.0	0.7	1.0
Myeloid leukemia	59	1.1	1.6	1.6	0.1	0.1	60	0.9	1.5	1.3	1.5	1.3
Leukemia unspecified	54	1.0	1.5	1.5	0.1	0.2	53	0.8	1.3	1.2	1.3	1.2
Myelodysplastic disease	23	0.4	0.6	0.6	0.0	0.1	26	0.4	0.7	0.5	0.7	0.5
Other and unspecified	352	6.4	9.4	9.2	0.5	1.1	333	5.0	8.3	7.0	8.3	7.0
<b>All sites</b>	<b>5,498</b>	<b>100.0</b>	<b>146.9</b>	<b>146.2</b>	<b>7.7</b>	<b>17.3</b>	<b>6,644</b>	<b>100.0</b>	<b>165.0</b>	<b>136.9</b>	<b>165.0</b>	<b>136.9</b>

**Table 3.9.4** 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	582	79.4	4.0	307	79.8	2.3	C00-C08
Oropharynx	178	75.8	5.6	31	61.3	6.5	C09-C10,C14
Nasopharynx	446	80.5	1.3	182	76.9	3.8	C11
Hypopharynx	132	84.1	0.0	7	71.4	0.0	C12-C13
Esophagus	483	68.3	3.9	71	64.8	5.6	C15
Stomach	395	78.5	3.8	474	72.8	4.2	C16
Small intestine	29	69.0	6.9	26	73.1	3.8	C17
Colon and rectum	2,083	79.0	3.5	1,965	79.5	2.9	C18-C21
Liver and bile duct	2,779	27.7	10.1	1,113	30.8	6.6	C22,C24
Gallbladder	56	39.3	12.5	94	55.3	12.8	C23
pancrease	316	55.4	6.6	344	57.3	4.4	C25
Nose,sinuses etc	56	75.0	3.6	52	67.3	5.8	C30-C31
Larynx	350	72.6	4.0	31	67.7	0.0	C32
Trachea, brochus and lung	2,660	48.4	5.5	1,489	55.4	4.2	C33-C34
Other thoracic organs	47	76.6	2.1	46	80.4	4.3	C37-C38
Bone	111	64.0	9.0	92	58.7	8.7	C40-C41
Melanoma of skin	24	100.0	0.0	47	100.0	0.0	C43
Other skin	273	83.9	1.1	392	83.7	1.3	C44
Mesothelioma	4	100.0	0.0	6	100.0	0.0	C45
Kaposi sarcoma	9	100.0	0.0	0	0.0		C46
Connective and soft tissue	176	79.0	1.7	189	72.5	2.1	C47,C49
Breast	37	81.1	0.0	5,308	86.2	1.7	C50
Vulva				35	74.3	0.0	C51
Vagina				42	90.5	0.0	C52
Cervix uteri				1,699	80.0	3.1	C53
Corpus uteri				873	89.9	0.5	C54
Uterus unspecified				79	65.8	13.9	C55
Ovary				1,069	73.4	2.4	C56
Other female genital organs				21	76.2	0.0	C57
Placenta				32	43.8	0.0	C58
Penis	52	84.6	0.0				C60
Prostate	1,504	84.8	2.1				C61
Testis	52	80.8	0.0				C62
Other male genital organs	11	54.5	0.0				C63
Kidney	237	78.1	6.8	161	78.9	3.1	C64
Renal pelvis	12	91.7	0.0	14	78.6	0.0	C65
Ureter	11	63.6	0.0	21	85.7	0.0	C66
Bladder	543	81.2	1.1	269	74.3	1.1	C67
Other urinary organs	29	82.8	3.4	15	73.3	13.3	C68
Eye	16	81.3	0.0	17	94.1	0.0	C69
Brain, nervous system	308	57.1	8.8	302	54.0	7.6	C70-C72
Thyroid	187	84.5	1.6	698	87.4	0.9	C73
Adrenal gland	10	60.0	10.0	18	61.1	11.1	C74
Other endocrine	13	76.9	7.7	19	31.6	5.3	C75
Hodgkin disease	51	100.0	0.0	40	100.0	0.0	C81
Non-Hodgkin lymphoma	548	99.6	0.4	621	99.7	0.2	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	104	100.0	0.0	115	100.0	0.0	C90
Leukemia	456	96.5	3.1	427	96.5	3.0	C91-C95
Myelodysplastic	69	98.6	0.0	79	96.2	0.0	D45-D47
Other and unspecified	1,056	23.6	19.2	1,000	25.1	15.7	O&U
<b>All sites</b>	<b>16,495</b>	<b>62.6</b>	<b>5.7</b>	<b>19,932</b>	<b>74.2</b>	<b>3.4</b>	<b>All</b>

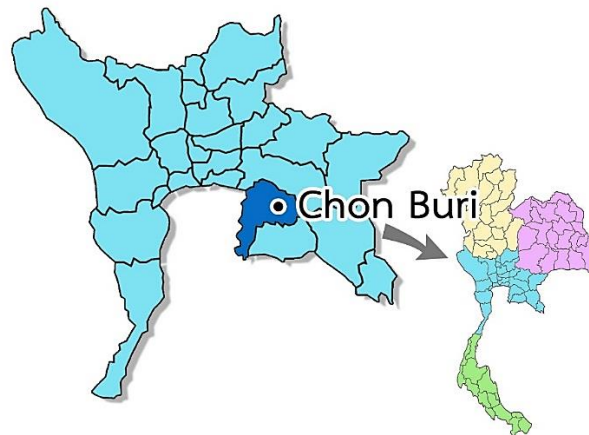
# Chon Buri Cancer Registry

## Registration area

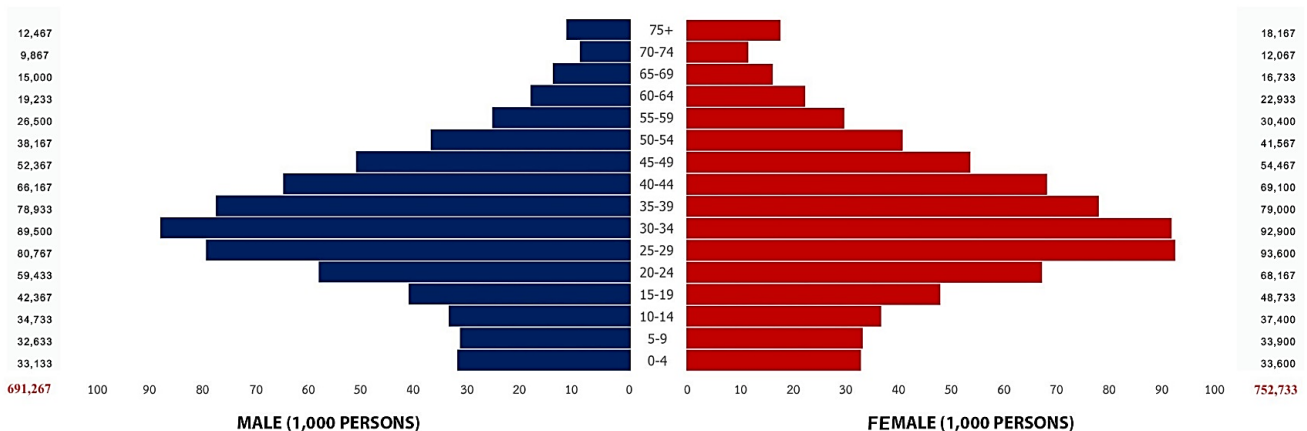
Chon Buri is situated in the eastern part of Thailand, between 12°-13°N and 100-102°E, 80 kilometers from Bangkok by car or bus and train, with land area 4,363 square kilometers and is bounded in the north by Chachoengsao, in the east by Chanthaburi, in the south by Rayong and in the west by the bank of Gulf of Thailand. The districts of Chon Buri were: Muang Chonburi, Sri Racha, Ban Bung, Nong Yai, Bang Lamung, Sattahip, Phan Thong, Phanat Nikhom, Bo Thong, Ko Sichang and subdistrict Ko Chan.

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

The most important occupations are farming of sugar beans, fishing and shrimp farming. The Industrial Estate Authority of Eastern part of Thailand is situated in this area. Nowadays, it is becoming appreciated for its tourism potential, especially Bang Saen, Ko si chang, Pattaya.



Population pyramid, Chon Buri  
estimated population in 2011 (average 2010-2012)



## **Cancer care facilities**

The total number of hospitals in Chonburi province was 26 hospitals composed of 12 community hospitals, 9 private hospitals and 1 provincial hospital, 3 military hospitals and university hospital providing 4745 total beds. Cancer diagnostic services including radiological diagnosis equipment such as: X-ray, ultrasound, computed radiography, mammogram, CT scan and pathological investigations are available in Chonburi provincial hospital, private hospitals and Chonburi cancer hospital. MRI is available only in Smitivej Sriracha Hospital. Cancer treatment, radiotherapy equipments: one simulator, cobalt-60 machine, linear accelerator and remote after-loading devices for brachytherapy are available at the Chonburi cancer hospital. Cancer surgery and cancer chemotherapy service are provided in Chonburi cancer hospital, provincial hospital and private hospitals.

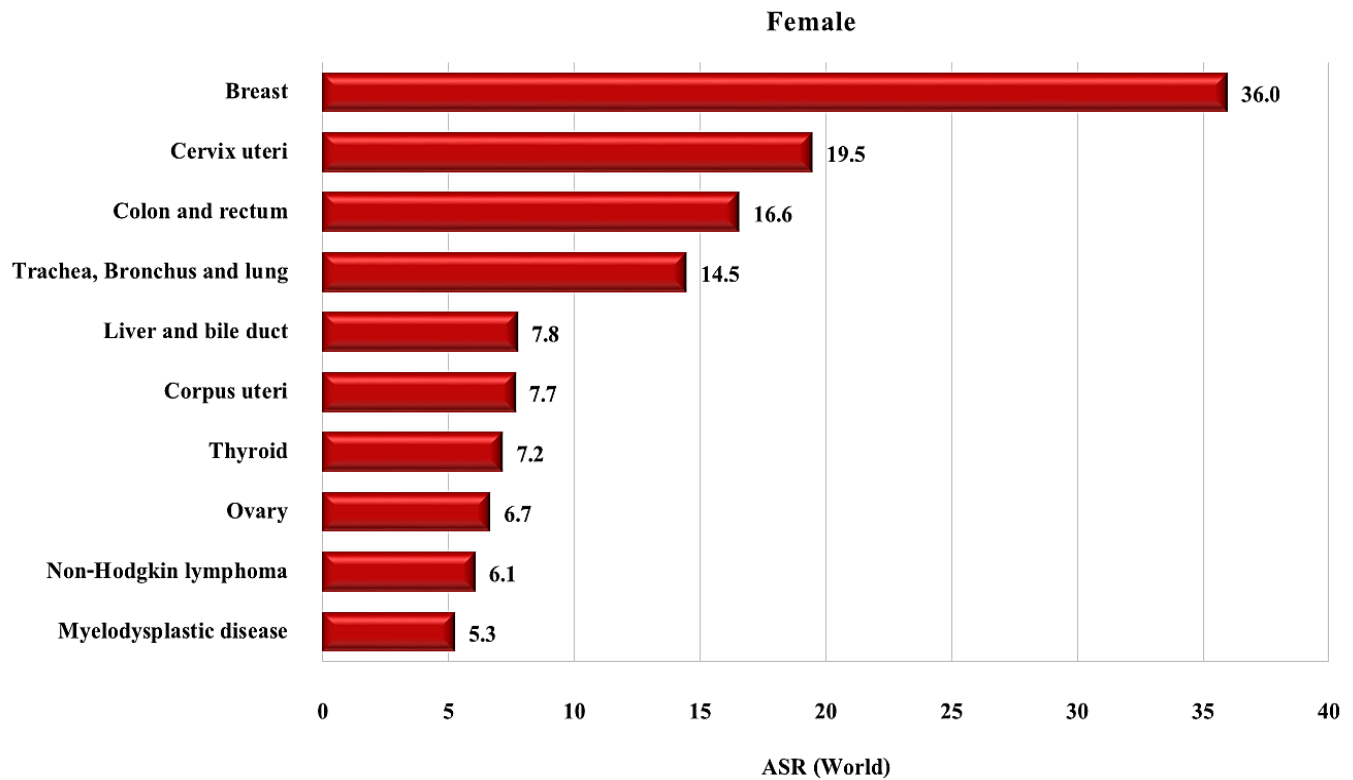
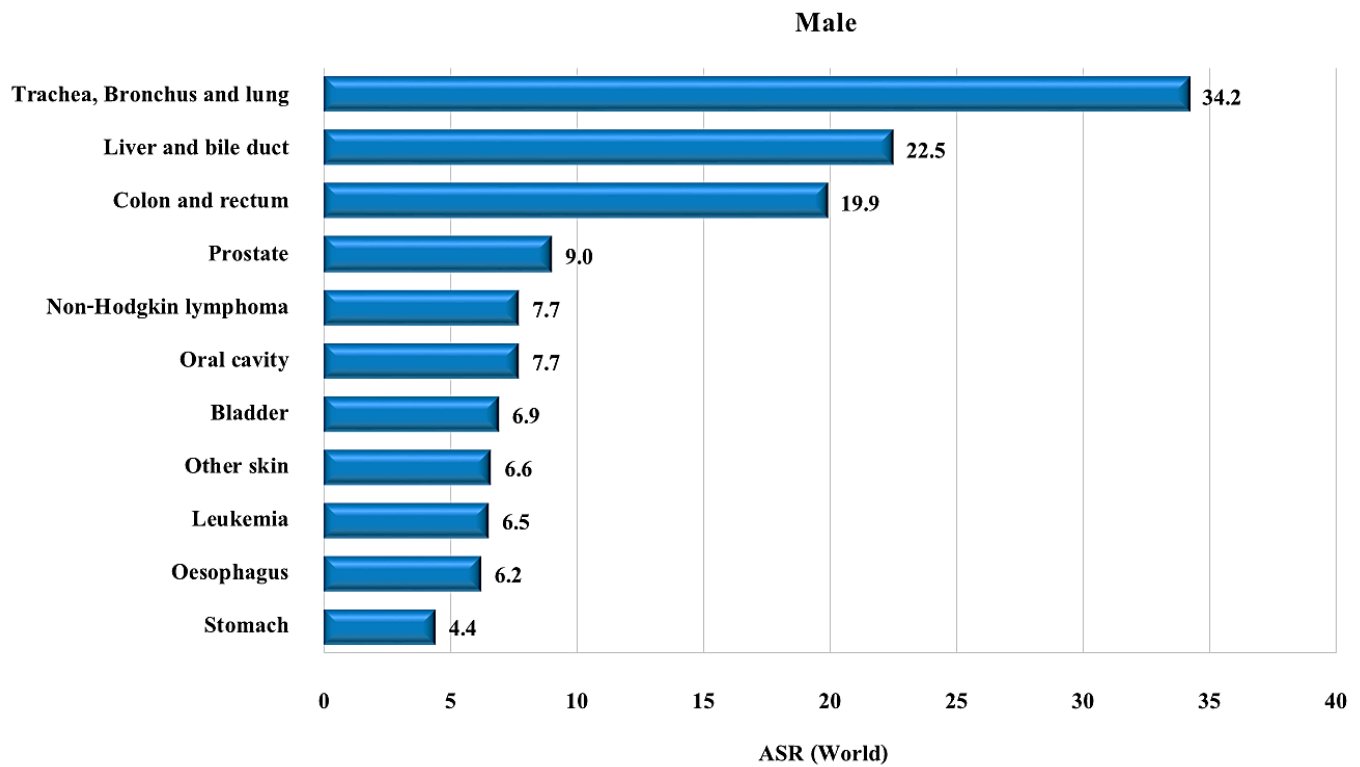
## **Registry procedures**

All data on cancer patients were collected by mixture of passive and active methods involving notification by the staff of all hospital in Chonburi. New cancer cases were collected from out and in patient 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, 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. Individual 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 other sources.

## **Summary of results**

New cases registered in 2011, 1,057 were males and 1,292 were females, making 2,349 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 169.0 per 100,000, with lung cancer ranks first (ASR = 34.2) followed by liver and bile duct (ASR =22.5) and colon and rectum (ASR =19.9). The ASR of all cancer sites in females was 160.0 per 100,000, three leading cancer sites being breast (ASR = 36.0), cervix (ASR =19.5) and colon and rectum (ASR =16.6).

**Figure 3.10** Leading cancer in Chonburi (mean annual ASR 2010-2012)



**Table 3.10.1** Chonburi (2011), Mean annual ASR per 100,000 (2010-2012) 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	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	0.0	0.0	0.1	C00
Tongue	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.0	7.0	14.0	20.1	15.6	17.8	23.6	13.4	3.6	3.9	C01-02
Mouth	19	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.8	2.5	5.7	7.0	11.3	13.9	11.1	16.9	13.4	2.8	C03-06
Salivary glands	6	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	1.0	1.3	2.6	1.3	5.2	0.0	6.8	5.3	0.9	0.8	C07-08
Tonsil	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.5	4.4	7.5	12.1	4.4	10.1	2.7	1.5	1.6	C09
Other oropharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.9	1.3	1.7	2.2	3.4	0.0	0.3	0.3	C10
Nasopharynx	30	0.0	1.0	0.0	2.4	0.0	1.7	1.9	3.0	4.5	10.8	8.7	20.1	17.3	13.3	6.8	0.0	4.3	4.1	C11
Hypopharynx	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.5	4.4	6.3	3.5	8.9	20.3	8.0	1.6	1.8	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	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.1	C14
Oesophagus	39	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.8	3.5	9.5	14.8	21.4	27.7	28.9	50.7	40.1	5.7	6.2	C15
Stomach	27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.5	3.8	5.2	12.6	17.3	24.4	50.7	34.8	4.0	4.4	C16
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	3.5	0.0	6.8	2.7	0.3	0.4	C17
Colon	77	0.0	0.0	0.0	0.0	0.6	0.8	1.5	5.5	5.5	10.8	23.6	36.5	43.3	53.3	121.6	115.0	11.2	12.2	C18
Rectum	47	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.5	5.5	6.4	15.7	22.6	24.3	46.7	60.8	58.8	6.8	7.4	C19-20
Anus	3	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.3	0.0	0.0	0.9	1.3	0.0	2.2	0.0	2.7	0.4	0.3	C21
Liver and bile duct	148	1.0	0.0	0.0	0.0	0.0	2.1	2.6	5.5	13.1	36.9	72.5	94.3	93.6	88.9	108.1	136.4	21.5	22.5	C22,C24
Gallbladder	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	3.8	0.0	2.2	0.0	8.0	0.4	0.4	C23
Pancreas	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.0	1.9	3.5	5.0	10.4	8.9	13.5	32.1	1.9	2.2	C25
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.0	0.0	1.7	2.5	0.0	0.0	3.4	10.7	0.6	0.6	C30-31
Larynx	24	0.0	0.0	1.0	0.0	0.0	0.0	0.4	0.0	0.5	3.2	6.1	13.8	26.0	31.1	27.0	26.7	3.5	4.2	C32
Trachea, Bronchus and lung	204	0.0	0.0	0.0	0.0	0.0	1.2	1.9	2.5	8.1	25.5	62.9	89.3	124.8	224.4	327.7	342.2	29.5	34.2	C33-34
Other thoracic organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.0	1.3	0.0	2.2	6.8	0.0	0.3	0.3	C37-38
Bone	6	0.0	0.0	1.9	2.4	0.6	0.0	0.7	0.0	0.5	0.6	0.9	0.0	3.5	2.2	6.8	2.7	0.8	1.0	C40-C41
Melanoma of skin	4	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.5	1.3	0.0	1.3	0.0	2.2	6.8	10.7	0.6	0.6	C43
Other skin	40	0.0	0.0	0.0	0.8	1.1	0.4	1.1	2.1	1.5	2.5	6.1	12.6	17.3	42.2	50.7	109.6	5.8	6.6	C44
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
Kaposi's sarcoma	1	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.2	0.2	C46
Connective tissue	10	2.0	0.0	2.9	0.0	0.0	0.4	0.7	1.7	1.5	0.6	1.7	2.5	1.7	8.9	10.1	8.0	1.5	1.7	C47,C49
Breast	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.9	0.0	1.7	4.4	10.1	5.3	0.5	0.6	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
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	8	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	1.5	3.2	2.6	0.0	6.9	4.4	6.8	8.0	1.2	1.2	C60
Prostate	49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	1.7	8.8	36.4	73.3	87.8	152.4	7.1	9.0	C61
Testis	6	1.0	0.0	0.0	0.8	2.8	0.8	0.7	1.7	0.0	0.0	0.0	2.5	0.0	2.2	0.0	2.7	0.9	0.8	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	2.7	0.0	0.1	C63
Kidney	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.9	4.4	5.0	1.7	8.9	3.4	10.7	1.3	1.3	C64
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	2.5	3.5	2.2	3.4	2.7	0.3	0.4	C65
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	2.2	3.4	0.0	0.1	0.1	C66
Bladder	41	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	1.0	3.8	7.0	17.6	27.7	26.7	74.3	104.3	5.9	6.9	C67
Eye	1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.7	0.0	0.0	2.7	0.2	0.3	C69
Brain, nervous system	14	0.0	1.0	1.9	0.0	0.0	1.2	0.7	0.8	3.5	2.5	2.6	6.3	10.4	2.2	16.9	5.3	2.1	2.1	C70-72
Thyroid	15	0.0	0.0	0.0	0.0	0.6	2.1	2.6	3.8	1.0	2.5	4.4	1.3	5.2	2.2	16.9	2.7	2.1	1.7	C73
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	0.0	0.0	C74
Hodgkin disease	3	1.0	0.0	0.0	0.0	1.1	0.0	0.4	0.8	0.5	0.6	0.0	0.0	1.7	0.0	3.4	0.0	0.5	0.5	C81
Non-Hodgkin lymphoma	53	1.0	1.0	0.0	3.1	0.6	2.9	6.3	5.1	5.5	9.5	11.4	17.6	32.9	35.6	50.7	34.8	7.7	7.7	C82-85,C96
Multiple myeloma	7	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	1.0	0.0	0.0	1.3	10.4	6.7	16.9	5.3	1.0	1.2	C90
Lymphoid leukemia	9	10.1	3.1	3.8	1.6	0.0	0.0	1.1	0.0	0.5	0.6	0.0	1.3	1.7	2.2	3.4	0.0	1.4	2.4	C91
Myeloid leukemia	14	1.0	4.1	0.0	1.6	0.0	1.7	1.5	1.3	1.0	1.3	2.6	3.8	1.7	8.9	13.5	16.0	2.1	2.3	C92-94
Leukemia unspecified	11	2.0	1.0	1.0	1.6	0.6	0.0	1.1	0.8	1.0	1.9	0.9	2.5	5.2	11.1	3.4	8.0	1.5	1.8	C95
Myelodysplastic disease	26	2.0	0.0	0.0	2.4	0.6	2.1	2.2	0.4	4.5	1.9	4.4	10.1	6.9	15.6	23.6	42.8	3.7	3.9	D45-D47
Other and unspecified	23	0.0	0.0	0.0	0.8	0.0	0.8	0.4	2.1	2.0	4.5	11.4	6.3	8.7	17.8	23.6	32.1	3.4	3.5	O&U
<b>All sites</b>	<b>1,057</b>	<b>22.1</b>	<b>11.2</b>	<b>12.5</b>	<b>17.3</b>	<b>9.0</b>	<b>20.2</b>	<b>31.3</b>	<b>48.1</b>	<b>84.1</b>	<b>171.9</b>	<b>313.5</b>	<b>476.7</b>	<b>627.4</b>	<b>853.3</b>	<b>1300.7</b>	<b>1430.5</b>	<b>153.0</b>	<b>169.0</b>	<b>ALL</b>

**Table 3.10.2** Chonburi (2011), Mean annual ASR per 100,000 (2010-2012) 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	2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.5	0.0	0.0	0.0	0.0	2.8	5.5	0.3	0.2	C00	
Tongue	6	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.4	0.0	0.6	1.6	1.1	5.8	4.0	2.8	5.5	0.8	0.8	C01-02
Mouth	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.0	1.2	1.6	2.2	5.8	0.0	8.3	14.7	1.1	1.0	C03-06
Salivary glands	3	0.0	0.0	0.0	0.7	0.5	0.0	0.0	0.4	0.5	0.6	0.8	2.2	0.0	0.0	2.8	0.0	0.4	0.4	C07-08
Tonsil	2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	1.8	0.8	1.1	0.0	0.0	0.0	0.0	0.3	0.2	C09
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
Nasopharynx	13	0.0	0.0	0.0	0.0	0.0	0.7	1.4	1.7	1.4	2.4	4.8	4.4	7.3	0.0	5.5	7.3	1.7	1.4	C11
Hypopharynx	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	0.0	0.0	0.0	C12-13
Pharynx unspecified	1	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	2.8	0.0	0.2	0.1	0.1	C14
Oesophagus	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	2.2	10.2	2.0	5.5	5.5	0.7	0.8	C15
Stomach	24	0.0	0.0	0.0	0.0	0.0	0.7	1.4	3.0	1.4	4.3	4.8	9.9	5.8	10.0	19.3	33.0	3.2	2.9	C16
Small intestine	2	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	3.7	0.2	0.2	C17
Colon	84	0.0	0.0	0.0	0.7	2.0	1.4	2.2	2.5	5.8	11.6	20.9	34.0	52.3	53.8	63.5	102.8	11.1	11.1	C18
Rectum	39	0.0	0.0	0.0	0.0	0.0	0.4	1.1	2.1	4.8	5.5	13.6	11.0	29.1	27.9	19.3	40.4	5.2	5.2	C19-20
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.6	0.0	1.1	1.5	0.0	2.8	3.7	0.3	0.3	C21
Liver and bile duct	58	1.0	0.0	0.0	0.0	0.5	0.0	1.4	0.8	6.3	12.9	15.2	15.4	34.9	31.9	63.5	66.1	7.7	7.8	C22,C24
Gallbladder	6	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.5	0.0	1.6	3.3	1.5	4.0	13.8	7.3	0.8	0.9	C23
Pancreas	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.8	5.5	0.0	8.0	16.6	27.5	1.5	1.5	C25
Nose, sinuses etc.	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.4	0.0	0.8	2.2	1.5	2.0	0.0	3.7	0.6	0.5	C30-31
Larynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	1.1	0.0	2.0	0.0	1.8	0.2	0.2	C32
Trachea, Bronchus and lung	107	0.0	0.0	0.0	0.0	1.5	0.7	1.4	3.8	6.8	18.4	20.9	34.0	56.7	87.6	132.6	128.4	14.2	14.5	C33-34
Other thoracic organs	2	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	1.5	2.0	0.0	1.8	0.2	0.3	C37-38
Bone	3	0.0	0.0	0.9	0.0	1.0	0.0	0.0	0.0	0.5	0.6	1.6	1.1	0.0	2.0	0.0	1.8	0.4	0.4	C40-C41
Melanoma of skin	4	0.0	0.0	0.0	0.0	0.5	0.0	0.4	0.8	0.5	0.0	0.0	0.0	1.5	2.0	2.8	5.5	0.5	0.4	C43
Other skin	40	0.0	0.0	0.0	0.7	0.0	1.1	0.7	1.7	1.4	4.9	8.0	12.1	5.8	23.9	41.4	88.1	5.4	5.1	C44
Mesothelioma	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	1.5	0.0	0.0	0.0	0.1	0.1	C45
Kaposi's sarcoma	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.8	0.0	0.0	0.0	0.0	1.8	0.1	0.1	C46
Connective tissue	9	1.0	1.0	0.9	0.0	1.5	1.1	0.7	0.4	1.4	1.2	2.4	2.2	2.9	2.0	2.8	0.0	1.2	1.2	C47,C49
Breast	309	0.0	0.0	0.0	0.0	0.5	4.3	19.7	34.2	66.6	99.8	128.3	123.9	107.6	103.6	113.3	66.1	41.0	36.0	C50
Vulva	4	0.0	0.0	0.0	0.0	0.5	0.4	0.0	0.4	0.0	0.6	2.4	1.1	0.0	0.0	5.5	1.8	0.5	0.4	C51
Vagina	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	1.5	0.0	0.0	1.8	0.2	0.2	C52
Cervix uteri	171	0.0	0.0	0.0	0.0	0.5	3.6	11.5	25.3	44.9	38.6	56.9	61.4	64.0	65.7	44.2	60.6	22.7	19.5	C53
Corpus uteri	59	0.0	0.0	0.0	0.0	0.0	0.7	1.1	3.4	7.7	9.2	28.1	37.3	30.5	39.8	30.4	20.2	7.8	7.7	C54
Ovary	59	0.0	0.0	0.0	0.7	1.5	2.5	4.3	8.4	9.6	20.8	19.2	21.9	13.1	21.9	19.3	18.3	7.9	6.7	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	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57
Placenta	1	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	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	4	1.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.6	0.8	1.1	2.9	2.0	8.3	1.8	0.5	0.6	C64
Renal pelvis	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	0.0	0.0	2.8	3.7	0.2	0.2	C65
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
Bladder	13	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.0	1.2	3.2	2.2	4.4	6.0	22.1	23.9	1.7	1.7	C67
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.1	0.1	C69
Brain, nervous system	16	0.0	2.0	0.0	0.7	0.5	0.4	1.4	1.7	2.4	1.8	4.8	8.8	2.9	8.0	8.3	9.2	2.2	2.1	C70-72
Thyroid	65	0.0	0.0	0.9	2.1	6.8	7.1	9.3	6.8	11.1	12.9	16.0	6.6	21.8	21.9	19.3	20.2	8.6	7.2	C73
Adrenal gland	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
Hodgkin disease	4	0.0	0.0	1.8	0.0	0.5	0.4	0.4	0.0	0.5	1.2	0.8	0.0	0.0	0.0	2.8	1.8	0.5	0.5	C81
Non-Hodgkin lymphoma	47	2.0	2.0	3.6	2.1	2.4	2.5	3.6	5.5	6.8	7.3	5.6	20.8	16.0	12.0	38.7	23.9	6.3	6.1	C82-85,C96
Multiple myeloma	7	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	1.8	1.6	1.1	5.8	8.0	5.5	7.3	1.0	1.0	C90
Lymphoid leukemia	9	6.0	3.9	2.7	1.4	0.0	1.4	0.7	0.0	1.0	0.0	1.6	1.1	0.0	0.0	0.0	3.7	1.2	1.9	C91
Myeloid leukemia	11	0.0	0.0	0.0	0.7	1.0	0.4	1.8	0.8	0.5	1.8	2.4	4.4	2.9	2.0	5.5	12.8	1.5	1.3	C92-94
Leukemia unspecified	10	3.0	0.0	0.9	0.0	0.5	0.0	0.7	1.3	2.4	0.6	1.6	1.1	4.4	4.0	5.5	9.2	1.4	1.5	C95
Myelodysplastic disease	40	1.0	0.0	0.9	1.4	1.5	0.0	0.7	1.3	3.4	3.7	12.0	11.0	14.5	15.9	52.5	60.6	5.3	5.3	D45-D47
Other and unspecified	19	0.0	0.0	0.0	0.0	0.0	0.4	0.7	1.3	1.9	4.3	4.8	6.6	10.2	8.0	19.3	18.3	2.5	2.4	O&U
<b>All sites</b>	<b>1,292</b>	<b>15.9</b>	<b>8.8</b>	<b>12.5</b>	<b>10.9</b>	<b>23.5</b>	<b>31.3</b>	<b>71.4</b>	<b>112.2</b>	<b>194.9</b>	<b>276.0</b>	<b>396.2</b>	<b>458.3</b>	<b>527.6</b>	<b>585.7</b>	<b>812.2</b>	<b>921.1</b>	<b>171.6</b>	<b>160.0</b>	<b>ALL</b>

**Table 3.10.3** Mean annual incidence, Chonburi, 2010-2012

Site	Male						Female					
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate	
					0-64	0-74					0-64	0-74
					(per 100,000)						(percent)	
Lip	0	0.0	0.0	0.1	0.0	0.0	2	0.2	0.3	0.2	0.0	0.0
Tongue	25	2.4	3.6	3.9	0.3	0.5	6	0.5	0.8	0.8	0.1	0.1
Mouth	19	1.8	2.8	2.9	0.2	0.4	8	0.6	1.1	1.0	0.1	0.1
Salivary glands	6	0.6	0.9	0.8	0.1	0.1	3	0.2	0.4	0.4	0.0	0.0
Tonsil	10	1.0	1.5	1.6	0.1	0.2	2	0.2	0.3	0.2	0.0	0.0
Other oropharynx	2	0.2	0.3	0.3	0.0	0.1	0	0.0	0.0	0.0	0.0	0.0
Nasopharynx	30	2.8	4.3	4.1	0.4	0.5	13	1.0	1.7	1.4	0.1	0.1
Hypopharynx	11	1.1	1.6	1.8	0.1	0.2	0	0.0	0.0	0.0	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.1	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0
Oesophagus	39	3.7	5.7	6.2	0.4	0.8	5	0.4	0.7	0.8	0.1	0.1
Stomach	27	2.6	4.0	4.4	0.2	0.6	24	1.9	3.2	2.9	0.2	0.3
Small intestine	2	0.2	0.3	0.4	0.0	0.1	2	0.1	0.2	0.2	0.0	0.0
Colon	77	7.3	11.2	12.2	0.6	1.5	84	6.5	11.1	11.1	0.7	1.3
Rectum	47	4.4	6.8	7.4	0.4	0.9	39	3.0	5.2	5.2	0.3	0.6
Anus	3	0.3	0.4	0.3	0.0	0.0	2	0.2	0.3	0.3	0.0	0.0
Liver and bile duct	148	14.0	21.5	22.5	1.6	2.6	58	4.5	7.7	7.8	0.4	0.9
Gallbladder	3	0.3	0.4	0.4	0.0	0.0	6	0.5	0.8	0.9	0.0	0.1
Pancreas	13	1.3	1.9	2.2	0.1	0.2	11	0.9	1.5	1.5	0.0	0.2
Nose, sinuses etc.	4	0.4	0.6	0.6	0.0	0.0	5	0.4	0.6	0.5	0.0	0.0
Larynx	24	2.3	3.5	4.2	0.3	0.5	2	0.1	0.2	0.2	0.0	0.0
Trachea, Bronchus and lung	204	19.3	29.5	34.2	1.6	4.3	107	8.3	14.2	14.5	0.7	1.8
Other thoracic organs	2	0.2	0.3	0.3	0.0	0.1	2	0.1	0.2	0.3	0.0	0.0
Bone	6	0.5	0.8	1.0	0.1	0.1	3	0.3	0.4	0.4	0.0	0.0
Melanoma of skin	4	0.4	0.6	0.6	0.0	0.1	4	0.3	0.5	0.4	0.0	0.0
Other skin	40	3.8	5.8	6.6	0.2	0.7	40	3.1	5.4	5.1	0.2	0.5
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Kaposi's sarcoma	1	0.1	0.2	0.2	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Connective tissue	10	1.0	1.5	1.7	0.1	0.2	9	0.7	1.2	1.2	0.1	0.1
Breast	3	0.3	0.5	0.6	0.0	0.1	309	23.9	41.0	36.0	2.9	4.0
Vulva							4	0.3	0.5	0.4	0.0	0.1
Vagina							2	0.1	0.2	0.2	0.0	0.0
Cervix uteri							171	13.2	22.7	19.5	1.5	2.1
Corpus uteri							59	4.5	7.8	7.7	0.6	0.9
Ovary							59	4.6	7.9	6.7	0.5	0.7
Other female genital organs							0	0.0	0.0	0.0	0.0	0.0
Placenta							1	0.1	0.1	0.1	0.0	0.0
Penis	8	0.8	1.2	1.2	0.1	0.1	0	0.0				
Prostate	49	4.7	7.1	9.0	0.2	1.0						
Testis	6	0.6	0.9	0.8	0.1	0.1						
Other male genital organs	0	0.0	0.0	0.1	0.0	0.0						
Kidney	9	0.8	1.3	1.3	0.1	0.1	4	0.3	0.5	0.6	0.0	0.1
Renal pelvis	2	0.2	0.3	0.4	0.0	0.1	1	0.1	0.2	0.2	0.0	0.0
Ureter	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Bladder	41	3.8	5.9	6.9	0.3	0.8	13	1.0	1.7	1.7	0.1	0.2
Eye	1	0.1	0.2	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Brain, nervous system	14	1.4	2.1	2.1	0.2	0.3	16	1.3	2.2	2.1	0.1	0.2
Thyroid	15	1.4	2.1	1.7	0.1	0.2	65	5.0	8.6	7.2	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
Hodgkin disease	3	0.3	0.5	0.5	0.0	0.0	4	0.3	0.5	0.5	0.0	0.0
Non-Hodgkin lymphoma	53	5.0	7.7	7.7	0.5	0.9	47	3.7	6.3	6.1	0.4	0.7
Multiple myeloma	7	0.7	1.0	1.2	0.1	0.2	7	0.6	1.0	1.0	0.1	0.1
Lymphoid leukemia	9	0.9	1.4	2.4	0.1	0.1	9	0.7	1.2	1.9	0.1	0.1
Myeloid leukemia	14	1.4	2.1	2.3	0.1	0.2	11	0.9	1.5	1.3	0.1	0.1
Leukemia unspecified	11	1.0	1.5	1.8	0.1	0.2	10	0.8	1.4	1.5	0.1	0.1
Myelodysplastic disease	26	2.4	3.7	3.9	0.2	0.4	40	3.1	5.3	5.3	0.3	0.6
Other and unspecified	23	2.2	3.4	3.5	0.2	0.4	19	1.5	2.5	2.4	0.2	0.3
<b>All sites</b>	<b>1,057</b>	<b>100.0</b>	<b>153.0</b>	<b>169.0</b>	<b>9.2</b>	<b>20.0</b>	<b>1,292</b>	<b>100.0</b>	<b>171.6</b>	<b>160.0</b>	<b>10.7</b>	<b>17.7</b>

**Table 3.10.4** Percentage of morphologically verified and death certificate only cases, Chonburi

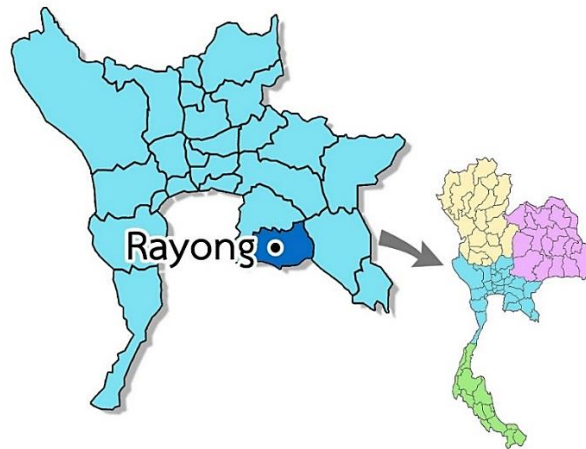
Site	Male			Female			ICD-10
	Cases 3 Year	% MV	% DCO	Cases 3 Year	% MV	% DCO	
Oral cavity	152	91.4	1.3	57	80.7	0.0	C00-C08
Oropharynx	38	97.4	0.0	11	45.5	0.0	C09-C10,C14
Nasopharynx	90	94.4	0.0	38	86.8	0.0	C11
Hypopharynx	34	94.1	0.0	1	100.0	0.0	C12-C13
Esophagus	118	82.2	0.0	16	75.0	6.3	C15
Stomach	82	79.3	0.0	72	73.6	4.2	C16
Small intestine	6	83.3	0.0	5	40.0	0.0	C17
Colon and rectum	380	79.2	2.4	376	77.1	2.4	C18-C21
Liver and bile duct	445	22.0	3.8	174	17.8	13.8	C22,C24
Gallbladder	8	62.5	0.0	19	63.2	0.0	C23
pancrease	40	32.5	5.0	34	26.5	17.6	C25
Nose,sinuses etc	12	75.0	0.0	14	71.4	0.0	C30-C31
Larynx	73	80.8	4.1	5	80.0	0.0	C32
Trachea, brochus and lung	611	69.2	3.4	320	67.5	3.8	C33-C34
Other thoracic organs	6	83.3	0.0	5	60.0	0.0	C37-C38
Bone	17	41.2	0.0	10	20.0	10.0	C40-C41
Melanoma of skin	12	100.0	0.0	11	100.0	0.0	C43
Other skin	121	96.7	0.0	121	94.2	0.0	C44
Mesothelioma	0	0.0	0.0	2	100.0	0.0	C45
Kaposi sarcoma	4	100.0	0.0	3	100.0	0.0	C46
Connective and soft tissue	31	96.8	0.0	26	100.0	0.0	C47,C49
Breast	10	100.0	0.0	926	89.8	0.5	C50
Vulva				11	81.8	0.0	C51
Vagina				5	100.0	0.0	C52
Cervix uteri				512	90.2	0.8	C53
Corpus uteri				176	96.6	0.0	C54
Uterus unspecified				0	0.0	0.0	C55
Ovary				178	78.7	1.1	C56
Other female genital organs				1	100.0	0.0	C57
Placenta				2	100.0	0.0	C58
Penis	25	92.0	0.0				C60
Prostate	148	67.6	0.0				C61
Testis	19	89.5	5.3				C62
Other male genital organs	1	100.0	0.0				C63
Kidney	26	53.8	3.8	12	83.3	0.0	C64
Renal pelvis	7	100.0	0.0	4	100.0	0.0	C65
Ureter	2	100.0	0.0	0	0.0	0.0	C66
Bladder	122	76.2	0.0	38	78.9	0.0	C67
Other urinary organs	0	0.0	0.0	0	0.0	0.0	C68
Eye	4	75.0	0.0	2	50.0	0.0	C69
Brain, nervous system	43	55.8	2.3	49	51.0	6.1	C70-C72
Thyroid	44	93.2	0.0	194	86.1	0.0	C73
Adrenal gland	1	100.0	0.0	1	100.0	0.0	C74
Other endocrine	0	0.0	0.0	0	0.0	0.0	C75
Hodgkin disease	10	100.0	0.0	11	100.0	0.0	C81
Non-Hodgkin lymphoma	159	100.0	0.0	142	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	21	100.0	0.0	22	100.0	0.0	C90
Leukemia	103	100.0	0.0	93	100.0	0.0	C91-C95
Myelodysplastic	77	100.0	0.0	120	100.0	0.0	D45-D47
Other and unspecified	70	48.6	0.0	57	50.9	7.0	O&U
<b>All sites</b>	<b>3,172</b>	<b>72.0</b>	<b>1.8</b>	<b>3,876</b>	<b>81.6</b>	<b>1.9</b>	<b>All</b>

# Rayong Cancer Registry

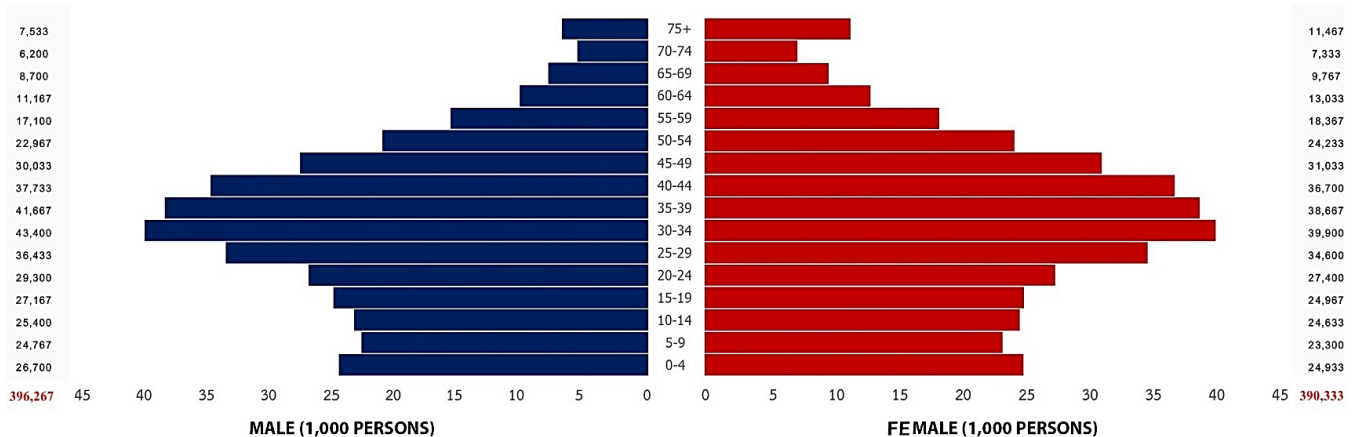
## Registration area

Rayong is situated between 12°-13°N and 101-102°E, with land area 3552 square kilometers, 5 meters above sea level and is bounded on the North and the West by Chonburi, on the East by Chanthaburi and the Gulf of Thailand on the South. The province had comprising of coastal plains, slope, hilly land, mountains and two major rivers which flow to the sea about 100 kilometers of sea shore on the South. The districts of Rayong were: Muang Rayong, Klaeng, Ban Chang, Wang Chan, Ban Khai, Pluak Daeng and Khao Chamao, Nikhom Phatthana subdistricts.

The climate is rather warm, the highest temperature about 38.7°C in summer from March to May, 17.8° C in winter from November to February, rainy season started from May to October. The average total rainfall is 3509.4 millimeters per year. The most important occupations are farming of vegetables and fruits, fishing and shrimp farming. The Map Ta Phut Industrial Estate is situated in Muang Rayong since 1981 composed of 1663 factories and 121568 workers.



Population pyramid, Rayong  
estimated population in 2011 (average 2010-2012)



## **Cancer care facilities**

The total number of hospitals in Rayong province was 12 hospitals composed of 8 community hospitals, 3 private hospitals and 1 provincial hospital, providing 1225 total beds. The medical personnel composed of 191 registered medical practitioners, 38 dentists, 76 pharmacists and 1117 nurses. The population to doctor ratio was 2722:1.

Cancer diagnostic services including radiological diagnosis equipment such as: X-ray, ultrasound, mammography, CT and pathological investigation are available in Rayong provincial hospital and private hospital. MRI is available only in Bangkok Rayong hospital. Cancer surgery services and cancer chemotherapy are provided in Rayong provincial hospital and private Hospital. Most of the cancer patients were referred to Chonburi cancer Hospital for radiotherapy.

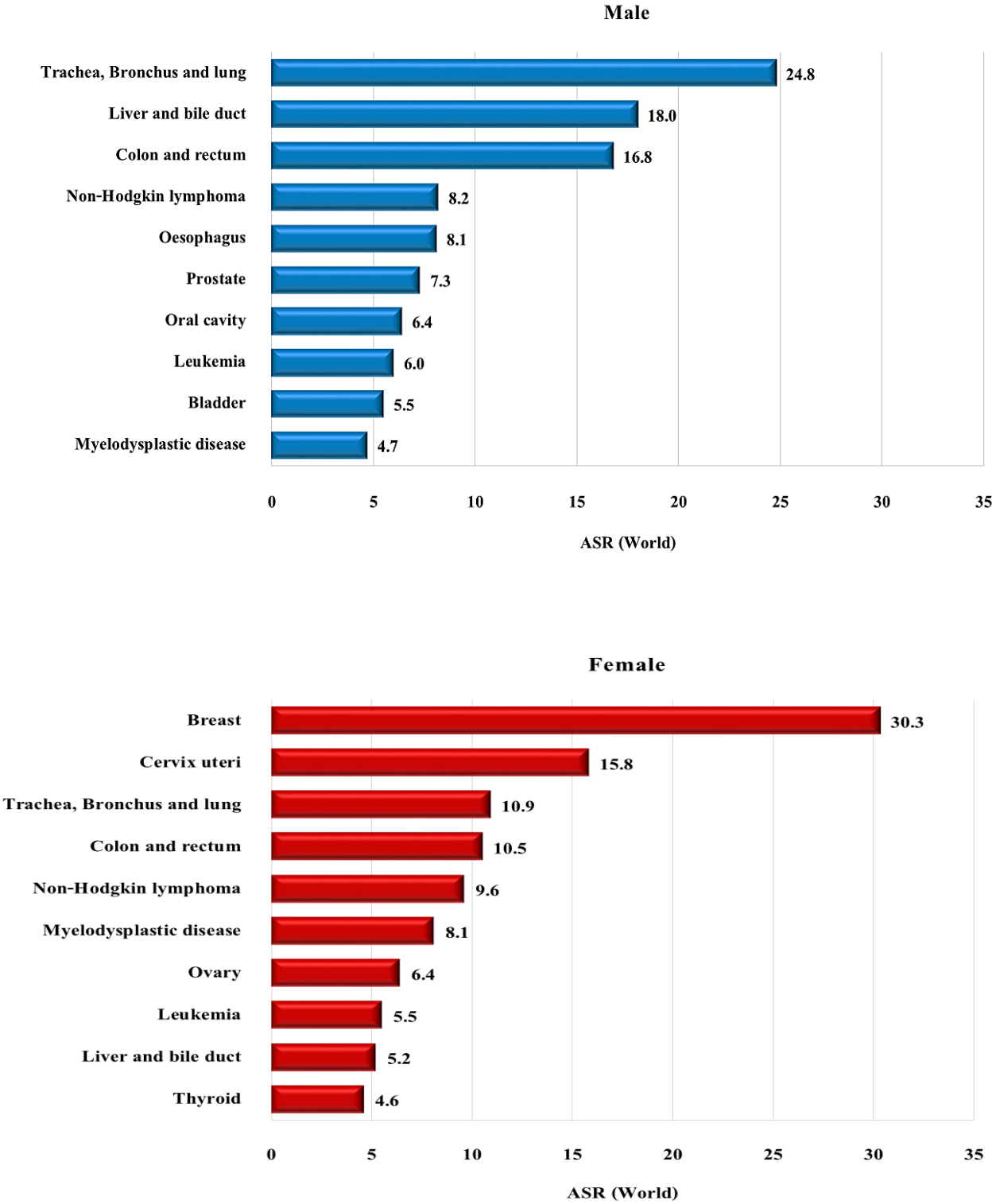
## **Registry procedures**

All data on cancer patients were collected by mixture of passive and active methods involving notification by the staff of all hospital in Rayong. New cancer cases were collected from out and in patient departments, wards, radiotherapy unit, surgery unit, cytology unit, hematology unit, medical record and pathological unit. 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 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. Individual 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 other sources.

## **Summary of results**

New cases registered in 2011, 542 were males and 647 were females, making 1,189 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 141.5 per 100,000, with lung cancer ranks first (ASR = 24.8) followed by liver and bile duct (ASR =18.0) and colon and rectum (ASR =16.8).The ASR of all cancer sites in females was 140.5 per 100,000, three leading cancer sites being breast (ASR = 30.3), cervix (ASR =15.8) and lung (ASR =10.9).

**Figure 3.11** Leading cancer in Rayong (mean annual ASR 2010-2012)



**Table 3.11.1** Rayong (2011), Mean annual ASR per 100,000 (2010-2012) 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	1	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	0.0	5.4	0.0	0.2	0.2	C00
Tongue	10	0.0	0.0	0.0	0.0	1.1	0.0	0.8	0.8	4.4	4.4	5.8	1.9	6.0	19.2	21.5	13.3	2.6	2.6	C01-02
Mouth	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	4.4	4.4	10.2	11.7	11.9	11.5	16.1	26.5	3.3	3.2	C03-06
Salivary glands	2	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.9	1.1	0.0	0.0	3.0	3.8	0.0	0.0	0.4	0.4	C07-08
Tonsil	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	8.7	11.7	6.0	0.0	0.0	0.0	1.3	1.2	C09
Other oropharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.9	0.0	3.0	0.0	0.0	4.4	0.5	0.5	C10
Nasopharynx	14	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.4	4.4	8.9	11.6	13.6	14.9	0.0	10.8	4.4	3.4	3.1	C11
Hypopharynx	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	4.4	8.7	5.8	6.0	7.7	10.8	4.4	2.0	1.9	C12-13
Pharynx unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.9	0.0	7.7	5.4	4.4	0.5	0.6	C14
Oesophagus	29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	3.5	4.4	24.7	27.3	38.8	46.0	75.3	39.8	7.4	8.1	C15
Stomach	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.5	5.5	7.3	9.7	6.0	23.0	21.5	26.5	3.3	3.3	C16
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.5	3.9	0.0	0.0	0.0	4.4	0.5	0.5	C17
Colon	36	0.0	0.0	0.0	0.0	0.0	2.7	1.5	4.0	3.5	5.5	24.7	19.5	41.8	53.6	48.4	110.6	9.1	9.6	C18
Rectum	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.9	3.3	14.5	21.4	23.9	11.5	59.1	79.6	5.6	6.0	C19-20
Anus	5	0.0	0.0	0.0	0.0	1.1	3.7	1.5	1.6	0.9	0.0	1.5	1.9	3.0	0.0	10.8	4.4	1.3	1.2	C21
Liver and bile duct	70	0.0	0.0	1.3	0.0	0.0	0.0	3.1	5.6	14.1	26.6	53.7	66.3	68.7	118.8	69.9	92.9	17.7	18.0	C22,C24
Gallbladder	4	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.8	1.1	0.0	0.0	0.0	15.3	10.8	4.4	0.9	1.0	C23
Pancreas	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.1	2.9	5.8	6.0	3.8	10.8	17.7	1.4	1.5	C25
Nose, sinuses etc.	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.1	0.0	1.9	3.0	0.0	0.0	4.4	0.4	0.4	C30-31
Larynx	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.7	1.1	5.8	13.6	17.9	7.7	10.8	8.8	2.4	2.4	C32
Trachea, Bronchus and lung	92	0.0	0.0	0.0	0.0	2.3	0.0	6.1	4.8	9.7	24.4	45.0	44.8	80.6	141.8	215.1	305.3	23.2	24.8	C33-34
Other thoracic organs	1	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	10.8	0.0	0.3	0.3	C37-38
Bone	4	0.0	0.0	0.0	2.5	0.0	1.8	0.0	0.8	0.9	2.2	1.5	1.9	0.0	0.0	5.4	4.4	1.0	0.9	C40-C41
Melanoma of skin	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	0.0	5.8	0.0	3.0	3.8	10.8	0.0	0.8	0.8	C43
Other skin	14	0.0	0.0	0.0	0.0	1.1	0.0	0.8	4.0	3.5	4.4	2.9	7.8	6.0	15.3	16.1	48.7	3.4	3.3	C44
Mesothelioma	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	C45
Kaposi's sarcoma	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	C46
Connective tissue	6	0.0	0.0	0.0	0.0	1.1	0.9	0.0	0.8	2.7	1.1	0.0	3.9	6.0	11.5	16.1	4.4	1.5	1.6	C47,C49
Breast	1	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.9	0.0	0.0	0.0	3.0	3.8	0.0	0.0	0.3	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
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
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	6	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.6	1.8	2.2	8.7	0.0	0.0	7.7	10.8	4.4	1.6	1.4	C60
Prostate	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	7.8	23.9	53.6	80.6	137.2	6.1	7.3	C61
Testis	2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	C62
Other male genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.2	0.2	C63
Kidney	3	1.2	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	1.5	5.8	3.0	3.8	0.0	8.8	0.8	0.9	C64
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	3.9	3.0	3.8	0.0	4.4	0.4	0.5	C65
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	3.0	0.0	0.0	0.0	0.1	0.1	C66
Bladder	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.9	1.1	8.7	13.6	14.9	19.2	59.1	97.3	5.0	5.5	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68
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	3.8	0.0	0.0	0.1	0.1	C69
Brain, nervous system	10	1.2	1.3	0.0	0.0	1.1	0.0	3.8	0.8	0.9	1.1	11.6	3.9	9.0	0.0	10.8	17.7	2.5	2.4	C70-72
Thyroid	7	0.0	0.0	0.0	0.0	2.3	0.9	0.8	2.4	1.8	3.3	2.9	1.9	3.0	7.7	5.4	4.4	1.7	1.5	C73
Adrenal gland	1	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	0.0	0.2	0.1	C74
Other endocrine	1	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C75
Hodgkin disease	3	0.0	0.0	2.6	0.0	0.0	0.9	0.8	1.6	0.9	1.1	1.5	0.0	0.0	0.0	5.4	0.0	0.8	0.8	C81
Non-Hodgkin lymphoma	33	6.2	4.0	0.0	2.5	6.8	8.2	7.7	5.6	6.2	7.8	7.3	17.5	17.9	23.0	32.3	44.2	8.2	8.2	C82-85,C96
Multiple myeloma	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.1	1.5	3.9	0.0	0.0	10.8	22.1	1.0	1.0	C90
Lymphoid leukemia	6	6.2	2.7	0.0	0.0	0.0	0.9	1.5	2.4	0.0	1.1	0.0	3.9	6.0	0.0	0.0	0.0	1.5	1.8	C91
Myeloid leukemia	8	0.0	0.0	0.0	1.2	2.3	0.9	1.5	0.8	0.9	0.0	1.5	5.8	11.9	19.2	5.4	13.3	2.1	2.3	C92-94
Leukemia unspecified	7	1.2	2.7	0.0	0.0	0.0	0.9	0.8	0.8	1.8	1.1	1.5	1.9	6.0	3.8	16.1	17.7	1.8	1.9	C95
Myelodysplastic disease	17	0.0	2.7	0.0	2.5	2.3	0.9	2.3	0.8	1.8	3.3	4.4	9.7	9.0	19.2	32.3	61.9	4.4	4.7	D45-D47
Other and unspecified	9	0.0	0.0	0.0	0.0	0.0	0.9	0.8	0.8	0.9	3.3	5.8	5.8	14.9	15.3	5.4	17.7	2.4	2.5	O&U
<b>All sites</b>	<b>542</b>	<b>16.2</b>	<b>13.5</b>	<b>3.9</b>	<b>9.8</b>	<b>22.8</b>	<b>25.6</b>	<b>38.4</b>	<b>56.0</b>	<b>91.9</b>	<b>138.7</b>	<b>299.0</b>	<b>362.6</b>	<b>483.6</b>	<b>693.5</b>	<b>935.5</b>	<b>1265.5</b>	<b>136.8</b>	<b>141.5</b>	<b>ALL</b>

**Table 3.11.2** Rayong (2011), Mean annual ASR per 100,000 (2010-2012) 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	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.8	0.0	4.5	5.8	0.4	0.3	C00	
Tongue	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	2.1	2.8	5.4	5.1	3.4	0.0	1.3	1.1	C01-02
Mouth	12	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.9	1.8	4.3	6.9	5.4	5.1	10.2	27.3	26.2	3.1	2.6	C03-06
Salivary glands	1	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	4.5	2.9	0.3	0.2	C07-08
Tonsil	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.1	0.0	3.6	0.0	0.0	13.6	2.9	0.7	0.6	C09
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	1.8	0.0	0.0	0.0	2.9	0.2	0.1	C10
Nasopharynx	5	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.9	1.8	1.1	4.1	5.4	0.0	3.4	0.0	5.8	1.2	0.9	C11
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	3.4	0.0	0.0	0.1	0.1	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	1.4	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C14
Oesophagus	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	5.5	5.4	7.7	23.9	18.2	17.4	2.5	2.4	C15
Stomach	13	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.6	1.8	5.4	4.1	9.1	7.7	10.2	27.3	26.2	3.4	2.9	C16
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.4	0.0	0.0	3.4	4.5	2.9	0.4	0.4	C17
Colon	28	0.0	0.0	0.0	0.0	1.2	0.0	1.7	3.4	4.5	14.0	13.8	16.3	35.8	17.1	9.1	55.2	7.2	6.1	C18
Rectum	18	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.7	2.7	5.4	13.8	20.0	5.1	10.2	27.3	32.0	4.6	3.8	C19-20
Anus	3	0.0	0.0	0.0	0.0	1.2	1.0	1.7	1.7	0.9	1.1	0.0	0.0	0.0	0.0	4.5	2.9	0.9	0.6	C21
Liver and bile duct	23	0.0	0.0	0.0	0.0	0.0	1.9	1.7	1.7	2.7	4.3	6.9	10.9	15.3	34.1	40.9	58.1	5.9	5.2	C22,C24
Gallbladder	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.1	0.0	1.8	5.1	3.4	9.1	2.9	0.8	0.7	C23
Pancreas	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.0	2.8	3.6	7.7	6.8	18.2	14.5	1.7	1.6	C25
Nose, sinuses etc.	2	0.0	0.0	0.0	0.0	1.2	0.0	0.8	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	5.8	0.4	0.4	C30-31
Larynx	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	5.1	3.4	0.0	2.9	0.4	0.4	C32
Trachea, Bronchus and lung	51	0.0	0.0	0.0	0.0	0.0	0.0	1.7	6.0	11.8	12.9	19.3	30.9	33.2	41.0	86.4	125.0	13.0	10.9	C33-34
Other thoracic organs	1	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	2.9	0.2	0.1	C37-38
Bone	5	0.0	0.0	2.7	1.3	2.4	1.0	1.7	0.0	0.9	3.2	0.0	0.0	5.1	0.0	9.1	0.0	1.4	1.4	C40-C41
Melanoma of skin	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.1	0.0	1.8	0.0	3.4	4.5	2.9	0.5	0.4	C43
Other skin	18	0.0	0.0	0.0	0.0	0.0	1.9	1.7	2.6	2.7	3.2	4.1	10.9	7.7	17.1	27.3	52.3	4.6	3.8	C44
Mesothelioma	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	0.0	0.1	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	6	1.3	0.0	0.0	0.0	0.0	1.9	0.8	1.7	0.9	1.1	4.1	3.6	5.1	0.0	9.1	5.8	1.6	1.4	C47,C49
Breast	150	0.0	0.0	0.0	0.0	4.9	16.4	27.6	47.4	76.3	65.5	107.3	83.5	84.4	71.7	50.0	20.3	38.4	30.3	C50
Vulva	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.4	0.0	5.1	3.4	9.1	5.8	0.8	0.7	C51
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.9	0.3	0.2	C52
Cervix uteri	74	0.0	0.0	0.0	0.0	0.0	4.8	7.5	16.4	30.0	41.9	41.3	43.6	76.7	34.1	54.5	34.9	19.0	15.8	C53
Corpus uteri	15	0.0	0.0	0.0	0.0	1.2	0.0	0.8	0.0	1.8	6.4	17.9	5.4	17.9	13.7	18.2	8.7	3.8	3.4	C54
Ovary	31	0.0	0.0	1.4	0.0	0.0	2.9	6.7	3.4	10.9	18.3	16.5	25.4	15.3	10.2	22.7	23.3	7.9	6.4	C56
Placenta	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	0.0	0.0	0.0	0.0	0.2	0.2	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	3	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	5.1	0.0	4.5	5.8	0.7	0.7	C64
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	2.9	0.1	0.1	C65
Ureter	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	C66
Bladder	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.4	0.0	0.0	0.0	18.2	14.5	1.0	0.9	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	0.0	0.0	0.0	0.0	0.0	2.9	0.1	0.1	C68
Eye	1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	C69
Brain, nervous system	8	1.3	0.0	0.0	1.3	1.2	1.0	0.8	0.9	0.9	4.3	2.8	1.8	2.6	6.8	22.7	8.7	2.1	2.0	C70-72
Thyroid	21	0.0	0.0	1.4	2.7	6.1	1.9	5.0	6.9	3.6	5.4	13.8	5.4	15.3	6.8	9.1	20.3	5.4	4.6	C73
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	2.9	0.1	0.1	C74
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
Hodgkin disease	2	0.0	0.0	0.0	0.0	1.2	1.9	0.0	1.7	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	C81
Non-Hodgkin lymphoma	43	0.0	7.2	1.4	2.7	12.2	23.1	11.7	8.6	13.6	10.7	15.1	16.3	20.5	10.2	22.7	2.9	10.9	9.6	C82-85,C96
Multiple myeloma	4	0.0	0.0	1.4	0.0	0.0	0.0	0.8	0.0	0.9	1.1	0.0	3.6	2.6	0.0	18.2	2.9	1.0	1.0	C90
Lymphoid leukemia	5	5.3	2.9	2.7	2.7	0.0	0.0	0.0	0.9	1.8	0.0	0.0	0.0	0.0	3.4	0.0	2.9	1.3	1.7	C91
Myeloid leukemia	9	1.3	2.9	2.7	0.0	3.6	2.9	0.8	1.7	3.6	1.1	1.4	5.4	0.0	3.4	0.0	8.7	2.3	2.2	C92-94
Leukemia unspecified	7	1.3	1.4	0.0	0.0	0.0	1.9	0.0	0.9	3.6	1.1	2.8	3.6	2.6	6.8	4.5	5.8	1.7	1.6	C95
Myelodysplastic disease	36	0.0	1.4	1.4	1.3	4.9	3.9	4.2	2.6	3.6	5.4	6.9	10.9	17.9	37.5	54.5	116.3	9.3	8.1	D45-D47
Other and unspecified	6	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	1.8	0.0	5.5	0.0	5.1	6.8	18.2	5.8	1.5	1.4	O&U
<b>All sites</b>	<b>647</b>	<b>12.0</b>	<b>17.2</b>	<b>14.9</b>	<b>12.0</b>	<b>41.4</b>	<b>73.2</b>	<b>81.0</b>	<b>120.7</b>	<b>189.8</b>	<b>230.9</b>	<b>327.4</b>	<b>346.6</b>	<b>427.1</b>	<b>409.6</b>	<b>672.7</b>	<b>767.4</b>	<b>165.7</b>	<b>140.5</b>	<b>ALL</b>

**Table 3.11.3** Mean annual incidence, Rayong, 2010-2012

Site	Male						Female					
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate	
					0-64	0-74					0-64	0-74
					(per 100,000)						(percent)	
Lip	1	0.1	0.2	0.2	0.0	0.0	2	0.3	0.4	0.3	0.0	0.0
Tongue	10	1.9	2.6	2.6	0.1	0.3	5	0.8	1.3	1.1	0.1	0.1
Mouth	13	2.4	3.3	3.2	0.2	0.4	12	1.9	3.1	2.6	0.1	0.3
Salivary glands	2	0.3	0.4	0.4	0.0	0.0	1	0.2	0.3	0.2	0.0	0.0
Tonsil	5	1.0	1.3	1.2	0.1	0.1	3	0.4	0.7	0.6	0.0	0.1
Other oropharynx	2	0.4	0.5	0.5	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0
Nasopharynx	14	2.5	3.4	3.1	0.3	0.3	5	0.7	1.2	0.9	0.1	0.1
Hypopharynx	8	1.5	2.0	1.9	0.1	0.2	0	0.1	0.1	0.1	0.0	0.0
Pharynx unspecified	2	0.4	0.5	0.6	0.0	0.1	0	0.1	0.1	0.1	0.0	0.0
Oesophagus	29	5.4	7.4	8.1	0.5	1.1	10	1.5	2.5	2.4	0.1	0.3
Stomach	13	2.4	3.3	3.3	0.2	0.4	13	2.1	3.4	2.9	0.2	0.3
Small intestine	2	0.4	0.5	0.5	0.0	0.0	2	0.3	0.4	0.4	0.0	0.1
Colon	36	6.6	9.1	9.6	0.5	1.0	28	4.3	7.2	6.1	0.5	0.6
Rectum	22	4.1	5.6	6.0	0.3	0.7	18	2.8	4.6	3.8	0.2	0.4
Anus	5	1.0	1.3	1.2	0.1	0.1	3	0.5	0.9	0.6	0.0	0.1
Liver and bile duct	70	13.0	17.7	18.0	1.2	2.1	23	3.6	5.9	5.2	0.2	0.6
Gallbladder	4	0.7	0.9	1.0	0.0	0.1	3	0.5	0.8	0.7	0.0	0.1
Pancreas	6	1.0	1.4	1.5	0.1	0.2	7	1.0	1.7	1.6	0.1	0.2
Nose, sinuses etc.	2	0.3	0.4	0.4	0.0	0.0	2	0.3	0.4	0.4	0.0	0.0
Larynx	9	1.7	2.4	2.4	0.2	0.3	2	0.3	0.4	0.4	0.0	0.1
Trachea, Bronchus and lung	92	17.0	23.2	24.8	1.1	2.9	51	7.8	13.0	10.9	0.6	1.2
Other thoracic organs	1	0.2	0.3	0.3	0.0	0.1	1	0.1	0.2	0.1	0.0	0.0
Bone	4	0.7	1.0	0.9	0.1	0.1	5	0.8	1.4	1.4	0.1	0.1
Melanoma of skin	3	0.6	0.8	0.8	0.1	0.1	2	0.3	0.5	0.4	0.0	0.1
Other skin	14	2.5	3.4	3.3	0.2	0.3	18	2.8	4.6	3.8	0.2	0.4
Mesothelioma	0	0.1	0.1	0.0	0.0	0.0	0	0.1	0.1	0.1	0.0	0.0
Kaposi's sarcoma	0	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Connective tissue	6	1.1	1.5	1.6	0.1	0.2	6	1.0	1.6	1.4	0.1	0.1
Breast	1	0.2	0.3	0.4	0.0	0.0	150	23.2	38.4	30.3	2.6	3.2
Vulva							3	0.5	0.8	0.7	0.0	0.1
Vagina							1	0.2	0.3	0.2	0.0	0.0
Cervix uteri							74	11.5	19.0	15.8	1.3	1.8
Corpus uteri							15	2.3	3.8	3.4	0.3	0.4
Ovary							31	4.8	7.9	6.4	0.5	0.7
Placenta							1	0.1	0.2	0.2	0.0	0.0
Penis	6	1.2	1.6	1.4	0.1	0.2						
Prostate	24	4.5	6.1	7.3	0.2	0.8						
Testis	2	0.3	0.4	0.2	0.0	0.0						
Other male genital organs	1	0.1	0.2	0.2	0.0	0.0						
Kidney	3	0.6	0.8	0.9	0.1	0.1	3	0.4	0.7	0.7	0.0	0.1
Renal pelvis	2	0.3	0.4	0.5	0.0	0.1	0	0.1	0.1	0.1	0.0	0.0
Ureter	0	0.1	0.1	0.1	0.0	0.0	0	0.1	0.1	0.1	0.0	0.0
Bladder	20	3.7	5.0	5.5	0.2	0.6	4	0.6	1.0	0.9	0.0	0.1
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0	0.1	0.1	0.1	0.0	0.0
Eye	0	0.1	0.1	0.1	0.0	0.0	1	0.2	0.3	0.3	0.0	0.0
Brain, nervous system	10	1.8	2.5	2.4	0.2	0.2	8	1.3	2.1	2.0	0.1	0.2
Thyroid	7	1.2	1.7	1.5	0.1	0.2	21	3.2	5.4	4.6	0.3	0.4
Adrenal gland	1	0.1	0.2	0.1	0.0	0.0	0	0.1	0.1	0.1	0.0	0.0
Other endocrine	1	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Hodgkin disease	3	0.6	0.8	0.8	0.0	0.1	2	0.4	0.6	0.5	0.0	0.0
Non-Hodgkin lymphoma	33	6.0	8.2	8.2	0.5	0.8	43	6.6	10.9	9.6	0.7	0.9
Multiple myeloma	4	0.7	1.0	1.0	0.0	0.1	4	0.6	1.0	1.0	0.1	0.1
Lymphoid leukemia	6	1.1	1.5	1.8	0.1	0.1	5	0.8	1.3	1.7	0.1	0.1
Myeloid leukemia	8	1.5	2.1	2.3	0.1	0.3	9	1.4	2.3	2.2	0.1	0.2
Leukemia unspecified	7	1.3	1.8	1.9	0.1	0.2	7	1.0	1.7	1.6	0.1	0.2
Myelodysplastic disease	17	3.2	4.4	4.7	0.2	0.5	36	5.6	9.3	8.1	0.3	0.8
Other and unspecified	9	1.7	2.4	2.5	0.2	0.3	6	0.9	1.5	1.4	0.1	0.2
<b>All sites</b>	<b>542</b>	<b>100.0</b>	<b>136.8</b>	<b>141.5</b>	<b>7.8</b>	<b>16.0</b>	<b>647</b>	<b>100.0</b>	<b>165.7</b>	<b>140.5</b>	<b>9.5</b>	<b>14.9</b>

**Table 3.11.4** 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	77	81.8	0.0	59	72.9	1.7	C00-C08
Oropharynx	28	85.7	3.6	11	81.8	0.0	C09-C10,C14
Nasopharynx	41	92.7	0.0	14	71.4	0.0	C11
Hypopharynx	24	91.7	0.0	1	0.0	0.0	C12-C13
Esophagus	88	85.2	3.4	29	72.4	10.3	C15
Stomach	39	82.1	0.0	40	72.5	2.5	C16
Small intestine	6	100.0	0.0	5	100.0	0.0	C17
Colon and rectum	191	73.3	0.5	148	83.1	0.7	C18-C21
Liver and bile duct	211	14.2	7.1	69	8.7	17.4	C22,C24
Gallbladder	11	36.4	0.0	9	44.4	0.0	C23
pancreas	17	35.3	0.0	20	30.0	15.0	C25
Nose,sinuses etc	5	80.0	0.0	5	60.0	0.0	C30-C31
Larynx	28	82.1	3.6	5	60.0	20.0	C32
Trachea, bronchus and lung	276	56.9	1.8	152	60.5	7.2	C33-C34
Other thoracic organs	3	100.0	0.0	2	50.0	0.0	C37-C38
Bone	12	50.0	0.0	16	43.8	0.0	C40-C41
Melanoma of skin	10	100.0	0.0	6	100.0	0.0	C43
Other skin	41	82.9	0.0	54	85.2	0.0	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	18	94.4	0.0	19	94.7	0.0	C47,C49
Breast	4	25.0	0.0	450	85.3	0.7	C50
Vulva				9	88.9	0.0	C51
Vagina				3	66.7	0.0	C52
Cervix uteri				223	86.5	0.9	C53
Corpus uteri				44	97.7	0.0	C54
Uterus unspecified				0	0.0	0.0	C55
Ovary				93	80.6	0.0	C56
Other female genital organs				0	0.0	0.0	C57
Placenta				2	50.0	0.0	C58
Penis	19	100.0	0.0				C60
Prostate	73	71.2	1.4				C61
Testis	5	100.0	0.0				C62
Other male genital organs	2	50.0	0.0				C63
Kidney	10	60.0	0.0	8	62.5	0.0	C64
Renal pelvis	5	100.0	0.0	1	100.0	0.0	C65
Ureter	1	100.0	0.0	1	100.0	0.0	C66
Bladder	60	78.3	3.3	12	50.0	16.7	C67
Other urinary organs	0	0.0	0.0	1	100.0	0.0	C68
Eye	1	0.0	0.0	3	100.0	0.0	C69
Brain, nervous system	30	60.0	6.7	25	52.0	12.0	C70-C72
Thyroid	20	70.0	0.0	63	87.3	0.0	C73
Adrenal gland	2	0.0	0.0	1	0.0	0.0	C74
Other endocrine	2	50.0	0.0	0	0.0	0.0	C75
Hodgkin disease	10	100.0	0.0	7	100.0	0.0	C81
Non-Hodgkin lymphoma	98	100.0	0.0	128	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	12	100.0	0.0	12	100.0	0.0	C90
Leukemia	64	100.0	0.0	62	100.0	0.0	C91-C95
Myelodysplastic	52	100.0	0.0	109	100.0	0.0	D45-D47
Other and unspecified	28	60.7	25.0	18	72.2	0.0	O&U
<b>All sites</b>	<b>1,626</b>	<b>68.8</b>	<b>2.3</b>	<b>1,940</b>	<b>80.2</b>	<b>2.2</b>	<b>All</b>

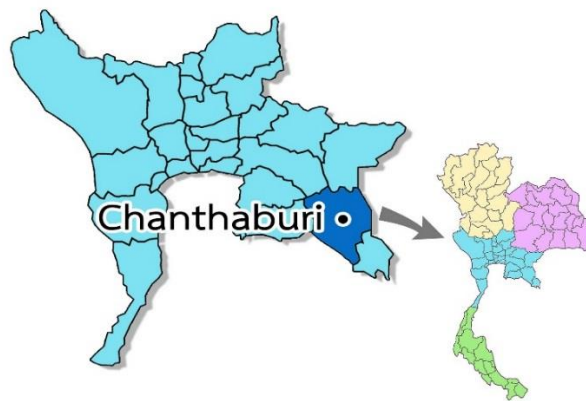
# Chanthaburi Cancer Registry

## Registration area

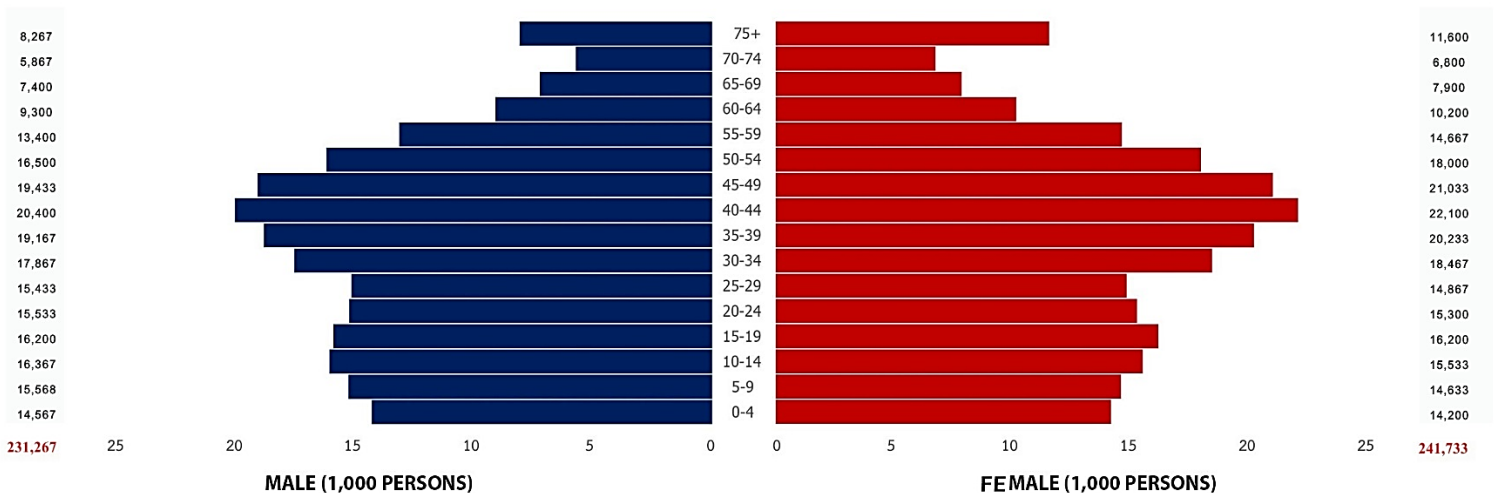
Chanthaburi is situated in the eastern part of Thailand, between 12°-13° N and 101-102 ° E, 245 kilometers from Bangkok by car or bus, with land area 6,338 square kilometers and is bounded in the north by Chonburi, Chachoengsao and Srakaeo, in the east by the kingdom of Cambodia and Trat, in the west by Rayong and Chonburi and in the south by the bank of Gulf of Thailand.

The north-east of the province is predominantly mountainous and the forests which abundant in herbs and forest products such as gamboges, wax, cardamom, eagle wood, rattan and cinnamon, the sea shore stretching from north-west to south-west about 108 kilometers and 30-190 meters above the sea level. The climate is hot and dry the highest temperature about 42 ° C in summer from March to May, 13.1° C in winter from November to February, rainy season started from June to October. The average total rainfall is 3,509.4 millimeters per year.

The most important occupations are gemstone trading, making Kok mat, farming of vegetables, fruits and fishing. In Chanthaburi, there are many factories contributing to successful cultivation of fruits especially durian, rambutan, mangosteen and other economic crops such as pepper and para rubber tree. Nowadays, it is becoming appreciated for its tourism potential, especially the Khao Khitchakut National park, Chao Lao beach, Philu waterfall.



Population pyramid, Chanthaburi  
estimated population in 2011 (average 2010-2012)



## **Cancer care facilities**

The total number of hospitals in Chanthaburi province was 14 hospitals composed of 11 community hospitals, 2 private hospitals and 1 provincial hospital, providing 1410 total beds. The medical personals composed of 183 registered medical practitioners, 31 dentists, 57 pharmacists and 1042 nurses.

Cancer diagnostic services including radiological diagnosis equipment such as: X-ray, ultrasound, computed tomography scan, mammogram and pathological investigations are available in Chanthaburi provincial hospital (Pahrapokklao Hospital). Cancer diagnosis is available in some private hospital. Most of the cancer patients were referred Pahrapokklao Hospital, or private hospital which can provide surgery, chemotherapy and targeted therapy. Radiotherapy can be performed only in Chonburi Cancer Hospital. All hospitals in the province provide palliative care.

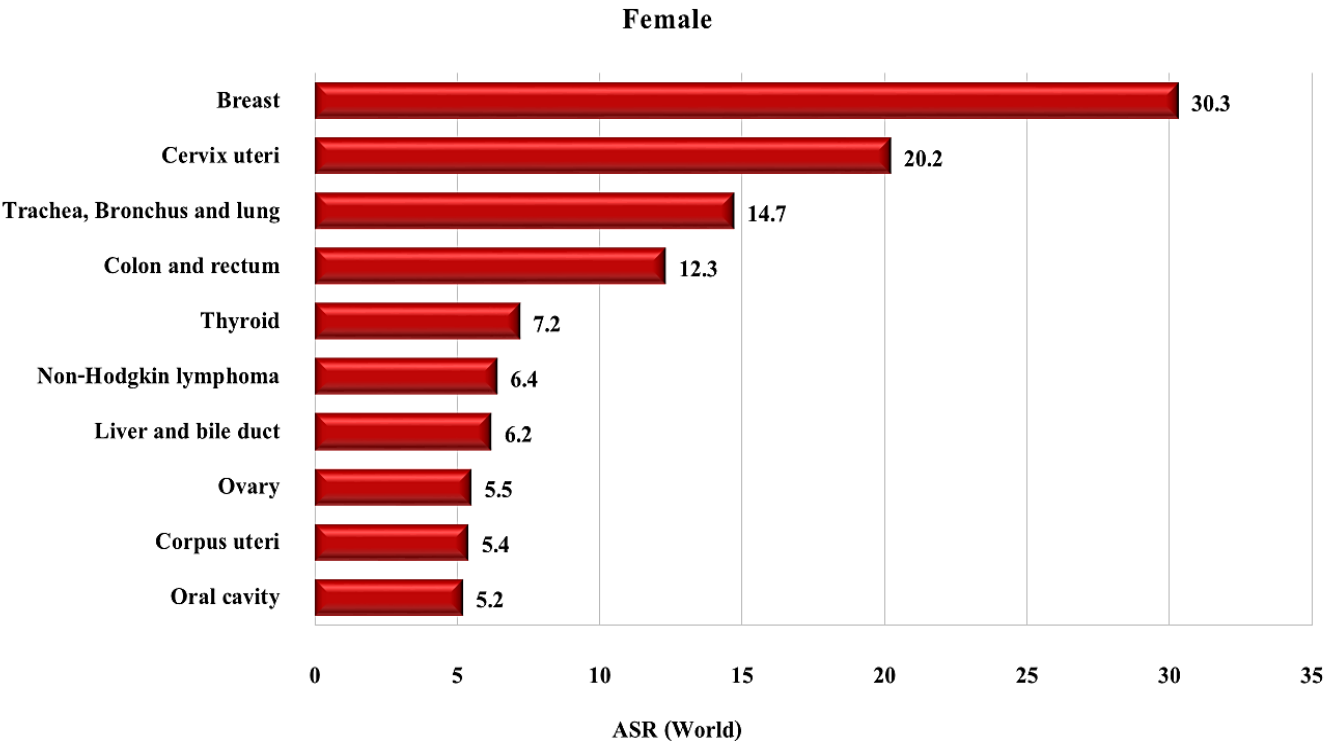
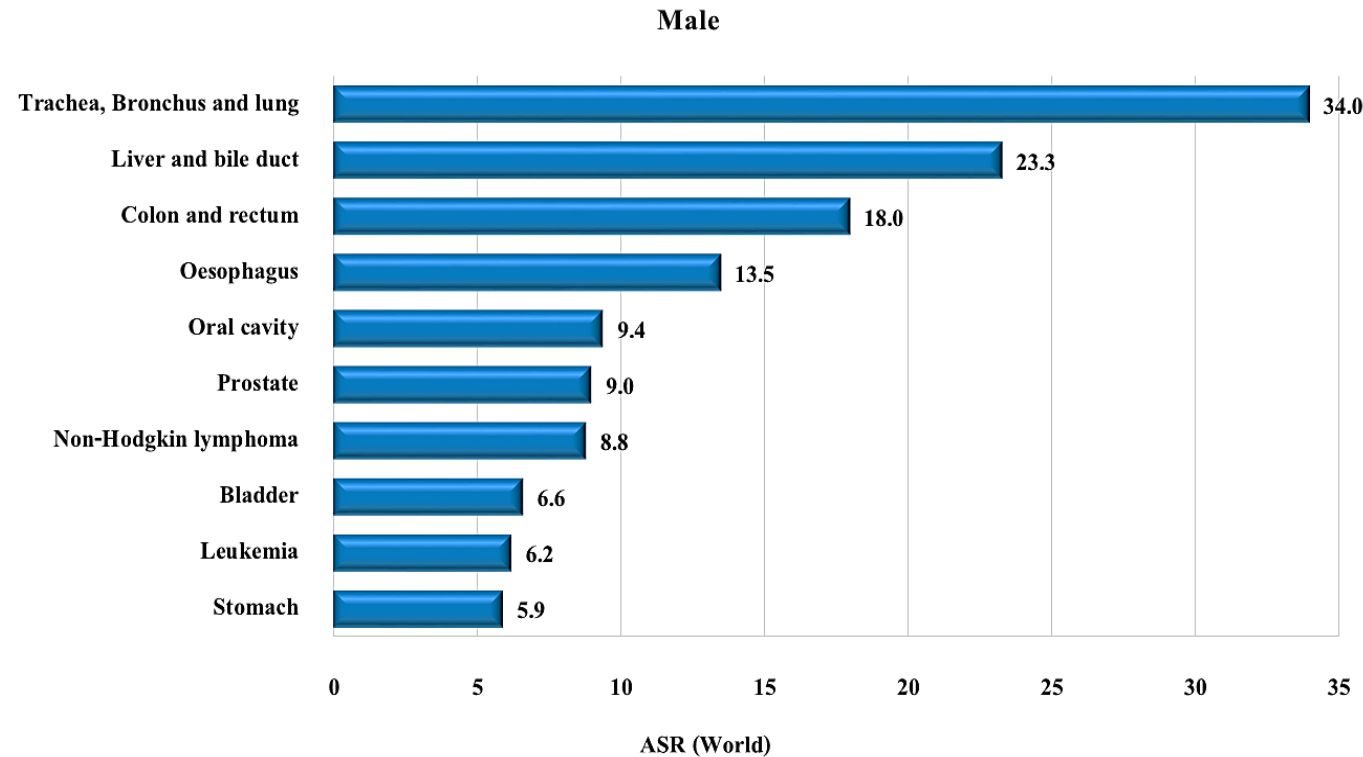
## **Registry procedures**

The data of Chanthaburi residents are extracted from the hospital-based cancer registry of Chonburi Cancer Hospital and mixture of passively and actively collected data of all hospital in Chanthaburi. New cancer cases were collected from out and in patient 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, 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. Individual 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 other sources.

## **Summary of results**

New cases registered in 2011, 550 were males and 514 were females, making 1,064 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 181.9 per 100,000, with lung cancer ranks first (ASR = 34.0) followed by liver and bile duct (ASR = 23.3) and colon and rectum (ASR = 18.0). The ASR of all cancer sites in females was 149.0 per 100,000, three leading cancer sites being breast (ASR = 30.3), cervix (ASR =20.2) and lung (ASR =14.7).

**Figure 3.12** Leading cancer in Chanthaburi (mean annual ASR 2010-2012)



**Table 3.12.1** Chanthaburi (2011), Mean annual ASR per 100,000 (2010-2012) 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	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.1	0.1	C00	
Tongue	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	5.1	20.2	24.9	14.3	31.5	11.4	32.3	6.6	4.9	C01-02	
Mouth	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	10.3	6.1	5.0	14.3	18.0	28.4	20.2	4.3	3.3	C03-06	
Salivary glands	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	4.9	1.7	0.0	0.0	3.6	9.0	0.0	0.0	1.4	1.1	C07-08	
Tonsil	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.6	3.4	10.1	7.5	3.6	4.5	17.0	0.0	2.5	1.8	C09	
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	2.5	7.2	0.0	0.0	0.0	0.6	0.5	C10	
Nasopharynx	14	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.5	6.5	10.3	12.1	19.9	3.6	13.5	39.8	12.1	5.9	4.3	C11	
Hypopharynx	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	5.1	4.0	7.5	7.2	9.0	28.4	4.0	3.0	2.3	C12-13	
Pharynx unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	2.5	7.2	0.0	0.0	4.0	0.7	0.6	C14	
Oesophagus	40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	14.7	24.0	40.4	44.8	75.3	67.6	62.5	48.4	17.4	13.5	C15	
Stomach	19	0.0	0.0	0.0	0.0	0.0	2.2	1.9	3.5	6.5	1.7	8.1	14.9	21.5	18.0	56.8	68.5	8.1	5.9	C16	
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.0	0.0	3.6	9.0	0.0	0.0	0.7	0.6	C17	
Colon	27	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	4.9	5.1	14.1	34.8	35.8	58.6	85.2	60.5	11.8	9.0	C18	
Rectum	26	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.7	9.8	5.1	18.2	27.4	53.8	40.5	39.8	68.5	11.4	8.7	C19-20	
Anus	1	0.0	0.0	0.0	0.0	0.0	2.2	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	C21	
Liver and bile duct	69	9.2	0.0	0.0	0.0	0.0	4.3	9.3	12.2	26.1	27.4	60.6	92.0	93.2	103.6	90.9	100.8	29.8	23.3	C22,C24	
Gallbladder	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	0.0	4.5	11.4	4.0	1.0	0.7	C23	
Pancreas	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	3.4	4.0	5.0	3.6	9.0	11.4	16.1	2.3	1.7	C25	
Nose, sinuses etc.	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	3.6	9.0	0.0	4.0	0.7	0.6	C30-31	
Larynx	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	6.1	10.0	21.5	27.0	17.0	32.3	4.9	3.8	C32	
Trachea, Bronchus and lung	105	0.0	0.0	0.0	0.0	0.0	0.0	1.9	7.0	9.8	32.6	52.5	64.7	132.6	234.2	312.5	358.9	45.4	34.0	C33-34	
Other thoracic organs	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	0.0	0.0	0.1	0.1	C37-38	
Bone	2	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	2.0	0.0	0.0	4.5	5.7	4.0	0.7	0.5	C40-C41	
Melanoma of skin	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.0	3.6	4.5	5.7	24.2	1.6	1.1	C43	
Other skin	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	8.2	6.9	8.1	7.5	21.5	18.0	45.5	68.5	7.5	5.4	C44	
Connective tissue	3	2.3	0.0	0.0	0.0	0.0	0.0	1.9	3.5	1.6	3.4	2.0	2.5	0.0	0.0	4.0	1.4	1.2	1.2	C47,C49	
Breast	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.7	0.0	0.0	0.0	4.5	5.7	0.0	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	0.0	C51
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	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	0.0	C54
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	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	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	0.0	C58
Penis	4	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.4	2.0	0.0	7.2	13.5	11.4	8.1	1.9	1.6	1.6	C60
Prostate	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.0	10.0	25.1	31.5	119.3	201.6	13.1	9.0	9.0	C61
Testis	3	4.6	0.0	2.0	2.1	2.1	4.3	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	5.7	0.0	1.4	1.8	1.8	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	5.7	0.0	0.1	0.1	0.1	C63
Kidney	4	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	18.0	5.7	12.1	1.6	1.3	1.3	C64
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	0.0	C65
Bladder	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.6	1.7	10.1	14.9	25.1	27.0	68.2	100.8	9.2	6.6	6.6	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68
Eye	1	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	4.0	0.4	0.5	0.5	C69
Brain, nervous system	9	4.6	0.0	0.0	4.1	2.1	2.2	3.7	0.0	3.3	5.1	6.1	2.5	3.6	9.0	17.0	12.1	3.7	3.4	3.4	C70-72
Thyroid	3	0.0	0.0	0.0	0.0	0.0	2.2	0.0	1.7	1.6	1.7	4.0	0.0	0.0	13.5	0.0	0.0	1.3	1.1	1.1	C73
Hodgkin disease	2	0.0	0.0	0.0	0.0	2.1	0.0	1.9	0.0	0.0	5.1	0.0	2.5	0.0	0.0	0.0	0.0	0.9	0.7	0.7	C81
Non-Hodgkin lymphoma	25	2.3	0.0	2.0	6.2	2.1	6.5	1.9	5.2	8.2	12.0	20.2	22.4	14.3	31.5	51.1	48.4	11.0	8.8	8.8	C82-85,C96
Multiple myeloma	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.4	2.0	2.5	7.2	22.5	17.0	12.1	2.7	2.1	2.1	C90
Lymphoid leukemia	4	0.0	0.0	0.0	4.1	0.0	2.2	0.0	1.7	3.3	0.0	0.0	5.0	3.6	0.0	17.0	4.0	1.9	1.6	1.6	C91
Myeloid leukemia	7	0.0	0.0	0.0	6.2	4.3	2.2	1.9	3.5	3.3	0.0	2.0	2.5	3.6	9.0	11.4	8.1	2.9	2.6	2.6	C92-94
Leukemia unspecified	6	2.3	2.1	0.0	0.0	0.0	0.0	1.9	1.7	1.6	0.0	4.0	0.0	3.6	4.5	5.7	32.3	2.6	2.0	2.0	C95
Myelodysplastic disease	17	0.0	0.0	0.0	0.0	2.1	0.0	5.6	10.4	8.2	1.7	4.0	17.4	17.9	4.5	39.8	48.4	7.2	5.2	5.2	D45-D47
Other and unspecified	11	0.0	0.0	0.0	0.0	0.0	2.2	0.0	1.7	3.3	5.1	4.0	5.0	14.3	18.0	45.5	28.2	4.9	3.8	3.8	O&U
<b>All sites</b>	<b>550</b>	<b>27.5</b>	<b>4.3</b>	<b>4.1</b>	<b>22.6</b>	<b>15.0</b>	<b>32.4</b>	<b>41.0</b>	<b>78.3</b>	<b>143.8</b>	<b>204.1</b>	<b>333.3</b>	<b>470.1</b>	<b>655.9</b>	<b>900.9</b>	<b>1301.1</b>	<b>1459.7</b>	<b>238.0</b>	<b>181.9</b>	<b>181.9</b>	<b>ALL</b>

**Table 3.12.2** Chanthaburi (2011), Mean annual ASR per 100,000 (2010-2012) 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	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	9.8	16.9	0.0	2.9	1.1	1.0	C00
Tongue	4	0.0	0.0	0.0	0.0	2.2	0.0	0.0	3.3	1.5	1.6	5.6	2.3	0.0	8.4	0.0	0.0	1.5	1.2	C01-02
Mouth	11	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.6	3.0	0.0	5.6	6.8	19.6	8.4	9.8	37.4	4.6	2.9	C03-06
Salivary glands	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.1	0.1	C07-08
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	4.2	0.0	0.0	0.3	0.2	C09
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
Nasopharynx	6	0.0	0.0	0.0	0.0	0.0	0.0	1.8	4.9	6.0	1.6	5.6	2.3	3.3	0.0	0.0	14.4	2.6	1.6	C11
Hypopharynx	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	0.0	0.0	4.9	0.0	0.3	0.2	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.2	5.6	11.4	19.6	33.8	24.5	23.0	5.2	3.8	C15
Stomach	11	0.0	0.0	0.0	0.0	0.0	0.0	1.8	9.9	1.5	3.2	7.4	13.6	9.8	0.0	9.8	25.9	4.7	3.0	C16
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	0.0	0.0	9.8	0.0	0.3	0.2	C17
Colon	23	0.0	0.0	0.0	2.1	0.0	2.2	0.0	1.6	1.5	6.3	13.0	18.2	13.1	25.3	39.2	80.5	9.5	6.0	C18
Rectum	22	0.0	0.0	0.0	0.0	0.0	2.2	3.6	0.0	9.0	1.6	9.3	18.2	29.4	38.0	49.0	40.2	9.0	6.3	C19-20
Anus	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C21
Liver and bile duct	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.5	6.3	13.0	15.9	26.1	46.4	44.1	51.7	9.1	6.2	C22,C24
Gallbladder	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	4.5	6.5	0.0	9.8	11.5	1.5	1.0	C23
Pancreas	4	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	3.7	0.0	0.0	4.2	14.7	11.5	1.5	0.9	C25
Nose, sinuses etc.	1	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	1.5	0.0	0.0	2.3	0.0	0.0	4.9	0.0	0.6	0.4	C30-31
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	4.9	0.0	0.1	0.1	C32
Trachea, Bronchus and lung	56	0.0	0.0	0.0	2.1	0.0	0.0	3.6	3.3	15.1	19.0	20.4	34.1	49.0	71.7	98.0	178.2	23.0	14.7	C33-34
Other thoracic organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.9	0.0	6.5	0.0	0.0	0.0	0.6	0.4	C37-38
Bone	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.3	3.3	0.0	0.0	0.0	0.4	0.3	C40-C41
Melanoma of skin	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	1.6	0.0	2.3	0.0	8.4	4.9	2.9	1.2	0.9	C43
Other skin	16	0.0	0.0	0.0	2.1	0.0	0.0	1.8	0.0	4.5	1.6	11.1	11.4	9.8	4.2	4.9	71.8	6.5	3.7	C44
Connective tissue	4	4.7	0.0	4.3	0.0	0.0	0.0	1.8	3.3	3.0	1.6	0.0	0.0	0.0	4.2	0.0	0.0	1.5	1.7	C47,C49
Breast	102	0.0	0.0	0.0	0.0	2.2	6.7	27.1	31.3	60.3	95.1	87.0	84.1	104.6	88.6	53.9	57.5	42.2	30.3	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	4.2	0.0	0.0	0.1	0.1	C51
Cervix uteri	70	0.0	0.0	0.0	0.0	0.0	4.5	9.0	23.1	39.2	58.6	70.4	61.4	55.6	50.6	58.8	57.5	29.0	20.2	C53
Corpus uteri	17	0.0	0.0	0.0	0.0	0.0	2.2	1.8	3.3	4.5	4.8	24.1	15.9	39.2	12.7	19.6	8.6	7.2	5.4	C54
Ovary	18	0.0	0.0	0.0	2.1	0.0	4.5	1.8	1.6	9.0	14.3	25.9	6.8	19.6	12.7	19.6	11.5	7.4	5.5	C56
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	C57
Placenta	1	0.0	0.0	0.0	0.0	2.2	0.0	0.0	1.6	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.4	0.4	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	2	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	2.3	0.0	4.2	0.0	5.7	0.8	0.7	C64
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	5.7	0.3	0.1	C65
Bladder	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.6	1.9	0.0	6.5	12.7	14.7	28.7	2.9	1.8	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	0.0	0.0	0.0	0.0	0.0	2.9	0.1	0.1	C68
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
Brain, nervous system	6	0.0	0.0	2.1	0.0	0.0	0.0	3.6	1.6	1.5	3.2	0.0	6.8	3.3	4.2	9.8	8.6	2.3	1.7	C70-72
Thyroid	22	0.0	0.0	0.0	4.1	2.2	15.7	12.6	9.9	16.6	4.8	16.7	6.8	22.9	4.2	14.7	14.4	9.0	7.2	C73
Hodgkin disease	1	0.0	0.0	2.1	2.1	0.0	0.0	1.8	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	C81
Non-Hodgkin lymphoma	21	2.3	0.0	0.0	2.1	2.2	2.2	3.6	8.2	7.5	19.0	1.9	22.7	19.6	12.7	24.5	28.7	8.7	6.4	C82-85,C96
Multiple myeloma	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	9.8	8.4	14.7	20.1	2.3	1.5	C90
Lymphoid leukemia	3	0.0	0.0	0.0	2.1	0.0	6.7	1.8	3.3	0.0	0.0	1.9	2.3	0.0	0.0	0.0	0.0	1.2	1.2	C91
Myeloid leukemia	7	0.0	0.0	0.0	4.1	2.2	0.0	0.0	0.0	6.0	0.0	5.6	4.5	3.3	8.4	9.8	8.6	2.8	2.1	C92-94
Leukemia unspecified	4	0.0	0.0	0.0	0.0	2.2	0.0	1.8	0.0	0.0	1.6	1.9	0.0	0.0	4.2	14.7	8.6	1.5	1.1	C95
Myelodysplastic disease	15	0.0	0.0	0.0	0.0	4.4	0.0	5.4	3.3	1.5	7.9	9.3	11.4	3.3	16.9	19.6	37.4	6.2	4.1	D45-D47
Other and unspecified	5	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.2	5.6	4.5	6.5	12.7	0.0	8.6	2.2	1.6	O&U
<b>All sites</b>	<b>514</b>	<b>7.0</b>	<b>2.3</b>	<b>8.6</b>	<b>22.6</b>	<b>19.6</b>	<b>49.3</b>	<b>92.1</b>	<b>118.6</b>	<b>202.1</b>	<b>267.8</b>	<b>359.3</b>	<b>381.8</b>	<b>500.0</b>	<b>535.9</b>	<b>607.8</b>	<b>864.9</b>	<b>212.8</b>	<b>149.0</b>	<b>ALL</b>

**Table 3.12.3** Mean annual incidence, Chanthaburi, 2010-2012

Site	Male						Female					
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate	
					0-64	0-74					0-64	0-74
					(per 100,000)						(percent)	
Lip	0	0.1	0.1	0.1	0.0	0.0	3	0.5	1.1	1.0	0.0	0.1
Tongue	15	2.8	6.6	4.9	0.3	0.6	4	0.7	1.5	1.2	0.1	0.1
Mouth	10	1.8	4.3	3.3	0.2	0.4	11	2.1	4.6	2.9	0.2	0.3
Salivary glands	3	0.6	1.4	1.1	0.1	0.1	0	0.1	0.1	0.1	0.0	0.0
Tonsil	6	1.0	2.5	1.8	0.1	0.2	1	0.1	0.3	0.2	0.0	0.0
Other oropharynx	1	0.2	0.6	0.5	0.1	0.1	0	0.0	0.0	0.0	0.0	0.0
Nasopharynx	14	2.5	5.9	4.3	0.3	0.6	6	1.2	2.6	1.6	0.1	0.1
Hypopharynx	7	1.3	3.0	2.3	0.1	0.3	1	0.1	0.3	0.2	0.0	0.0
Pharynx unspecified	2	0.3	0.7	0.6	0.1	0.1	0	0.0	0.0	0.0	0.0	0.0
Oesophagus	40	7.3	17.4	13.5	1.0	1.7	13	2.5	5.2	3.8	0.2	0.5
Stomach	19	3.4	8.1	5.9	0.3	0.7	11	2.2	4.7	3.0	0.2	0.3
Small intestine	2	0.3	0.7	0.6	0.0	0.1	1	0.1	0.3	0.2	0.0	0.0
Colon	27	5.0	11.8	9.0	0.5	1.2	23	4.5	9.5	6.0	0.3	0.6
Rectum	26	4.8	11.4	8.7	0.6	1.0	22	4.2	9.0	6.3	0.4	0.8
Anus	1	0.1	0.3	0.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Liver and bile duct	69	12.5	29.8	23.3	1.7	2.6	22	4.3	9.1	6.2	0.3	0.8
Gallbladder	2	0.4	1.0	0.7	0.0	0.1	4	0.7	1.5	1.0	0.1	0.1
Pancreas	5	1.0	2.3	1.7	0.1	0.2	4	0.7	1.5	0.9	0.0	0.1
Nose, sinuses etc.	2	0.3	0.7	0.6	0.0	0.1	1	0.3	0.6	0.4	0.0	0.1
Larynx	11	2.1	4.9	3.8	0.2	0.4	0	0.1	0.1	0.1	0.0	0.0
Trachea, Bronchus and lung	105	19.1	45.4	34.0	1.5	4.2	56	10.8	23.0	14.7	0.7	1.6
Other thoracic organs	0	0.1	0.1	0.1	0.0	0.0	1	0.3	0.6	0.4	0.1	0.1
Bone	2	0.3	0.7	0.5	0.0	0.1	1	0.2	0.4	0.3	0.0	0.0
Melanoma of skin	4	0.7	1.6	1.1	0.0	0.1	3	0.6	1.2	0.9	0.0	0.1
Other skin	17	3.1	7.5	5.4	0.3	0.6	16	3.0	6.5	3.7	0.2	0.3
Connective tissue	3	0.6	1.4	1.2	0.1	0.1	4	0.7	1.5	1.7	0.1	0.1
Breast	1	0.2	0.6	0.4	0.0	0.1	102	19.8	42.2	30.3	2.5	3.2
Vulva							0	0.1	0.1	0.1	0.0	0.0
Cervix uteri							70	13.6	29.0	20.2	1.6	2.2
Corpus uteri							17	3.4	7.2	5.4	0.5	0.6
Ovary							18	3.5	7.4	5.5	0.4	0.6
Other female genital organs							1	0.1	0.3	0.2	0.0	0.0
Placenta							1	0.2	0.4	0.4	0.0	0.0
Penis	4	0.8	1.9	1.6	0.1	0.2						
Prostate	30	5.5	13.1	9.0	0.2	0.9						
Testis	3	0.6	1.4	1.8	0.1	0.1						
Other male genital organs	0	0.1	0.1	0.1	0.0	0.0						
Kidney	4	0.7	1.6	1.3	0.0	0.2	2	0.4	0.8	0.7	0.0	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	1	0.1	0.3	0.1	0.0	0.0
Bladder	21	3.9	9.2	6.6	0.3	0.8	7	1.4	2.9	1.8	0.1	0.2
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0	0.1	0.1	0.1	0.0	0.0
Eye	1	0.2	0.4	0.5	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Brain, nervous system	9	1.6	3.7	3.4	0.2	0.3	6	1.1	2.3	1.7	0.1	0.2
Thyroid	3	0.5	1.3	1.1	0.1	0.1	22	4.2	9.0	7.2	0.6	0.7
Hodgkin disease	2	0.4	0.9	0.7	0.1	0.1	1	0.3	0.6	0.6	0.0	0.0
Non-Hodgkin lymphoma	25	4.6	11.0	8.8	0.5	0.9	21	4.1	8.7	6.4	0.5	0.6
Multiple myeloma	6	1.2	2.7	2.1	0.1	0.3	6	1.1	2.3	1.5	0.1	0.2
Lymphoid leukemia	4	0.8	1.9	1.6	0.1	0.2	3	0.6	1.2	1.2	0.1	0.1
Myeloid leukemia	7	1.2	2.9	2.6	0.1	0.2	7	1.3	2.8	2.1	0.1	0.2
Leukemia unspecified	6	1.1	2.6	2.0	0.1	0.1	4	0.7	1.5	1.1	0.0	0.1
Myelodysplastic disease	17	3.0	7.2	5.2	0.3	0.6	15	2.9	6.2	4.1	0.2	0.4
Other and unspecified	11	2.1	4.9	3.8	0.2	0.5	5	1.0	2.2	1.6	0.1	0.2
<b>All sites</b>	<b>550</b>	<b>100.0</b>	<b>238.0</b>	<b>181.9</b>	<b>10.2</b>	<b>21.2</b>	<b>514</b>	<b>100.0</b>	<b>212.8</b>	<b>149.0</b>	<b>10.2</b>	<b>15.9</b>

**Table 3.12.4** Percentage of morphologically verified and death certificate only cases, Chanthaburi

Site	Male			Female			ICD-10
	Cases 3 Year	% MV	% DCO	Cases 3 Year	% MV	% DCO	
Oral cavity	87	96.6	0.0	53	100.0	0.0	C00-C08
Oropharynx	26	96.2	0.0	2	100.0	0.0	C09-C10,C14
Nasopharynx	41	92.7	0.0	19	89.5	0.0	C11
Hypopharynx	21	100.0	0.0	2	100.0	0.0	C12-C13
Esophagus	121	89.3	0.8	38	89.5	0.0	C15
Stomach	56	87.5	0.0	34	88.2	0.0	C16
Small intestine	5	80.0	0.0	2	100.0	0.0	C17
Colon and rectum	163	91.4	0.0	134	91.8	0.0	C18-C21
Liver and bile duct	207	25.6	1.4	66	24.2	3.0	C22,C24
Gallbladder	7	57.1	0.0	11	63.6	0.0	C23
pancrease	16	37.5	12.5	11	36.4	0.0	C25
Nose,sinuses etc	5	100.0	0.0	4	100.0	0.0	C30-C31
Larynx	34	94.1	2.9	1	100.0	0.0	C32
Trachea, brochus and lung	315	61.3	1.0	167	65.9	1.8	C33-C34
Other thoracic organs	1	100.0	0.0	4	75.0	0.0	C37-C38
Bone	5	40.0	0.0	3	33.3	0.0	C40-C41
Melanoma of skin	11	100.0	0.0	9	100.0	0.0	C43
Other skin	52	100.0	0.0	47	100.0	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	10	90.0	0.0	11	90.9	0.0	C47,C49
Breast	4	75.0	0.0	306	94.8	1.0	C50
Vulva				1	100.0	0.0	C51
Vagina				0	0.0	0.0	C52
Cervix uteri				210	95.7	0.0	C53
Corpus uteri				52	100.0	0.0	C54
Uterus unspecified				0	0.0	0.0	C55
Ovary				54	83.3	0.0	C56
Other female genital organs				2	100.0	0.0	C57
Placenta				3	100.0	0.0	C58
Penis	13	100.0	0.0				C60
Prostate	91	92.3	0.0				C61
Testis	10	100.0	0.0				C62
Other male genital organs	1	100.0	0.0				C63
Kidney	11	72.7	0.0	6	66.7	0.0	C64
Renal pelvis	0	0.0	0.0	2	100.0	0.0	C65
Ureter	0	0.0	0.0	0	0.0	0.0	C66
Bladder	64	98.4	0.0	21	90.5	0.0	C67
Other urinary organs	0	0.0	0.0	1	0.0	0.0	C68
Eye	3	33.3	0.0	0	0.0	0.0	C69
Brain, nervous system	26	57.7	0.0	17	41.2	5.9	C70-C72
Thyroid	9	77.8	0.0	65	98.5	0.0	C73
Adrenal gland	0	0.0	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	4	100.0	0.0	C81
Non-Hodgkin lymphoma	76	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	19	100.0	0.0	17	100.0	0.0	C90
Leukemia	51	100.0	0.0	40	100.0	0.0	C91-C95
Myelodysplastic	50	100.0	0.0	45	100.0	0.0	D45-D47
Other and unspecified	34	44.1	5.9	16	37.5	0.0	O&U
<b>All sites</b>	<b>1,651</b>	<b>76.8</b>	<b>0.7</b>	<b>1,543</b>	<b>86.8</b>	<b>0.6</b>	<b>All</b>

# Trat Cancer Registry

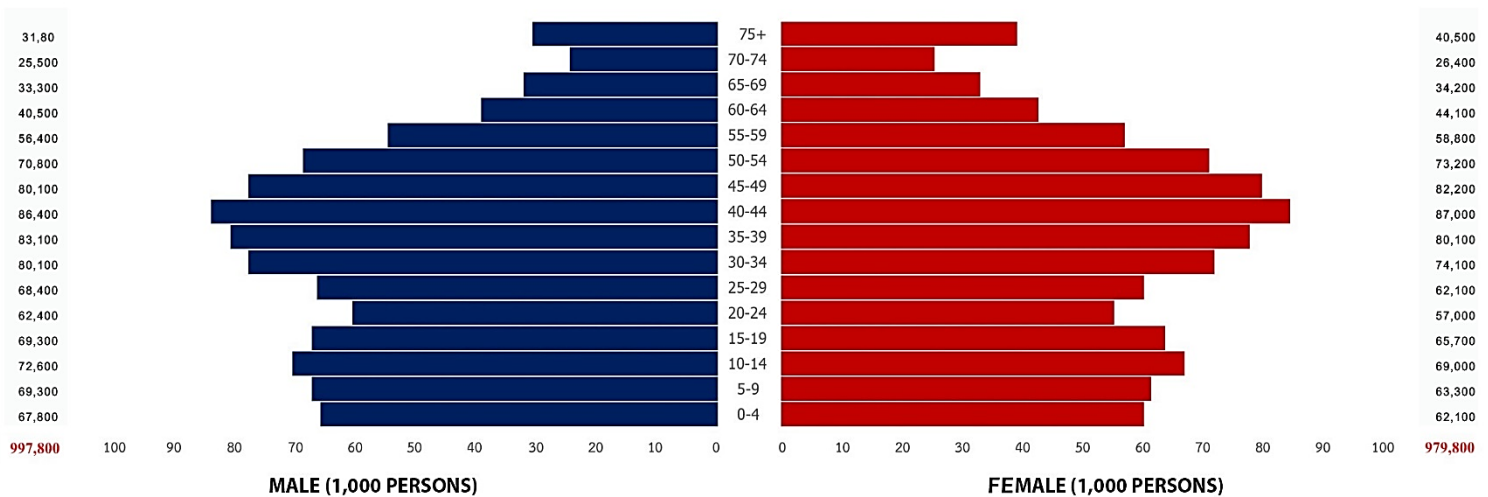
## Registration area

Trat is one of the eighth provinces in the Eastern part of Thailand, situated between 12 °24' N 102 °31' E, 315 kilometers from Bangkok by car or bus, with land area 2,819 square kilometers, 2 meters above sea level and is bounded on the northwest by Chanthaburi Province, the east by Cambodia with the Cardamom mountain range and the Gulf of Thailand on the South. The land area composed of 52 islands, Koh Chang is the third biggest island of Thailand after Phuket and Koh Samui. The smaller surrounding islands form the Mu Koh Chang Marine National Park.

The climate is rather warm, the highest temperature about 34-38 ° C in summer from March to April, 17.8° C in winter from November to February, rainy season started from May to October. The average total rainfall is 4,398 millimeters per year. The most important occupations are fishing and farming of rice, vegetables, fruits especially pineapple and Sweet Zallaca and famous tourism such as diving spot with beautiful corals at the Mu Koh Chang Marine National Park.



Population pyramid, Trat  
estimated population in 2011 (average 2010-2012)



## **Cancer care facilities**

The total number of hospitals in the province was 8 hospitals composed of 6 community hospitals, 1 private hospital and 1 provincial hospital, providing 402 total beds. The medical personals composed of 43 registered medical practitioners, 12 dentists and 16 pharmacists.

Cancer diagnostic services including radiological diagnosis equipment such as: X-ray, ultrasound. Mammography and computed tomography scan are available in private hospital. Cancer surgery services are provided in provincial hospital. Some of the cancer patients were referred to Chonburi cancer center for radiotherapy. Most of cancer patients go to Chanthaburi provincial hospital (Pahrapokklao Hospital) which providing clinical consultations, radiological and pathological investigations for cancer diagnosis including cancer surgery services, chemotherapy and targeted therapy for cancer treatment. All hospitals in the province provide palliative care.

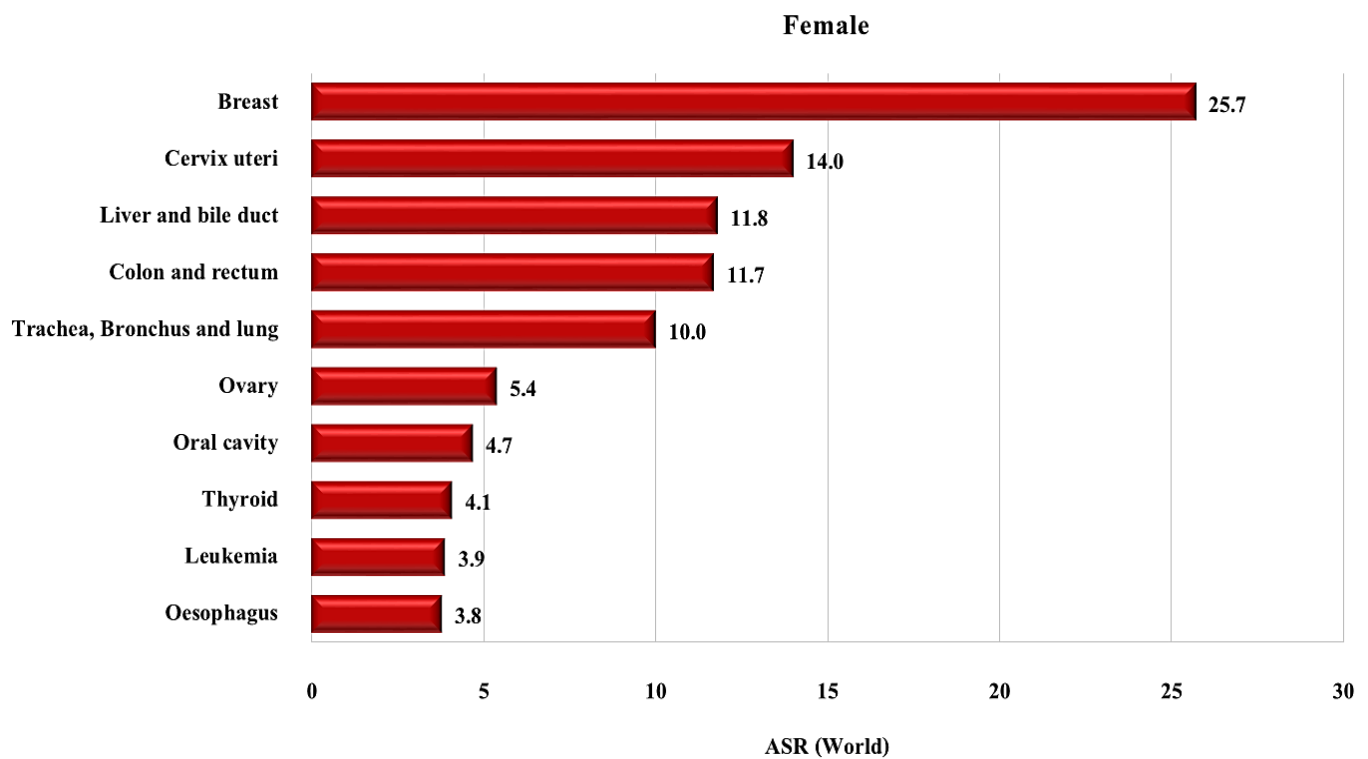
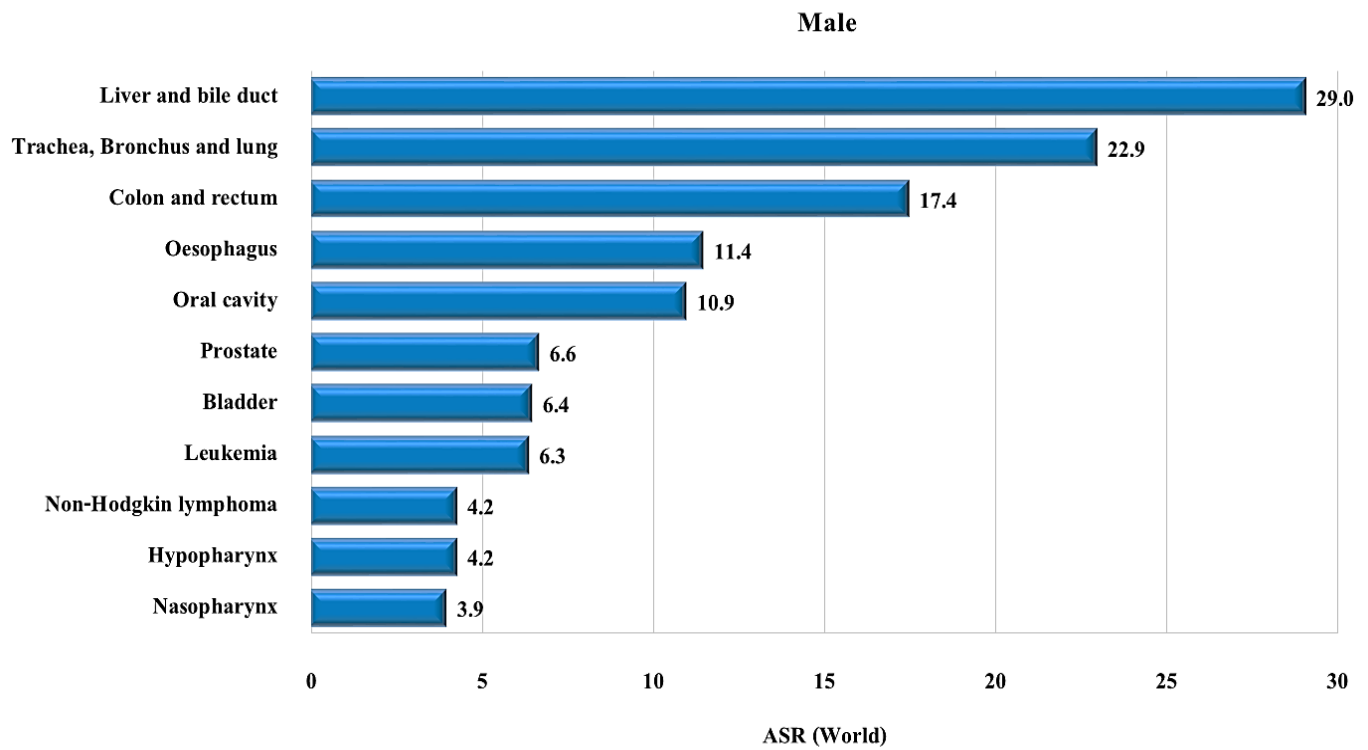
## **Registry procedures**

The data of Trat residents are extracted from the hospital-based cancer registry of Chonburi Cancer Hospital, hospital-based cancer registry of Pahrapokklao Hospital and mixture of passively and actively collected data of all hospital in Trat. New cancer cases were collected from out and in patient 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, 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. Individual 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 other sources.

## **Summary of results**

New cases registered in 2011, 225 were males and 189 were females, making 414 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 157.2 per 100,000, with liver and bile duct cancer ranking first (ASR = 29.0) followed by lung (ASR = 22.9) and colon and rectum (ASR = 17.4). The ASR of all cancer sites in females was 124.9 per 100,000, the three leading cancer sites being breast (ASR = 25.7), cervix (ASR = 14.0) and liver and bile duct (ASR = 11.8).

**Figure 3.13** Leading cancer in Trat (mean annual ASR 2010-2012)



**Table 3.13.1** Trat (2011), Mean annual ASR per 100,000 (2010-2012) 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	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	9.4	0.6	0.4	C00
Tongue	7	0.0	0.0	0.0	0.0	0.0	0.0	3.7	3.6	3.5	0.0	12.7	26.6	37.0	27.0	23.5	0.0	6.3	5.1	C01-02
Mouth	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.5	4.2	10.6	14.8	18.0	47.1	47.2	5.7	4.3	C03-06
Salivary glands	1	0.0	0.0	0.0	4.3	0.0	0.0	3.7	0.0	0.0	3.7	0.0	0.0	7.4	0.0	0.0	0.0	1.2	1.1	C07-08
Tonsil	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.5	0.0	0.0	5.3	7.4	9.0	0.0	9.4	1.8	1.4	C09
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	7.4	9.0	0.0	9.4	1.2	1.0	C10
Nasopharynx	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.5	18.7	25.4	5.3	14.8	0.0	11.8	0.0	5.1	3.9	C11
Hypopharynx	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.5	8.5	10.6	29.6	36.0	11.8	9.4	5.1	4.2	C12-13
Oesophagus	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	25.4	47.9	51.9	45.0	152.9	75.5	14.7	11.4	C15
Stomach	4	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	7.5	4.2	5.3	22.2	9.0	11.8	28.3	3.9	3.2	C16
Small intestine	0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	C17
Colon	12	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	10.4	11.2	25.4	16.0	7.4	63.1	70.6	66.0	11.1	8.4	C18
Rectum	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	7.5	25.4	26.6	37.0	27.0	94.1	47.2	10.5	8.1	C19-20
Anus	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.5	0.0	0.0	0.0	0.0	9.0	0.0	9.4	1.2	0.9	C21
Liver and bile duct	42	0.0	0.0	0.0	0.0	0.0	4.4	7.5	18.1	17.4	74.9	110.2	63.8	96.3	180.2	70.6	141.5	37.6	29.0	C22,C24
Gallbladder	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	9.0	0.0	0.0	0.6	0.5	C23
Pancreas	4	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	3.7	8.5	5.3	7.4	9.0	23.5	18.9	3.3	2.5	C25
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	0.0	0.0	0.0	18.9	0.6	0.4	C30-31
Larynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	29.6	27.0	0.0	18.9	3.0	2.6	C32
Trachea, Bronchus and lung	35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	6.9	37.5	59.3	58.5	81.5	90.1	70.6	358.5	31.3	22.9	C33-34
Other thoracic 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	C37-38
Bone	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	7.4	0.0	11.8	9.4	1.2	0.9	C40-C41
Melanoma of skin	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.7	0.0	5.3	0.0	9.0	0.0	0.0	1.2	0.9	C43
Other skin	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	16.0	14.8	0.0	0.0	47.2	3.3	2.4	C44
Connective tissue	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.6	0.5	C47,C49
Breast	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.3	0.2	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
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
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
Penis	2	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	29.6	0.0	0.0	0.0	1.5	1.4	C60
Prostate	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	14.8	54.1	105.9	103.8	8.7	6.6	C61
Kidney	2	8.8	0.0	0.0	0.0	0.0	0.0	3.7	0.0	3.5	3.7	0.0	0.0	0.0	0.0	0.0	9.4	1.8	1.9	C64
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	7.4	0.0	0.0	0.0	0.3	0.3	C65
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	9.4	0.6	0.4	C66
Bladder	9	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	7.5	0.0	16.0	7.4	36.0	82.4	94.3	8.4	6.4	C67
Eye	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	C69
Brain, nervous system	5	0.0	0.0	0.0	0.0	4.8	0.0	0.0	3.6	6.9	7.5	8.5	5.3	14.8	9.0	11.8	9.4	4.2	3.4	C70-72
Thyroid	2	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	3.7	4.2	0.0	0.0	0.0	11.8	9.4	1.5	1.2	C73
Hodgkin disease	1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	0.6	0.7	C81
Non-Hodgkin lymphoma	6	0.0	0.0	4.1	0.0	4.8	0.0	3.7	3.6	10.4	3.7	4.2	5.3	0.0	18.0	11.8	47.2	5.4	4.2	C82-85,C96
Multiple myeloma	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	9.0	11.8	0.0	0.6	0.5	C90
Lymphoid leukemia	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.6	0.4	C91
Myeloid leukemia	5	0.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0	3.7	8.5	5.3	7.4	27.0	11.8	37.7	4.5	3.7	C92-94
Leukemia unspecified	3	0.0	4.3	0.0	0.0	0.0	0.0	0.0	7.2	3.5	0.0	0.0	10.6	7.4	0.0	0.0	18.9	2.7	2.2	C95
Myelodysplastic disease	3	0.0	0.0	0.0	4.3	0.0	0.0	3.7	3.6	0.0	0.0	0.0	0.0	7.4	18.0	23.5	9.4	2.7	2.3	D45-D47
Other and unspecified	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	10.4	3.7	16.9	5.3	22.2	18.0	35.3	18.9	6.3	4.9	O&U
<b>All sites</b>	<b>225</b>	<b>8.8</b>	<b>4.3</b>	<b>12.4</b>	<b>21.6</b>	<b>14.4</b>	<b>8.8</b>	<b>37.5</b>	<b>75.8</b>	<b>97.2</b>	<b>221.0</b>	<b>381.4</b>	<b>356.4</b>	<b>600.0</b>	<b>765.8</b>	<b>929.4</b>	<b>1301.9</b>	<b>202.6</b>	<b>157.2</b>	<b>ALL</b>

**Table 3.13.2** Trat (2011), Mean annual ASR per 100,000 (2010-2012) 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	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	11.4	22.2	1.2	0.7	C00
Tongue	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	3.6	0.0	10.2	0.0	0.0	0.0	14.8	2.1	1.3	C01-02
Mouth	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	4.1	5.1	6.8	8.8	34.1	44.4	4.3	2.7	C03-06
Salivary glands	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C07-08
Tonsil	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C09
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
Nasopharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	6.8	0.0	0.0	0.0	0.6	0.5	C11
Hypopharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	C12-13
Oesophagus	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	12.3	20.4	0.0	17.5	56.8	22.2	5.5	3.8	C15
Stomach	4	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	4.1	15.3	0.0	17.5	11.4	29.6	3.7	2.4	C16
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	5.1	13.6	0.0	0.0	0.0	0.9	0.7	C17
Colon	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	6.9	14.6	24.6	5.1	27.2	35.1	45.5	44.4	9.8	6.9	C18
Rectum	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	3.6	8.2	5.1	34.0	17.5	22.7	44.4	6.1	4.3	C19-20
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	0.0	8.8	11.4	0.0	0.6	0.5	C21
Liver and bile duct	18	0.0	0.0	0.0	0.0	0.0	4.8	0.0	3.7	3.4	7.3	16.4	15.3	88.4	26.3	113.6	125.9	16.8	11.8	C22,C24
Gallbladder	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	11.4	14.8	0.9	0.5	C23
Pancreas	3	0.0	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0	0.0	0.0	34.0	8.8	0.0	7.4	2.8	2.3	C25
Nose, sinuses etc.	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C30-31
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	7.4	0.3	0.1	C32
Trachea, Bronchus and lung	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.2	10.9	20.5	35.7	54.4	52.6	22.7	81.5	14.4	10.0	C33-34
Other thoracic 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	8.8	0.0	0.0	0.3	0.3	C37-38
Bone	1	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	11.4	0.0	0.6	0.5	C40-C41
Melanoma of skin	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	6.8	0.0	0.0	7.4	0.9	0.6	C43
Other skin	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	3.6	0.0	0.0	13.6	8.8	11.4	14.8	2.4	1.8	C44
Connective tissue	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	8.8	0.0	0.0	0.6	0.5	C47,C49
Breast	39	0.0	0.0	0.0	0.0	0.0	4.8	4.0	26.2	72.4	83.9	73.8	71.4	74.8	52.6	90.9	59.3	36.1	25.7	C50
Vulva	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	4.1	5.1	0.0	0.0	0.0	0.0	0.9	0.6	C51
Cervix uteri	22	0.0	0.0	0.0	0.0	0.0	0.0	8.1	11.2	20.7	32.8	12.3	71.4	34.0	70.2	68.2	66.7	19.9	14.0	C53
Corpus uteri	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	0.0	3.6	0.0	5.1	20.4	8.8	0.0	14.8	3.1	2.2	C54
Ovary	7	0.0	0.0	0.0	0.0	5.3	14.5	4.0	11.2	6.9	7.3	12.3	5.1	0.0	35.1	0.0	7.4	6.4	5.4	C56
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
Kidney	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	C64
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
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
Bladder	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	8.8	0.0	37.0	2.1	1.2	C67
Eye	0	4.8	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	0.0	0.0	0.3	0.6	C69
Brain, nervous system	3	0.0	4.7	0.0	0.0	5.3	0.0	0.0	0.0	0.0	3.6	8.2	5.1	20.4	0.0	11.4	0.0	3.1	2.8	C70-72
Thyroid	6	0.0	0.0	0.0	0.0	10.5	0.0	0.0	7.5	3.4	3.6	4.1	25.5	0.0	17.5	0.0	29.6	5.5	4.1	C73
Hodgkin disease	2	0.0	4.7	0.0	0.0	5.3	0.0	0.0	0.0	3.4	0.0	4.1	0.0	6.8	0.0	0.0	0.0	1.5	1.6	C81
Non-Hodgkin lymphoma	5	0.0	0.0	0.0	0.0	10.5	0.0	0.0	3.7	10.3	0.0	4.1	25.5	0.0	0.0	0.0	29.6	4.9	3.5	C82-85,C96
Multiple myeloma	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	5.1	0.0	8.8	11.4	0.0	1.2	0.9	C90
Lymphoid leukemia	0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	C91
Myeloid leukemia	2	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	4.1	0.0	6.8	17.5	0.0	7.4	1.8	1.4	C92-94
Leukemia unspecified	3	0.0	0.0	0.0	0.0	5.3	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	22.7	29.6	2.8	2.1	C95
Myelodysplastic disease	5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	3.4	7.3	0.0	5.1	20.4	8.8	34.1	22.2	4.6	3.3	D45-D47
Other and unspecified	4	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	3.4	7.3	4.1	5.1	0.0	26.3	0.0	14.8	3.4	2.6	O&U
<b>All sites</b>	<b>189</b>	<b>4.8</b>	<b>9.5</b>	<b>0.0</b>	<b>4.6</b>	<b>47.4</b>	<b>29.0</b>	<b>40.5</b>	<b>82.4</b>	<b>169.0</b>	<b>204.4</b>	<b>237.7</b>	<b>346.9</b>	<b>469.4</b>	<b>482.5</b>	<b>602.3</b>	<b>800.0</b>	<b>173.6</b>	<b>124.9</b>	<b>ALL</b>

**Table 3.13.3** Mean annual incidence, Trat, 2010-2012

Site	Male						Female					
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate	
					0-64	0-74					0-64	0-74
					(per 100,000)	(percent)					(per 100,000)	(percent)
Lip	1	0.3	0.6	0.4	0.0	0.0	1	0.7	1.2	0.7	0.0	0.1
Tongue	7	3.1	6.3	5.1	0.4	0.7	2	1.2	2.1	1.3	0.1	0.1
Mouth	6	2.8	5.7	4.3	0.2	0.5	5	2.5	4.3	2.7	0.1	0.3
Salivary glands	1	0.6	1.2	1.1	0.1	0.1	0	0.0	0.0	0.0	0.0	0.0
Tonsil	2	0.9	1.8	1.4	0.1	0.1	0	0.0	0.0	0.0	0.0	0.0
Other oropharynx	1	0.6	1.2	1.0	0.1	0.1	0	0.0	0.0	0.0	0.0	0.0
Nasopharynx	6	2.5	5.1	3.9	0.4	0.4	1	0.4	0.6	0.5	0.1	0.1
Hypopharynx	6	2.5	5.1	4.2	0.3	0.5	0	0.2	0.3	0.2	0.0	0.0
Oesophagus	16	7.3	14.7	11.4	0.6	1.6	6	3.2	5.5	3.8	0.2	0.6
Stomach	4	1.9	3.9	3.2	0.2	0.3	4	2.1	3.7	2.4	0.1	0.3
Small intestine	0	0.1	0.3	0.4	0.0	0.0	1	0.5	0.9	0.7	0.1	0.1
Colon	12	5.5	11.1	8.4	0.4	1.0	11	5.6	9.8	6.9	0.4	0.8
Rectum	12	5.2	10.5	8.1	0.5	1.1	7	3.5	6.1	4.3	0.3	0.5
Anus	1	0.6	1.2	0.9	0.0	0.1	1	0.4	0.6	0.5	0.0	0.1
Liver and bile duct	42	18.5	37.6	29.0	2.0	3.2	18	9.7	16.8	11.8	0.7	1.4
Gallbladder	1	0.3	0.6	0.5	0.0	0.1	1	0.5	0.9	0.5	0.0	0.1
Pancreas	4	1.6	3.3	2.5	0.1	0.3	3	1.6	2.8	2.3	0.2	0.3
Nose, sinuses etc.	1	0.3	0.6	0.4	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Larynx	3	1.5	3.0	2.6	0.2	0.3	0	0.2	0.3	0.1	0.0	0.0
Trachea, Bronchus and lung	35	15.4	31.3	22.9	1.3	2.1	16	8.3	14.4	10.0	0.7	1.1
Other thoracic organs	0	0.0	0.0	0.0	0.0	0.0	0	0.2	0.3	0.3	0.0	0.0
Bone	1	0.6	1.2	0.9	0.1	0.1	1	0.4	0.6	0.5	0.0	0.1
Melanoma of skin	1	0.6	1.2	0.9	0.1	0.1	1	0.5	0.9	0.6	0.1	0.1
Other skin	4	1.6	3.3	2.4	0.2	0.2	3	1.4	2.4	1.8	0.1	0.2
Connective tissue	1	0.3	0.6	0.5	0.0	0.1	1	0.4	0.6	0.5	0.0	0.1
Breast	0	0.1	0.3	0.2	0.0	0.1	39	20.8	36.1	25.7	2.1	2.8
Vulva							1	0.5	0.9	0.6	0.1	0.1
Cervix uteri							22	11.5	19.9	14.0	1.0	1.6
Corpus uteri							3	1.8	3.1	2.2	0.2	0.2
Ovary							7	3.7	6.4	5.4	0.3	0.5
Penis	2	0.7	1.5	1.4	0.2	0.2						
Prostate	10	4.3	8.7	6.6	0.1	0.9						
Kidney	2	0.9	1.8	1.9	0.1	0.1	0	0.2	0.3	0.2	0.0	0.0
Renal pelvis	0	0.1	0.3	0.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Ureter	1	0.3	0.6	0.4	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Bladder	9	4.2	8.4	6.4	0.2	0.8	2	1.2	2.1	1.2	0.0	0.1
Eye	0	0.1	0.3	0.2	0.0	0.0	0	0.2	0.3	0.6	0.0	0.0
Brain, nervous system	5	2.1	4.2	3.4	0.3	0.4	3	1.8	3.1	2.8	0.2	0.3
Thyroid	2	0.7	1.5	1.2	0.1	0.1	6	3.2	5.5	4.1	0.3	0.4
Hodgkin disease	1	0.3	0.6	0.7	0.1	0.1	2	0.9	1.5	1.6	0.1	0.1
Non-Hodgkin lymphoma	6	2.7	5.4	4.2	0.2	0.3	5	2.8	4.9	3.5	0.3	0.3
Multiple myeloma	1	0.3	0.6	0.5	0.0	0.1	1	0.7	1.2	0.9	0.0	0.1
Lymphoid leukemia	1	0.3	0.6	0.4	0.0	0.0	0	0.2	0.3	0.4	0.0	0.0
Myeloid leukemia	5	2.2	4.5	3.7	0.2	0.4	2	1.1	1.8	1.4	0.1	0.2
Leukemia unspecified	3	1.3	2.7	2.2	0.2	0.2	3	1.6	2.8	2.1	0.1	0.2
Myelodysplastic disease	3	1.3	2.7	2.3	0.1	0.3	5	2.6	4.6	3.3	0.2	0.4
Other and unspecified	7	3.1	6.3	4.9	0.3	0.6	4	1.9	3.4	2.6	0.1	0.3
<b>All sites</b>	<b>225</b>	<b>100.0</b>	<b>202.6</b>	<b>157.2</b>	<b>9.2</b>	<b>17.7</b>	<b>189</b>	<b>100.0</b>	<b>173.6</b>	<b>124.9</b>	<b>8.2</b>	<b>13.7</b>

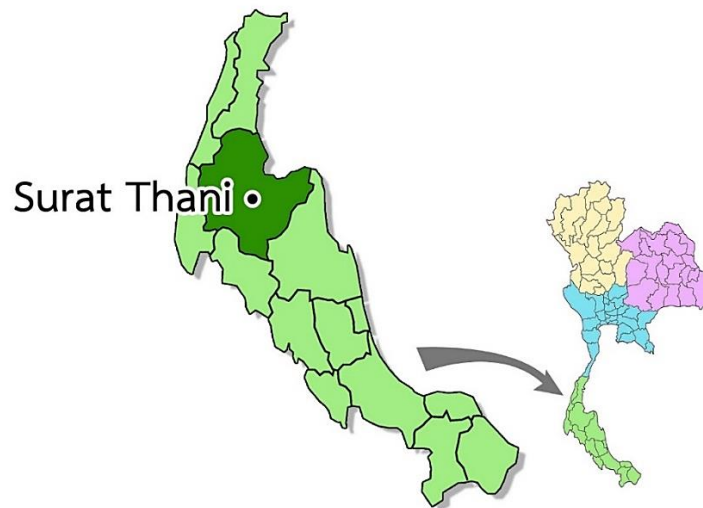
**Table 3.13.4** Percentage of morphologically verified and death certificate only cases, Trat

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	46	89.1	0.0	25	88.0	0.0	C00-C08
Oropharynx	10	100.0	0.0	0	0.0	0.0	C09-C10,C14
Nasopharynx	17	94.1	0.0	2	100.0	0.0	C11
Hypopharynx	17	76.5	0.0	1	100.0	0.0	C12-C13
Esophagus	49	83.7	0.0	18	77.8	0.0	C15
Stomach	13	69.2	0.0	12	75.0	0.0	C16
Small intestine	1	100.0	0.0	3	100.0	0.0	C17
Colon and rectum	76	85.5	0.0	54	87.0	0.0	C18-C21
Liver and bile duct	125	13.6	4.8	55	16.4	7.3	C22,C24
Gallbladder	2	50.0	0.0	3	33.3	0.0	C23
pancrease	11	9.1	0.0	9	22.2	11.1	C25
Nose,sinuses etc	2	50.0	0.0	0	0.0	0.0	C30-C31
Larynx	10	90.0	0.0	1	0.0	0.0	C32
Trachea, brochus and lung	104	44.2	1.9	47	51.1	4.3	C33-C34
Other thoracic organs	0	0.0	0.0	1	100.0	0.0	C37-C38
Bone	4	50.0	0.0	2	0.0	0.0	C40-C41
Melanoma of skin	4	100.0	0.0	3	100.0	0.0	C43
Other skin	11	100.0	0.0	8	100.0	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	2	100.0	0.0	2	100.0	0.0	C47,C49
Breast	1	100.0	0.0	118	91.5	0.0	C50
Vulva				3	100.0	0.0	C51
Vagina				0	0.0	0.0	C52
Cervix uteri				65	84.6	0.0	C53
Corpus uteri				10	90.0	0.0	C54
Uterus unspecified				0	0.0	0.0	C55
Ovary				21	81.0	4.8	C56
Other female genital organs							C57
Placenta							C58
Penis	5	60.0	20.0				C60
Prostate	29	82.8	0.0				C61
Testis	0	0.0	0.0				C62
Other male genital organs	0	0.0	0.0				C63
Kidney	6	66.7	0.0	1	100.0	0.0	C64
Renal pelvis	1	100.0	0.0	0	0.0	0.0	C65
Ureter	2	100.0	0.0	0	0.0	0.0	C66
Bladder	28	89.3	0.0	7	100.0	0.0	C67
Other urinary organs	0	0.0	0.0	0	0.0	0.0	C68
Eye	1	100.0	0.0	1	100.0	0.0	C69
Brain, nervous system	14	35.7	0.0	10	30.0	0.0	C70-C72
Thyroid	5	100.0	0.0	18	83.3	0.0	C73
Adrenal gland	0	0.0	0.0	0	0.0	0.0	C74
Other endocrine	0	0.0	0.0	0	0.0	0.0	C75
Hodgkin disease	2	100.0	0.0	5	100.0	0.0	C81
Non-Hodgkin lymphoma	18	100.0	0.0	16	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	2	100.0	0.0	4	100.0	0.0	C90
Leukemia	26	100.0	0.0	16	100.0	0.0	C91-C95
Myelodysplastic	9	100.0	0.0	15	100.0	0.0	D45-D47
Other and unspecified	21	28.6	4.8	11	36.4	0.0	O&U
<b>All sites</b>	<b>674</b>	<b>62.9</b>	<b>1.5</b>	<b>567</b>	<b>75.3</b>	<b>1.4</b>	<b>All</b>

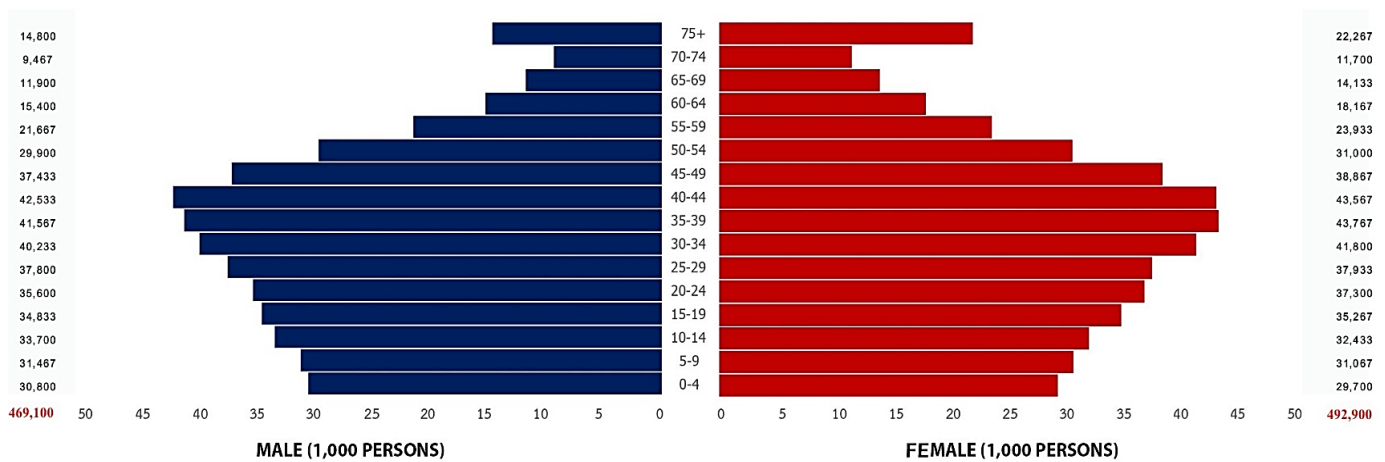
# Surat Thani Cancer Registry

## Registration area

Surat Thani, one of the 14 provinces of the Southern Region of Thailand, is subdivided into 19 districts, which are further subdivided into 131 subdistricts and 1,028 villages. The population in the year 2008 was 903,262, about 97.5% of which are Buddhists and nearly 2% are Moslems. Christians and others account for less than 0.5% of the population. Surat Thani province borders the Gulf of Thailand to the north and east, Chumphon province to the north, Nakhon Si Thammarat and Krabi provinces to the south, Phang Nga and Ranong provinces to the west and Nakhon Si Thammarat province to the east.



Population pyramid, Surat Thani  
estimated population in 2011 (average 2010-2012)



## **Cancer care facilities**

Community hospitals are provided in all 19 districts of Suratthani. One cancer center (Surat Thani cancer center) is situated in Muaeng district which is the center of the province. The Surat Thani provincial hospital has facilities for cancer surgery and chemotherapy. The Surat Thani cancer center is the only place in the province with radiotherapy services. Patients suspected to have cancer in the health care system and community hospitals are referred to the Surat Thani provincial hospital, Surat Thani cancer center or Songklanagarind hospital.

## **Registry procedures**

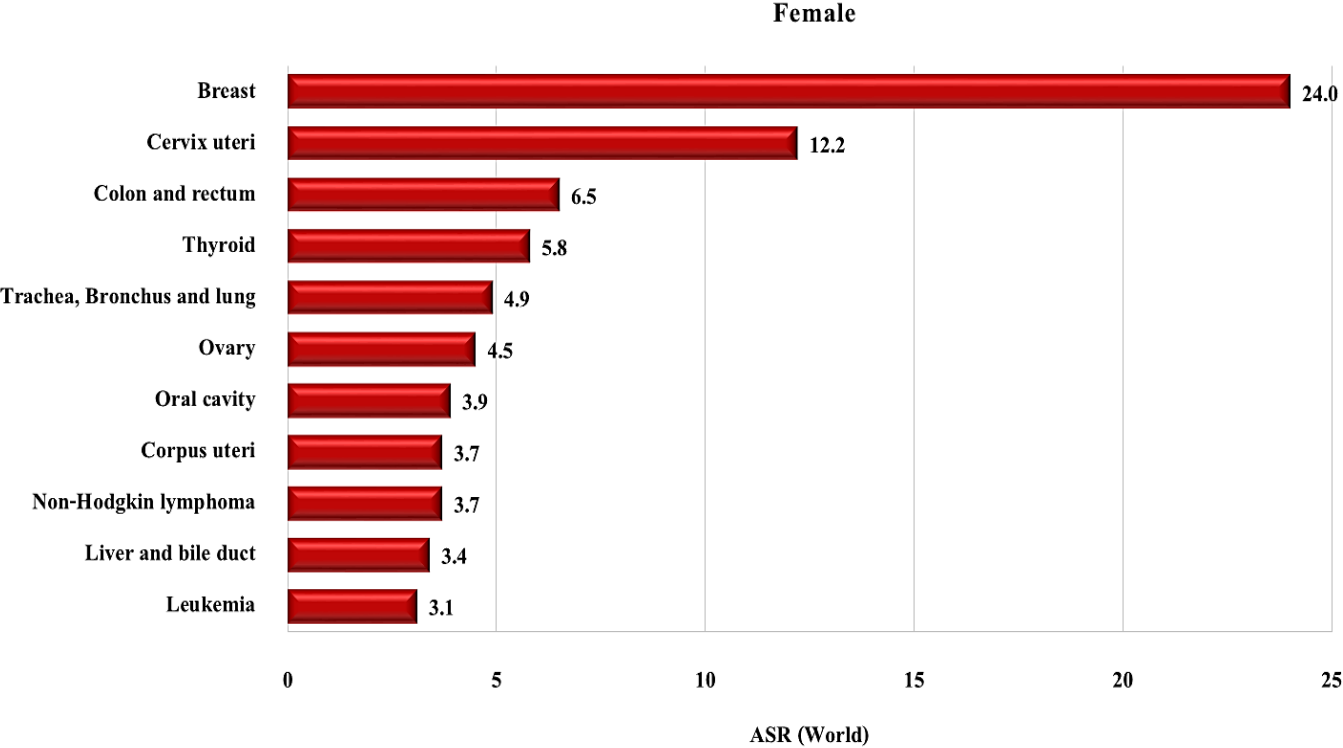
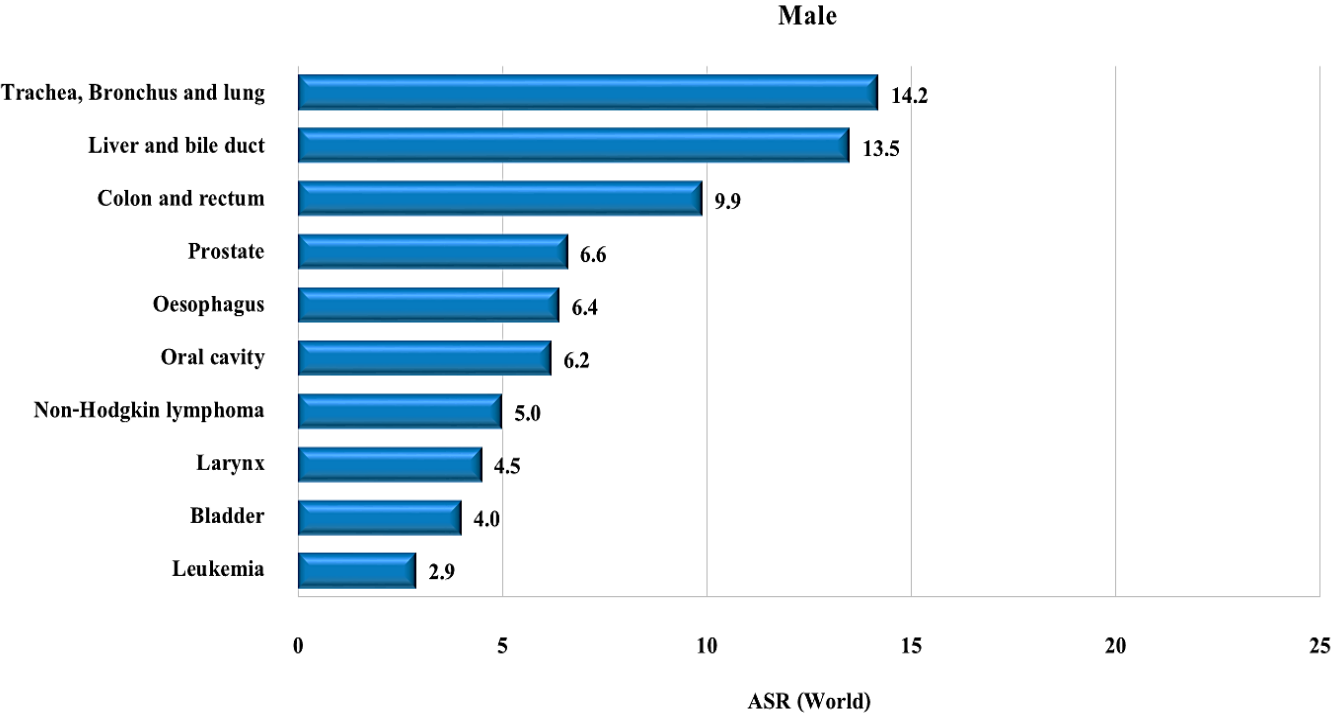
All data on cancer patients are collected by a mixture of passive and active methods involving notification by the staff of Suratthani cancer center, Suratthani provincial hospital, one Suratthani provincial hospital, 19 community hospitals, pathological laboratory in Suratthani hospital, cancer registration unit of Songklanagarind hospital and information of deaths from all causes of death from Bureau of health policy and strategy, Ministry of Public Health. All 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 no other information about the individual can be traced from the other sources.

## **Summary of results**

New cases registered in 2011, 520 were males and 572 were females, making 1,092 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 100.0 per 100,000, with lung cancer ranks first (ASR = 14.2) followed by liver and bile duct (ASR = 13.5) and colon and rectum (ASR = 9.9). The ASR of all cancer sites in females was 91.0 per 100,000, the three leading cancer sites being breast (ASR = 24.0), cervix (ASR = 12.2) and colon and rectum (ASR = 6.5).

**Figure 3.14** Leading cancer in Surat Thani (mean annual ASR 2010-2012)



**Table 3.14.1** Surat Thani (2011), Mean annual ASR per 100,000 (2010-2012) 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	0	0.0	0.0	0.0	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	C00
Tongue	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	3.6	8.9	4.6	4.3	25.2	28.2	13.5	3.1	2.7	C01-02
Mouth	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.7	4.5	9.2	2.2	25.2	21.1	42.8	3.6	3.0	C03-06
Salivary glands	3	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.8	0.9	1.1	1.5	2.2	2.8	3.5	0.0	0.6	0.5	C07-08
Tonsil	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.6	7.8	6.2	0.0	8.4	7.0	11.3	1.9	1.6	C09
Other oropharynx	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	2.2	1.5	6.5	0.0	0.0	9.0	0.9	0.8	C10
Nasopharynx	13	0.0	0.0	1.0	1.0	0.0	0.9	2.5	4.0	0.8	8.0	10.0	4.6	2.2	5.6	3.5	4.5	2.8	2.3	C11
Hypopharynx	11	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.8	7.8	9.2	8.7	2.8	10.6	15.8	2.3	2.0	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	0.0	0.0	0.0	0.0	0.0	2.3	0.1	0.0	C14
Oesophagus	32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6	7.1	7.8	21.5	43.3	42.0	38.7	42.8	6.9	6.4	C15
Stomach	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.8	3.3	3.1	13.0	14.0	28.2	9.0	2.2	2.1	C16
Small intestine	1	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	4.5	0.2	0.1	C17
Colon	29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	3.1	4.5	10.0	15.4	36.8	33.6	45.8	33.8	6.3	5.8	C18
Rectum	21	0.0	0.0	0.0	0.0	0.0	0.9	0.0	2.4	3.9	1.8	4.5	4.6	23.8	22.4	14.1	47.3	4.4	3.8	C19-20
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	2.2	0.0	0.0	2.8	0.0	2.3	0.4	0.3	C21
Liver and bile duct	72	0.0	0.0	0.0	0.0	0.0	0.0	3.3	8.0	14.9	23.2	25.6	50.8	51.9	67.2	98.6	56.3	15.3	13.5	C22,C24
Gallbladder	1	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	3.5	2.3	0.2	0.2	C23
Pancreas	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	3.1	2.2	2.8	7.0	2.3	0.9	0.7	C25
Nose, sinuses etc.	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	C30-31
Larynx	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	4.5	5.6	12.3	34.6	25.2	35.2	29.3	4.8	4.5	C32
Trachea, Bronchus and lung	75	0.0	0.0	0.0	0.0	0.0	0.9	2.5	3.2	7.1	18.7	25.6	32.3	64.9	81.2	123.2	108.1	15.9	14.2	C33-34
Other thoracic organs	2	0.0	0.0	0.0	1.9	0.9	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	2.3	0.4	0.3	C37-38
Bone	2	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	2.8	0.0	2.3	0.4	0.3	C40-C41
Melanoma of skin	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	2.2	2.8	0.0	0.0	0.2	0.2	C43
Other skin	13	0.0	0.0	0.0	1.0	0.0	0.0	0.8	0.0	0.8	2.7	2.2	3.1	4.3	22.4	17.6	32.5	2.8	2.4	C44
Connective tissue	5	1.1	2.1	0.0	0.0	0.0	0.0	0.8	0.0	0.0	2.7	0.0	4.6	0.0	8.4	0.0	4.5	1.1	1.1	C47,C49
Breast	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	4.3	2.8	3.5	4.5	0.5	0.5	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
Penis	8	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.4	0.8	0.9	1.1	3.1	2.2	5.6	14.1	18.0	1.7	1.4	C60
Prostate	33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	3.3	10.8	32.5	36.4	105.6	69.8	7.1	6.6	C61
Testis	4	1.1	0.0	1.0	0.0	2.8	1.8	0.8	0.8	0.0	1.8	0.0	0.0	0.0	0.0	0.0	2.3	0.9	0.8	C62
Kidney	4	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	2.2	1.5	4.3	5.6	7.0	0.0	0.9	0.9	C64
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	2.3	0.1	0.0	C65
Bladder	21	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.8	0.8	3.6	1.1	13.8	26.0	14.0	28.2	47.3	4.5	4.0	C67
Eye	2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	2.2	0.0	0.0	2.3	0.4	0.6	C69
Brain, nervous system	13	2.2	3.2	0.0	0.0	1.9	1.8	2.5	3.2	2.4	1.8	4.5	4.6	8.7	5.6	3.5	11.3	2.8	2.7	C70-72
Thyroid	10	0.0	0.0	1.0	1.9	0.9	1.8	0.8	3.2	1.6	2.7	3.3	3.1	8.7	2.8	7.0	4.5	2.1	1.9	C73
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
Hodgkin disease	1	0.0	0.0	1.0	1.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.3	0.3	C81
Non-Hodgkin lymphoma	26	0.0	3.2	2.0	0.0	1.9	2.6	0.8	2.4	6.3	6.2	10.0	9.2	10.8	22.4	28.2	31.5	5.6	5.0	C82-85,C96
Multiple myeloma	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.9	1.1	3.1	2.2	2.8	7.0	2.3	0.7	0.6	C90
Lymphoid leukemia	4	3.2	4.2	2.0	0.0	0.0	0.0	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.1	C91
Myeloid leukemia	4	0.0	0.0	0.0	0.0	0.9	0.0	1.7	0.8	0.8	0.0	1.1	3.1	6.5	0.0	3.5	0.0	0.9	0.8	C92-94
Leukemia unspecified	4	2.2	2.1	1.0	0.0	0.9	0.0	0.8	0.0	0.0	0.0	1.1	3.1	2.2	0.0	0.0	2.3	0.9	1.0	C95
Myelodysplastic 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	2.8	0.0	0.0	0.1	0.1	D45-D47
Other and unspecified	13	0.0	0.0	0.0	0.0	0.9	0.0	0.8	0.8	1.6	2.7	3.3	6.2	4.3	14.0	38.7	15.8	2.8	2.5	O&U
<b>All sites</b>	<b>520</b>	<b>15.2</b>	<b>14.8</b>	<b>8.9</b>	<b>8.6</b>	<b>13.1</b>	<b>11.5</b>	<b>21.5</b>	<b>40.1</b>	<b>58.8</b>	<b>115.8</b>	<b>166.1</b>	<b>250.8</b>	<b>417.7</b>	<b>512.6</b>	<b>732.4</b>	<b>695.3</b>	<b>110.7</b>	<b>100.0</b>	<b>ALL</b>

**Table 3.14.2** Surat Thani (2011), Mean annual ASR per 100,000 (2010-2012) 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	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	3.7	2.4	5.7	7.5	0.7	0.5	C00
Tongue	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	2.2	0.0	5.5	2.4	5.7	12.0	1.2	0.8	C01-02
Mouth	17	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	3.2	2.8	11.0	9.4	14.2	41.9	3.4	2.3	C03-06
Salivary glands	2	0.0	0.0	0.0	0.0	0.9	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	2.4	0.0	1.5	0.3	0.3	C07-08
Tonsil	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	0.0	0.0	5.7	4.5	0.4	0.3	C09
Other oropharynx	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	C10
Nasopharynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.5	0.8	1.7	1.1	0.0	3.7	2.4	0.0	0.0	0.7	0.6	C11
Hypopharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.1	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	0.0	4.2	1.8	4.7	2.8	12.0	1.1	0.8	C15
Stomach	10	0.0	0.0	0.0	0.0	0.0	0.9	0.8	0.8	0.8	4.3	1.1	2.8	3.7	9.4	5.7	13.5	2.0	1.4	C16
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	1.4	3.7	2.4	0.0	3.0	0.4	0.3	C17
Colon	24	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	5.4	3.4	8.6	7.0	12.8	21.2	17.1	34.4	4.8	3.5	C18
Rectum	18	0.0	0.0	0.0	0.0	0.9	0.9	0.8	1.5	2.3	2.6	7.5	4.2	12.8	16.5	11.4	21.0	3.6	2.8	C19-20
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	1.8	2.4	0.0	1.5	0.2	0.2	C21
Liver and bile duct	23	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8	2.6	5.4	5.6	11.0	21.2	42.7	35.9	4.6	3.4	C22,C24
Gallbladder	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	3.7	0.0	2.8	0.0	0.2	0.2	C23
Pancreas	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	2.6	1.1	1.4	3.7	2.4	2.8	9.0	1.1	0.8	C25
Nose, sinuses etc.	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	0.1	0.1	C30-31
Larynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.4	1.8	0.0	5.7	0.0	0.3	0.3	C32
Trachea, Bronchus and lung	32	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.0	5.4	6.9	11.8	15.3	22.0	18.9	25.6	35.9	6.5	4.9	C33-34
Other thoracic organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0	1.1	0.0	0.0	0.0	0.0	1.5	0.3	0.2	C37-38
Bone	2	0.0	0.0	0.0	1.9	0.9	0.0	0.0	0.0	0.8	0.0	0.0	1.4	0.0	2.4	0.0	1.5	0.5	0.4	C40-C41
Melanoma of skin	4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8	0.9	2.2	2.8	1.8	0.0	2.8	4.5	0.8	0.6	C43
Other skin	15	0.0	1.1	0.0	0.0	0.9	0.9	0.8	0.0	0.8	0.9	6.5	4.2	7.3	11.8	5.7	28.4	3.0	2.2	C44
Connective tissue	7	1.1	0.0	0.0	0.0	1.8	2.6	2.4	0.8	0.0	0.0	2.2	2.8	1.8	4.7	2.8	6.0	1.5	1.3	C47,C49
Breast	151	0.0	0.0	0.0	0.0	1.8	6.2	23.1	27.4	50.5	77.2	68.8	93.3	69.7	42.5	42.7	29.9	30.6	24.0	C50
Vulva	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0	1.4	0.0	0.0	0.0	1.5	0.3	0.2	C51
Vagina	1	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	1.5	0.1	0.1	C52
Cervix uteri	76	0.0	0.0	0.0	0.0	0.9	3.5	9.6	12.2	22.2	36.0	29.0	32.0	38.5	37.7	59.8	24.0	15.4	12.2	C53
Corpus uteri	22	0.0	0.0	0.0	0.0	0.9	0.9	0.0	1.5	2.3	3.4	17.2	19.5	23.9	9.4	8.5	6.0	4.4	3.7	C54
Uterus unspecified	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	0.0	0.1	0.1	C55
Ovary	27	0.0	0.0	2.1	0.9	0.0	0.9	1.6	2.3	4.6	12.9	7.5	15.3	14.7	23.6	11.4	18.0	5.5	4.5	C56
Other female genital organs	1	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C57
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
Kidney	3	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.8	0.0	0.9	1.1	1.4	0.0	4.7	5.7	0.0	0.6	0.5	C64
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	2.4	0.0	1.5	0.1	0.1	C65
Bladder	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	2.2	4.2	1.8	0.0	2.8	9.0	1.0	0.7	C67
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	1.5	0.1	0.0	C69
Brain, nervous system	10	1.1	2.1	0.0	1.9	2.7	1.8	3.2	3.0	3.1	0.0	2.2	2.8	1.8	4.7	2.8	1.5	2.1	2.0	C70-72
Thyroid	34	0.0	1.1	0.0	3.8	3.6	9.7	5.6	6.1	6.1	10.3	16.1	12.5	12.8	7.1	19.9	9.0	6.9	5.8	C73
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
Hodgkin disease	1	0.0	0.0	0.0	0.0	0.9	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C81
Non-Hodgkin lymphoma	23	2.2	0.0	1.0	0.9	0.9	0.9	4.0	3.0	4.6	4.3	4.3	11.1	9.2	9.4	17.1	25.4	4.7	3.7	C82-85,C96
Multiple myeloma	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	1.8	7.1	0.0	3.0	0.5	0.5	C90
Lymphoid leukemia	2	2.2	1.1	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.4	0.6	C91
Myeloid leukemia	4	0.0	0.0	1.0	0.9	0.0	0.0	0.8	0.8	0.0	0.0	1.1	4.2	1.8	0.0	0.0	6.0	0.9	0.7	C92-94
Leukemia unspecified	10	1.1	2.1	1.0	1.9	0.0	0.0	4.0	0.8	0.0	1.7	3.2	2.8	1.8	2.4	5.7	12.0	2.1	1.8	C95
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	0.0	0.0	3.0	0.1	0.1	D45-D47
Other and unspecified	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.5	0.9	1.1	4.2	3.7	4.7	19.9	9.0	1.7	1.3	O&U
<b>All sites</b>	<b>572</b>	<b>9.0</b>	<b>7.5</b>	<b>6.2</b>	<b>12.3</b>	<b>18.8</b>	<b>31.6</b>	<b>63.8</b>	<b>70.1</b>	<b>117.1</b>	<b>178.4</b>	<b>212.9</b>	<b>264.6</b>	<b>297.2</b>	<b>292.5</b>	<b>356.1</b>	<b>437.1</b>	<b>116.0</b>	<b>91.0</b>	<b>ALL</b>

**Table 3.14.3** Mean annual incidence, Surat Thani, 2010-2012

Site	Male						Female					
	No.Cases Year	Freq. (%)	Crude rate  (per 100,000)	ASR world  (per 100,000)	Cum.Rate		No.Cases Year	Freq. (%)	Crude rate  (per 100,000)	ASR world  (per 100,000)	Cum.Rate	
					0-64	0-74					0-64	0-74
					(per 100,000)	(per 100,000)					(per 100,000)	(per 100,000)
Lip	0	0.1	0.1	0.0	0.0	0.0	3	0.6	0.7	0.5	0.0	0.1
Tongue	14	2.8	3.1	2.7	0.1	0.4	6	1.0	1.2	0.8	0.0	0.1
Mouth	17	3.2	3.6	3.0	0.1	0.3	17	2.9	3.4	2.3	0.1	0.2
Salivary glands	3	0.5	0.6	0.5	0.0	0.1	2	0.3	0.3	0.3	0.0	0.0
Tonsil	9	1.7	1.9	1.6	0.1	0.2	2	0.3	0.4	0.3	0.0	0.0
Other oropharynx	4	0.8	0.9	0.8	0.1	0.1	0	0.1	0.1	0.1	0.0	0.0
Nasopharynx	13	2.5	2.8	2.3	0.2	0.2	3	0.6	0.7	0.6	0.0	0.1
Hypopharynx	11	2.1	2.3	2.0	0.1	0.2	1	0.1	0.1	0.1	0.0	0.0
Pharynx unspecified	0	0.1	0.1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Oesophagus	32	6.2	6.9	6.4	0.4	0.8	6	1.0	1.1	0.8	0.0	0.1
Stomach	10	2.0	2.2	2.1	0.1	0.3	10	1.7	2.0	1.4	0.1	0.2
Small intestine	1	0.2	0.2	0.1	0.0	0.0	2	0.3	0.4	0.3	0.0	0.0
Colon	29	5.6	6.3	5.8	0.4	0.8	24	4.1	4.8	3.5	0.2	0.4
Rectum	21	4.0	4.4	3.8	0.2	0.4	18	3.1	3.6	2.8	0.2	0.3
Anus	2	0.4	0.4	0.3	0.0	0.0	1	0.2	0.2	0.2	0.0	0.0
Liver and bile duct	72	13.9	15.3	13.5	0.9	1.7	23	4.0	4.6	3.4	0.1	0.5
Gallbladder	1	0.2	0.2	0.2	0.0	0.0	1	0.2	0.2	0.2	0.0	0.0
Pancreas	4	0.8	0.9	0.7	0.0	0.1	5	0.9	1.1	0.8	0.0	0.1
Nose, sinuses etc.	0	0.1	0.1	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Larynx	22	4.3	4.8	4.5	0.3	0.6	2	0.3	0.3	0.3	0.0	0.1
Trachea, Bronchus and lung	75	14.4	15.9	14.2	0.8	1.8	32	5.6	6.5	4.9	0.3	0.6
Other thoracic organs	2	0.3	0.4	0.3	0.0	0.0	1	0.2	0.3	0.2	0.0	0.0
Bone	2	0.3	0.4	0.3	0.0	0.0	2	0.4	0.5	0.4	0.0	0.0
Melanoma of skin	1	0.2	0.2	0.2	0.0	0.0	4	0.7	0.8	0.6	0.0	0.1
Other skin	13	2.6	2.8	2.4	0.1	0.3	15	2.6	3.0	2.2	0.1	0.2
Connective tissue	5	1.0	1.1	1.1	0.1	0.1	7	1.3	1.5	1.3	0.1	0.1
Breast	2	0.4	0.5	0.5	0.0	0.1	151	26.4	30.6	24.0	2.1	2.5
Vulva							1	0.2	0.3	0.2	0.0	0.0
Vagina							1	0.1	0.1	0.1	0.0	0.0
Cervix uteri							76	13.3	15.4	12.2	0.9	1.4
Corpus uteri							22	3.8	4.4	3.7	0.3	0.4
Uterus unspecified							0	0.1	0.1	0.1	0.0	0.0
Ovary							27	4.8	5.5	4.5	0.3	0.5
Other female genital organs							1	0.1	0.1	0.1	0.0	0.0
Penis	8	1.5	1.7	1.4	0.1	0.2						
Prostate	33	6.4	7.1	6.6	0.2	0.9						
Testis	4	0.8	0.9	0.8	0.1	0.1						
Kidney	4	0.8	0.9	0.9	0.1	0.1	3	0.5	0.6	0.5	0.0	0.1
Renal pelvis	0	0.1	0.1	0.0	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Bladder	21	4.0	4.5	4.0	0.2	0.4	5	0.9	1.0	0.7	0.0	0.1
Eye	2	0.4	0.4	0.6	0.0	0.0	0	0.1	0.1	0.0	0.0	0.0
Brain, nervous system	13	2.6	2.8	2.7	0.2	0.2	10	1.8	2.1	2.0	0.1	0.2
Thyroid	10	1.9	2.1	1.9	0.1	0.2	34	5.9	6.9	5.8	0.4	0.6
Adrenal gland	0	0.1	0.1	0.1	0.0	0.0	0	0.1	0.1	0.1	0.0	0.0
Hodgkin disease	1	0.3	0.3	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Non-Hodgkin lymphoma	26	5.1	5.6	5.0	0.3	0.5	23	4.1	4.7	3.7	0.2	0.4
Multiple myeloma	3	0.6	0.7	0.6	0.0	0.1	3	0.5	0.5	0.5	0.0	0.1
Lymphoid leukemia	4	0.7	0.8	1.1	0.1	0.1	2	0.3	0.4	0.6	0.0	0.0
Myeloid leukemia	4	0.8	0.9	0.8	0.1	0.1	4	0.8	0.9	0.7	0.1	0.1
Leukemia unspecified	4	0.8	0.9	1.0	0.1	0.1	10	1.8	2.1	1.8	0.1	0.1
Myelodysplastic disease	0	0.1	0.1	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0
Other and unspecified	13	2.6	2.8	2.5	0.1	0.4	8	1.5	1.7	1.3	0.1	0.2
<b>All sites</b>	<b>520</b>	<b>100.0</b>	<b>110.7</b>	<b>100.0</b>	<b>5.7</b>	<b>11.9</b>	<b>572</b>	<b>100.0</b>	<b>116.0</b>	<b>91.0</b>	<b>6.4</b>	<b>9.7</b>

**Table 3.14.4** Percentage of morphologically verified and death certificate only cases, Surat Thani

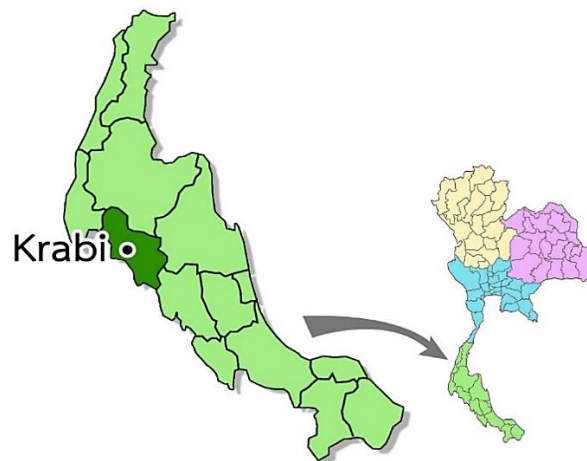
Site	Male			Female			ICD-10
	Cases 3 Year	% MV	% DCO	Cases 3 Year	% MV	% DCO	
Oral cavity	102	93.1	3.9	83	90.4	7.2	C00-C08
Oropharynx	41	97.6	0.0	7	100.0	0.0	C09-C10,C14
Nasopharynx	39	94.9	2.6	10	80.0	20.0	C11
Hypopharynx	33	100.0	0.0	2	100.0	0.0	C12-C13
Esophagus	97	87.6	8.2	17	88.2	11.8	C15
Stomach	31	93.5	0.0	29	96.6	0.0	C16
Small intestine	3	100.0	0.0	6	100.0	0.0	C17
Colon and rectum	156	91.0	2.6	127	95.3	2.4	C18-C21
Liver and bile duct	216	27.3	51.9	68	33.8	50.0	C22,C24
Gallbladder	3	100.0	0.0	3	100.0	0.0	C23
pancrease	12	33.3	0.0	16	68.8	0.0	C25
Nose,sinuses etc	1	100.0	0.0	2	100.0	0.0	C30-C31
Larynx	67	97.0	0.0	5	100.0	0.0	C32
Trachea, brochus and lung	224	70.1	13.4	96	79.2	9.4	C33-C34
Other thoracic organs	5	100.0	0.0	4	100.0	0.0	C37-C38
Bone	5	100.0	0.0	7	85.7	0.0	C40-C41
Melanoma of skin	3	100.0	0.0	12	100.0	0.0	C43
Other skin	40	100.0	0.0	45	100.0	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	15	93.3	0.0	22	100.0	0.0	C47,C49
Breast	7	100.0	0.0	452	96.2	0.0	C50
Vulva				4	100.0	0.0	C51
Vagina				2	100.0	0.0	C52
Cervix uteri				228	89.0	6.6	C53
Corpus uteri				65	98.5	0.0	C54
Uterus unspecified				1	0.0	0.0	C55
Ovary				82	87.8	4.9	C56
Other female genital organs				2	100.0	0.0	C57
Placenta				0			C58
Penis	24	100.0	0.0				C60
Prostate	100	90.0	0.0				C61
Testis	12	91.7	0.0				C62
Other male genital organs	0	0.0	0.0				C63
Kidney	13	92.3	0.0	9	100.0	0.0	C64
Renal pelvis	1	100.0	0.0	2	50.0	0.0	C65
Ureter	0	0.0	0.0	0	0.0	0.0	C66
Bladder	63	95.2	0.0	15	93.3	0.0	C67
Other urinary organs	0	0.0	0.0	0	0.0	0.0	C68
Eye	6	100.0	0.0	1	0.0	0.0	C69
Brain, nervous system	40	72.5	17.5	31	71.0	19.4	C70-C72
Thyroid	30	93.3	3.3	102	89.2	3.9	C73
Adrenal gland	1	100.0	0.0	1	100.0	0.0	C74
Other endocrine	0	0.0	0.0	0	0.0	0.0	C75
Hodgkin disease	4	100.0	0.0	2	100.0	0.0	C81
Non-Hodgkin lymphoma	79	91.1	8.9	70	95.7	4.3	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	10	100.0	0.0	8	87.5	12.5	C90
Leukemia	35	94.3	2.9	50	74.0	26.0	C91-C95
Myelodysplastic	1	100.0	0.0	2	100.0	0.0	D45-D47
Other and unspecified	40	85.0	0.0	25	64.0	0.0	O&U
<b>All sites</b>	<b>1,559</b>	<b>79.7</b>	<b>11.2</b>	<b>1,715</b>	<b>88.7</b>	<b>5.9</b>	<b>All</b>

# Krabi Cancer Registry

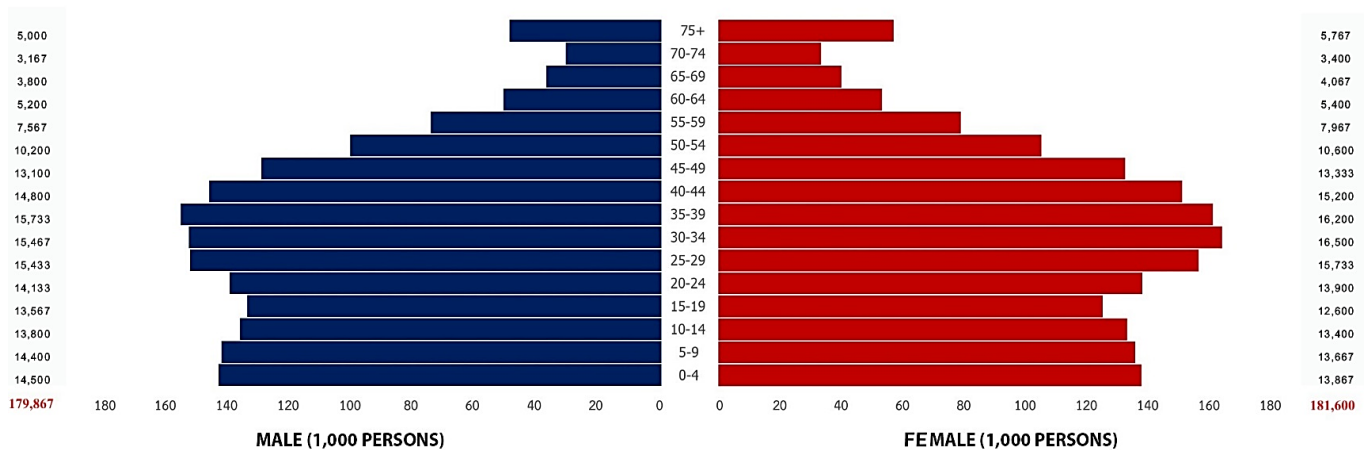
## Registration area

Krabi A province in southern Thailand. Is a popular tourist town in the south. There are many tourist attractions including white sandy beaches, crystal clear waters, coral caves and islands, over 100 islands and is home to the house that sat pitched Hagnac certification. The region is divided into eight District 53 District 374 villages. The province is located along the Andaman Sea. 814 kilometers from Bangkok on Highway 4 (Phetkasem Road) with an area of 4,708 square kilometers. The inland mountains, plains, more than 154 large and small islands, rich mangrove islands. Krabi Town, a 5 km long river flows into the Andaman Sea at Tambon Pak Nam. There is also a canal Chaya. Khlong Yai, Krabi Krabi Noi and Khlong The origin of the highest peaks in the province is Khao Phanom Benja

Phang Nga and Surat Thani province north side. Plai Phraya district Khao Phanom and south end of the province and the Andaman Sea, Ko Lanta. Klong Muang district, Krabi and Nakhon Si Thammarat and Trang eastern border of Khao Phanom district, Krabi and Phang Nga Lam Thap west and take the Andaman Sea and Krabi Ao Luek.



Population pyramid, Krabi  
estimated population in 2011 (average 2010-2012)



### **Cancer care facilities**

General health care in Thailand is mainly provided by the government. there are 1 municipal hospital, 7 private hospitals. The total number of hospital beds in Krabi was 642 beds with Medical personnel and public health 434 Most cancer patients are treated at the district hospital in Krabi. And forwards at the Hospital of Songkhla and Suratthani Cancer Hospital.

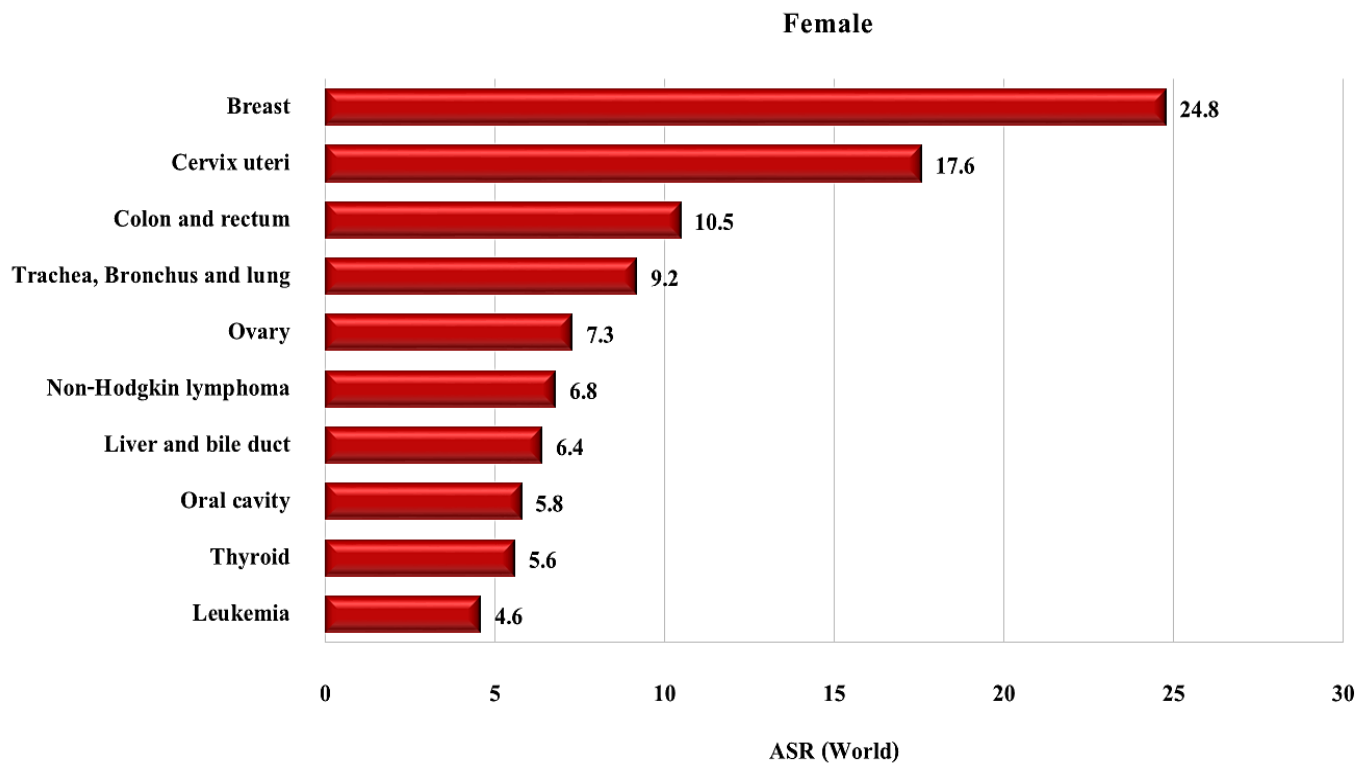
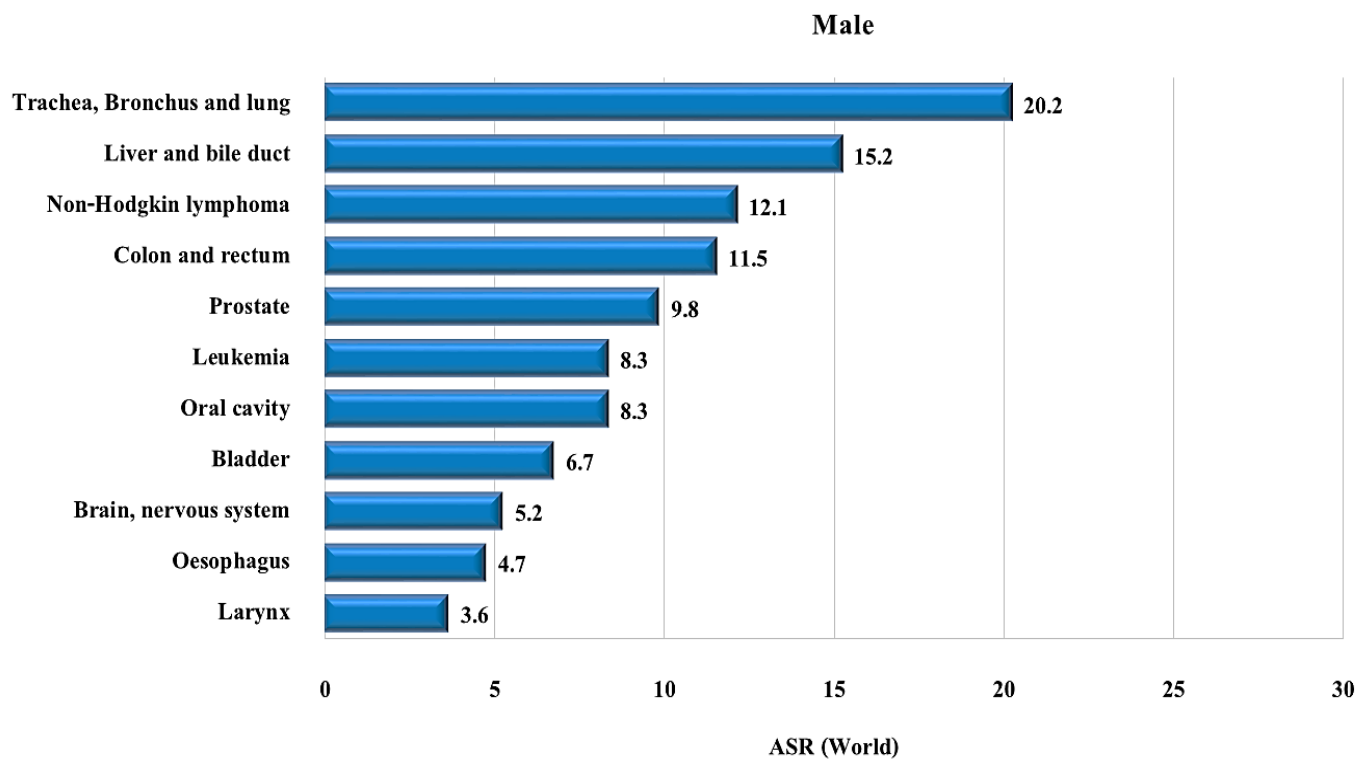
### **Registry procedures**

Data on cancer patients are now collected actively from every hospital in Krabi. Data collection by, Surat Thani Cancer Registration and Krabi Hospital Cancer Registration. The collected data. Public hospitals in the province. Just outside hospital Bureau of health Policy and Strategy, Ministry of Public Health. This records data using Canceg4 Program and Coding disease by manual coding ICD-O 3th.

### **Summary of results**

New cases registered in 2011, 257 were males and 252 were females, making 509 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 142.4 per 100,000, with lung cancer ranking first (ASR = 20.2) followed by liver and bile duct (ASR = 15.2) and Lymphoma (ASR = 12.1). The ASR of all cancer sites in females was 125.0, the three leading cancer sites being breast (ASR = 24.8), cervix (ASR = 17.6) and colon and rectum (ASR = 10.5).

**Figure 3.15** Leading cancer in Krabi (mean annual ASR 2010-2012)



**Table 3.15.1** Krabi (2011), Mean annual ASR per 100,000 (2010-2012) 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	1	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.4	0.4	C00
Tongue	5	0.0	0.0	0.0	0.0	0.0	2.2	0.0	2.1	2.3	2.5	6.5	8.8	6.4	17.5	10.5	13.3	2.6	2.5	C01-02
Mouth	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	2.3	0.0	3.3	22.0	19.2	26.3	21.1	46.7	4.6	4.5	C03-06
Salivary glands	1	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	6.4	8.8	0.0	0.0	0.7	0.9	C07-08
Tonsil	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	4.4	19.2	8.8	0.0	26.7	2.0	2.0	C09
Other oropharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	8.8	0.0	0.0	10.5	6.7	0.9	0.8	C10
Nasopharynx	5	0.0	0.0	0.0	0.0	0.0	2.2	2.2	4.2	9.0	7.6	0.0	4.4	0.0	17.5	0.0	6.7	2.8	2.4	C11
Hypopharynx	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.3	4.4	19.2	8.8	21.1	20.0	2.2	2.3	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.5	9.8	13.2	12.8	43.9	31.6	46.7	4.6	4.7	C15
Stomach	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	3.3	8.8	6.4	8.8	0.0	20.0	1.9	1.7	C16
Small intestine	1	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	0.0	0.0	6.7	0.4	0.3	C17
Colon	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	19.6	22.0	25.6	43.9	73.7	100.0	8.2	8.0	C18
Rectum	6	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	2.5	6.5	17.6	19.2	8.8	21.1	33.3	3.5	3.5	C19-20
Anus	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C21
Liver and bile duct	27	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	15.8	20.4	32.7	74.9	70.5	61.4	94.7	80.0	15.2	15.2	C22,C24
Gallbladder	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	8.8	21.1	6.7	0.7	0.8	C23
Pancreas	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	13.1	0.0	0.0	26.3	42.1	33.3	3.2	3.1	C25
Nose, sinuses etc.	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	10.5	6.7	0.6	0.5	C30-31
Larynx	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.5	3.3	4.4	25.6	26.3	31.6	26.7	3.3	3.6	C32
Trachea, Bronchus and lung	36	0.0	0.0	0.0	2.5	0.0	2.2	4.3	4.2	13.5	15.3	42.5	57.3	57.7	131.6	189.5	153.3	20.2	20.2	C33-34
Bone	2	0.0	0.0	2.4	0.0	0.0	0.0	0.0	4.2	2.3	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.9	0.8	C40-C41
Melanoma of skin	1	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	0.0	0.0	6.7	0.4	0.3	C43
Other skin	5	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	12.8	17.5	31.6	40.0	3.0	3.0	C44
Connective tissue	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	8.8	0.0	17.5	0.0	0.0	0.9	1.0	C47,C49
Breast	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	0.6	0.4	C50
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
Penis	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	2.5	6.5	8.8	0.0	0.0	21.1	6.7	1.7	1.5	C60
Prostate	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	8.8	19.2	87.7	94.7	200.0	10.2	9.8	C61
Testis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.4	0.3	C62
Kidney	2	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	8.8	0.0	0.0	10.5	0.0	1.3	1.3	C64
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	8.8	0.0	0.0	0.2	0.3	C66
Bladder	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	2.5	9.8	17.6	44.9	8.8	63.2	93.3	6.9	6.7	C67
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68
Eye	1	4.6	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	0.4	0.6	C69
Brain, nervous system	10	0.0	2.3	7.2	0.0	4.7	2.2	10.8	4.2	4.5	5.1	6.5	4.4	25.6	0.0	10.5	26.7	5.6	5.2	C70-72
Thyroid	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.3	5.1	0.0	22.0	6.4	0.0	21.1	13.3	2.6	2.4	C73
Adrenal gland	0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C74
Hodgkin disease	2	0.0	0.0	0.0	0.0	0.0	4.3	0.0	2.1	0.0	0.0	3.3	0.0	0.0	0.0	10.5	0.0	0.9	0.8	C81
Non-Hodgkin lymphoma	21	0.0	0.0	2.4	4.9	0.0	4.3	2.2	10.6	11.3	17.8	13.1	39.6	38.5	96.5	63.2	33.3	11.9	12.1	C82-85,C96
Multiple myeloma	3	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	8.8	0.0	8.8	21.1	13.3	1.7	1.7	C90
Lymphoid leukemia	4	4.6	2.3	0.0	4.9	0.0	0.0	2.2	0.0	2.3	2.5	0.0	4.4	6.4	8.8	0.0	6.7	2.2	2.5	C91
Myeloid leukemia	5	2.3	2.3	0.0	2.5	0.0	0.0	0.0	0.0	0.0	2.5	6.5	8.8	12.8	35.1	0.0	6.7	2.8	3.3	C92-94
Leukemia unspecified	4	6.9	2.3	0.0	2.5	0.0	0.0	4.3	2.1	0.0	2.5	9.8	4.4	0.0	0.0	0.0	0.0	2.4	2.5	C95
Myelodysplastic disease	1	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.4	0.3	D45-D47
Other and unspecified	14	0.0	0.0	0.0	0.0	2.4	0.0	0.0	4.2	9.0	0.0	13.1	22.0	44.9	52.6	42.1	60.0	7.8	7.9	O&U
<b>All sites</b>	<b>257</b>	<b>20.7</b>	<b>16.2</b>	<b>16.9</b>	<b>22.1</b>	<b>7.1</b>	<b>21.6</b>	<b>25.9</b>	<b>55.1</b>	<b>85.6</b>	<b>122.1</b>	<b>232.0</b>	<b>427.3</b>	<b>500.0</b>	<b>789.5</b>	<b>978.9</b>	<b>1160.0</b>	<b>143.1</b>	<b>142.4</b>	<b>ALL</b>

**Table 3.15.2** Krabi (2011), Mean annual ASR per 100,000 (2010-2012) 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	4	0.0	0.0	0.0	2.6	0.0	2.1	0.0	0.0	0.0	0.0	0.0	4.2	0.0	8.2	29.4	28.9	2.2	2.0	C00
Tongue	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	4.2	0.0	24.6	19.6	11.6	1.7	1.7	C01-02
Mouth	4	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.1	0.0	2.5	0.0	4.2	6.2	8.2	0.0	28.9	2.0	1.6	C03-06
Salivary glands	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	11.6	0.7	0.5	C07-08
Tonsil	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C09
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
Nasopharynx	3	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	2.2	5.0	6.3	8.4	0.0	0.0	0.0	0.0	1.7	1.4	C11
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	0.0	0.0	9.8	5.8	0.4	0.3	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	0.0	0.0	6.2	0.0	0.0	0.0	0.2	0.2	C14
Oesophagus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	12.3	0.0	19.6	0.0	0.9	1.0	C15
Stomach	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	3.1	4.2	12.3	8.2	9.8	28.9	2.2	2.0	C16
Small intestine	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.2	0.2	C17
Colon	13	0.0	0.0	0.0	0.0	2.4	0.0	4.0	4.1	4.4	0.0	3.1	12.6	37.0	41.0	68.6	63.6	7.3	7.0	C18
Rectum	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.2	12.5	12.6	8.4	18.5	8.2	0.0	17.3	3.7	3.3	C19-20
Anus	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.2	0.2	C21
Liver and bile duct	12	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	8.8	2.5	9.4	25.1	24.7	65.6	19.6	40.5	6.6	6.4	C22,C24
Gallbladder	1	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	0.0	5.8	0.4	0.2	0.2	C23
Pancreas	5	0.0	0.0	0.0	0.0	2.4	2.1	0.0	4.1	6.6	2.5	6.3	0.0	6.2	8.2	29.4	5.8	2.9	2.7	C25
Nose, sinuses etc.	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	0.2	0.1	C30-31
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
Trachea, Bronchus and lung	18	0.0	0.0	0.0	0.0	0.0	2.1	0.0	4.1	2.2	12.5	25.2	16.7	30.9	32.8	107.8	80.9	10.1	9.2	C33-34
Bone	1	0.0	0.0	0.0	2.6	2.4	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	0.7	0.7	C40-C41
Melanoma of skin	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	6.2	8.2	0.0	0.0	0.6	0.7	C43
Other skin	5	0.0	0.0	0.0	2.6	2.4	0.0	0.0	2.1	0.0	5.0	0.0	0.0	12.3	8.2	19.6	28.9	2.8	2.6	C44
Connective tissue	2	0.0	0.0	5.0	2.6	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.0	C47,C49
Breast	51	0.0	0.0	0.0	0.0	2.4	8.5	8.1	28.8	50.4	82.5	75.5	87.9	86.4	57.4	29.4	34.7	28.3	24.8	C50
Cervix uteri	37	0.0	0.0	0.0	0.0	0.0	4.2	20.2	16.5	35.1	50.0	59.7	54.4	49.4	32.8	68.6	23.1	20.4	17.6	C53
Corpus uteri	6	0.0	0.0	0.0	0.0	0.0	2.1	2.0	4.1	4.4	2.5	9.4	20.9	12.3	0.0	9.8	0.0	3.3	2.9	C54
Uterus unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	8.2	0.0	0.0	0.4	0.4	C55
Ovary	15	0.0	0.0	2.5	5.3	12.0	2.1	4.0	6.2	17.5	12.5	15.7	8.4	6.2	24.6	19.6	28.9	8.3	7.3	C56
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
Kidney	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	3.1	0.0	0.0	0.0	0.0	5.8	0.6	0.4	C64
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
Bladder	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.1	0.0	0.0	0.0	9.8	17.3	1.1	0.9	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	0.0	0.0	8.2	0.0	0.0	0.0	0.2	0.2	C68
Eye	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C69
Brain, nervous system	5	2.4	2.4	0.0	0.0	0.0	2.1	0.0	0.0	0.0	5.0	9.4	4.2	12.3	16.4	9.8	5.8	2.8	2.9	C70-72
Thyroid	12	0.0	0.0	0.0	2.6	7.2	4.2	6.1	10.3	15.4	12.5	12.6	16.7	0.0	8.2	0.0	11.6	6.8	5.6	C73
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
Hodgkin disease	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C81
Non-Hodgkin lymphoma	15	0.0	0.0	0.0	0.0	2.4	2.1	8.1	2.1	8.8	15.0	22.0	20.9	0.0	32.8	29.4	46.2	8.1	6.8	C82-85,C96
Multiple myeloma	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	8.2	19.6	23.1	1.5	1.3	C90
Lymphoid leukemia	2	2.4	2.4	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.6	0.0	5.8	1.3	1.6	C91
Myeloid leukemia	2	2.4	0.0	0.0	5.3	0.0	0.0	0.0	2.1	2.2	0.0	0.0	0.0	6.2	0.0	0.0	5.8	1.3	1.4	C92-94
Leukemia unspecified	3	2.4	2.4	0.0	0.0	2.4	2.1	2.0	0.0	4.4	0.0	3.1	0.0	0.0	0.0	9.8	0.0	1.7	1.6	C95
Myelodysplastic 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	0.0	0.0	0.0	0.0	0.0	D45-D47
Other and unspecified	8	0.0	0.0	0.0	0.0	0.0	2.1	0.0	4.1	0.0	2.5	3.1	12.6	18.5	24.6	19.6	40.5	4.2	3.9	O&U
<b>All sites</b>	<b>252</b>	<b>9.6</b>	<b>7.3</b>	<b>7.5</b>	<b>23.8</b>	<b>36.0</b>	<b>42.4</b>	<b>60.6</b>	<b>94.7</b>	<b>173.2</b>	<b>237.5</b>	<b>295.6</b>	<b>322.2</b>	<b>370.4</b>	<b>467.2</b>	<b>558.8</b>	<b>618.5</b>	<b>138.8</b>	<b>125.0</b>	<b>ALL</b>

**Table 3.15.3** Mean annual incidence, Krabi, 2010-2012

Site	No.Cases Year	Freq. (%)	Male					Female				
			Crude rate	ASR world	Cum.Rate.		No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum.Rate.	
					0-64	0-74					0-64	0-74
					(per 100,000)						(per 100,000)	
Lip	1	0.3	0.4	0.4	0.0	0.0	4	1.6	2.2	2.0	0.0	0.2
Tongue	5	1.8	2.6	2.5	0.2	0.3	3	1.2	1.7	1.7	0.0	0.3
Mouth	8	3.2	4.6	4.5	0.3	0.5	4	1.5	2.0	1.6	0.1	0.1
Salivary glands	1	0.5	0.7	0.9	0.1	0.1	1	0.5	0.7	0.5	0.0	0.0
Tonsil	4	1.4	2.0	2.0	0.1	0.2	0	0.0	0.0	0.0	0.0	0.0
Other oropharynx	2	0.6	0.9	0.8	0.1	0.1	0	0.0	0.0	0.0	0.0	0.0
Nasopharynx	5	1.9	2.8	2.4	0.1	0.2	3	1.2	1.7	1.4	0.1	0.1
Hypopharynx	4	1.6	2.2	2.3	0.1	0.3	1	0.3	0.4	0.3	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0	0.1	0.2	0.2	0.0	0.0
Oesophagus	8	3.2	4.6	4.7	0.2	0.6	2	0.7	0.9	1.0	0.1	0.2
Stomach	3	1.3	1.9	1.7	0.1	0.2	4	1.6	2.2	2.0	0.1	0.2
Small intestine	1	0.3	0.4	0.3	0.0	0.0	0	0.1	0.2	0.2	0.0	0.0
Colon	15	5.7	8.2	8.0	0.4	0.9	13	5.3	7.3	7.0	0.3	0.9
Rectum	6	2.5	3.5	3.5	0.2	0.4	7	2.6	3.7	3.3	0.3	0.3
Anus	0	0.0	0.0	0.0	0.0	0.0	0	0.1	0.2	0.2	0.0	0.0
Liver and bile duct	27	10.6	15.2	15.2	1.1	1.9	12	4.8	6.6	6.4	0.4	0.8
Gallbladder	1	0.5	0.7	0.8	0.0	0.1	1	0.3	0.4	0.2	0.0	0.0
Pancreas	6	2.2	3.2	3.1	0.1	0.4	5	2.1	2.9	2.7	0.2	0.3
Nose, sinuses etc.	1	0.4	0.6	0.5	0.0	0.1	0	0.1	0.2	0.1	0.0	0.0
Larynx	6	2.3	3.3	3.6	0.2	0.5	0	0.0	0.0	0.0	0.0	0.0
Trachea, Bronchus and lung	36	14.1	20.2	20.2	1.0	2.6	18	7.3	10.1	9.2	0.5	1.2
Bone	2	0.6	0.9	0.8	0.0	0.1	1	0.5	0.7	0.7	0.0	0.0
Melanoma of skin	1	0.3	0.4	0.3	0.0	0.0	1	0.4	0.6	0.7	0.1	0.1
Other skin	5	2.1	3.0	3.0	0.1	0.4	5	2.0	2.8	2.6	0.1	0.3
Connective tissue	2	0.6	0.9	1.0	0.1	0.1	2	0.7	0.9	1.0	0.1	0.1
Breast	1	0.4	0.6	0.4	0.0	0.0	51	20.4	28.3	24.8	2.2	2.6
Cervix uteri							37	14.7	20.4	17.6	1.4	2.0
Corpus uteri							6	2.4	3.3	2.9	0.3	0.3
Uterus unspecified							1	0.3	0.4	0.4	0.0	0.1
Ovary							15	6.0	8.3	7.3	0.5	0.7
Penis	3	1.2	1.7	1.5	0.1	0.2						
Prostate	18	7.1	10.2	9.8	0.2	1.1						
Testis	1	0.3	0.4	0.3	0.0	0.0						
Kidney	2	0.9	1.3	1.3	0.1	0.1	1	0.4	0.6	0.4	0.0	0.0
Ureter	0	0.1	0.2	0.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Bladder	12	4.8	6.9	6.7	0.4	0.7	2	0.8	1.1	0.9	0.0	0.1
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0	0.1	0.2	0.2	0.0	0.0
Eye	1	0.3	0.4	0.6	0.0	0.0	0	0.1	0.2	0.2	0.0	0.0
Brain, nervous system	10	3.9	5.6	5.2	0.4	0.4	5	2.0	2.8	2.9	0.2	0.3
Thyroid	5	1.8	2.6	2.4	0.2	0.3	12	4.9	6.8	5.6	0.4	0.5
Adrenal gland	0	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Hodgkin disease	2	0.6	0.9	0.8	0.0	0.1	0	0.1	0.2	0.2	0.0	0.0
Non-Hodgkin lymphoma	21	8.3	11.9	12.1	0.7	1.5	15	5.8	8.1	6.8	0.4	0.7
Multiple myeloma	3	1.2	1.7	1.7	0.1	0.2	3	1.1	1.5	1.3	0.0	0.2
Lymphoid leukemia	4	1.6	2.2	2.5	0.1	0.2	2	0.9	1.3	1.6	0.0	0.2
Myeloid leukemia	5	1.9	2.8	3.3	0.2	0.4	2	0.9	1.3	1.4	0.1	0.1
Leukemia unspecified	4	1.7	2.4	2.5	0.2	0.2	3	1.2	1.7	1.6	0.1	0.1
Myelodysplastic disease	1	0.3	0.4	0.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Other and unspecified	14	5.4	7.8	7.9	0.5	1.0	8	3.0	4.2	3.9	0.2	0.4
<b>All sites</b>	<b>257</b>	<b>100.0</b>	<b>143.1</b>	<b>142.4</b>	<b>7.8</b>	<b>16.6</b>	<b>252</b>	<b>100.0</b>	<b>138.8</b>	<b>125.0</b>	<b>8.4</b>	<b>13.5</b>

**Table 3.15.4** Percentage of morphologically verified and death certificate only cases, Krabi

Site	Male			Female		
	Cases 3 Year	% MV	% DCO	Cases 3 Year	% MV	% DCO
Oral cavity	45	86.7	2.2	36	75.0	0.0
Oropharynx	16	87.5	0.0	1	100.0	0.0
Nasopharynx	15	73.3	0.0	9	77.8	0.0
Hypopharynx	12	75.0	0.0	2	50.0	0.0
Esophagus	25	92.0	0.0	5	100.0	0.0
Stomach	10	60.0	20.0	12	66.7	0.0
Small intestine	2	50.0	0.0	1	100.0	0.0
Colon and rectum	63	60.3	1.6	61	67.2	1.6
Liver and bile duct	82	25.6	9.8	36	36.1	8.3
Gallbladder	4	75.0	0.0	2	0.0	0.0
pancreas	17	41.2	0.0	16	56.3	0.0
Nose, sinuses etc	3	100.0	0.0	1	100.0	0.0
Larynx	18	83.3	0.0	0	0.0	0.0
Trachea, bronchus and lung	109	56.0	5.5	55	52.7	9.1
Other thoracic organs	0	0.0	0.0	0	0.0	0.0
Bone	5	60.0	0.0	4	25.0	0.0
Melanoma of skin	2	100.0	0.0	3	100.0	0.0
Other skin	16	75.0	0.0	15	93.3	0.0
Mesothelioma	0	0.0	0.0	0	0.0	0.0
Kaposi sarcoma	0	0.0	0.0	0	0.0	0.0
Connective and soft tissue	5	80.0	0.0	5	100.0	0.0
Breast	3	66.7	0.0	154	87.7	1.3
Vulva				0	0.0	0.0
Vagina				0	0.0	0.0
Cervix uteri				111	85.6	0.9
Corpus uteri				18	83.3	0.0
Uterus unspecified				2	100.0	0.0
Ovary				45	48.9	0.0
Other female genital organs				0		
Placenta				0		
Penis	9	77.8	0.0			
Prostate	55	60.0	1.8			
Testis	2	50.0	0.0			
Other male genital organs	0	0.0	0.0			
Kidney	7	85.7	0.0	3	66.7	0.0
Renal pelvis	0	0.0	0.0	0	0.0	0.0
Ureter	1	100.0	0.0	0	0.0	0.0
Bladder	37	75.7	0.0	6	50.0	16.7
Other urinary organs	0	0.0	0.0	1	0.0	0.0
Eye	2	100.0	0.0	1	100.0	0.0
Brain, nervous system	30	43.3	6.7	15	53.3	6.7
Thyroid	14	85.7	0.0	37	83.8	2.7
Adrenal gland	1	100.0	0.0	0	0.0	0.0
Other endocrine	0	0.0	0.0	0	0.0	0.0
Hodgkin disease	5	100.0	0.0	1	100.0	0.0
Non-Hodgkin lymphoma	64	100.0	0.0	44	95.5	2.3
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0
Multiple myeloma	9	100.0	0.0	8	87.5	12.5
Leukemia	40	97.5	2.5	23	95.7	4.3
Myelodysplastic	2	100.0	0.0	0	0.0	0.0
Other and unspecified	42	35.7	19.0	23	52.2	34.8
<b>All sites</b>	<b>772</b>	<b>66.3</b>	<b>3.9</b>	<b>756</b>	<b>74.6</b>	<b>3.4</b>