

# Cancer in Thailand

Vol. IX, 2013-2015



50 ปี สถาบันมะเร็งแห่งชาติ  
มุ่งมั่น "ทำ" ตามรอยพระราชอา

MINISTRY OF PUBLIC HEALTH  
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Lampang Cancer Center  
Ubon Ratchathani Cancer Center  
Udon Thani Cancer Center  
Lop Buri Cancer Center  
Chon Buri Cancer Center  
Surat Thani Cancer Center  
Maha Vajiralongkorn Cancer Center



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## **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

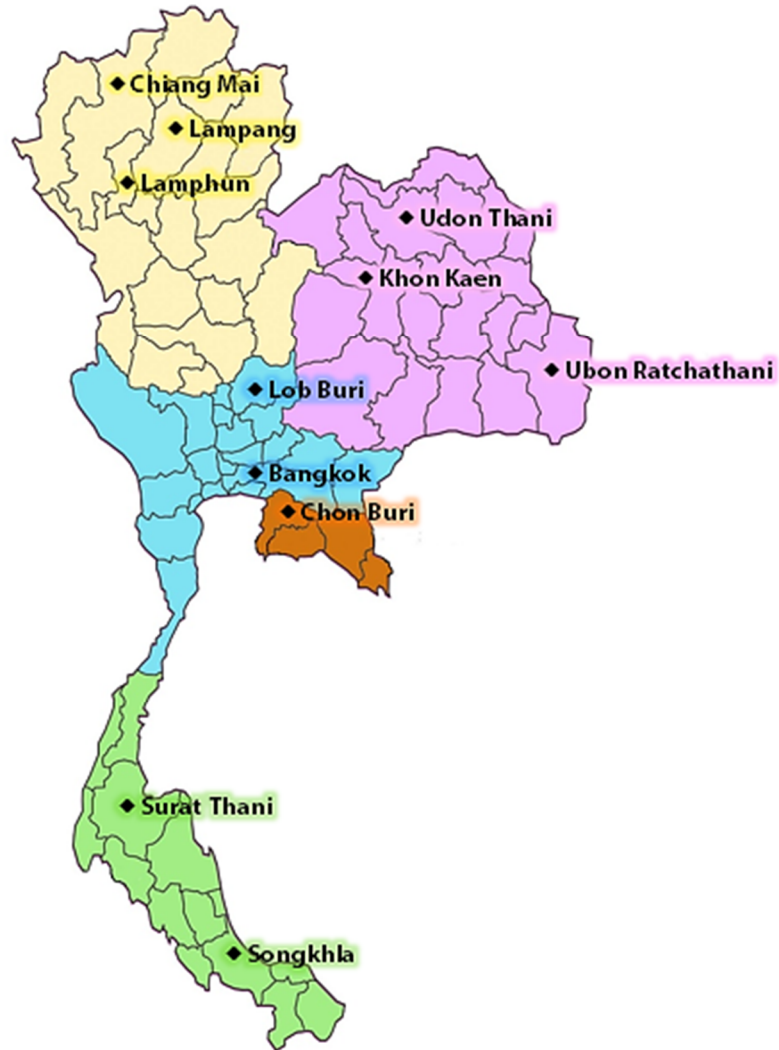
### Registration area

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 five geographical regions: the Northern, Northeastern, Central, Eastern and Southern. The geographic area covered by the fifteen 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

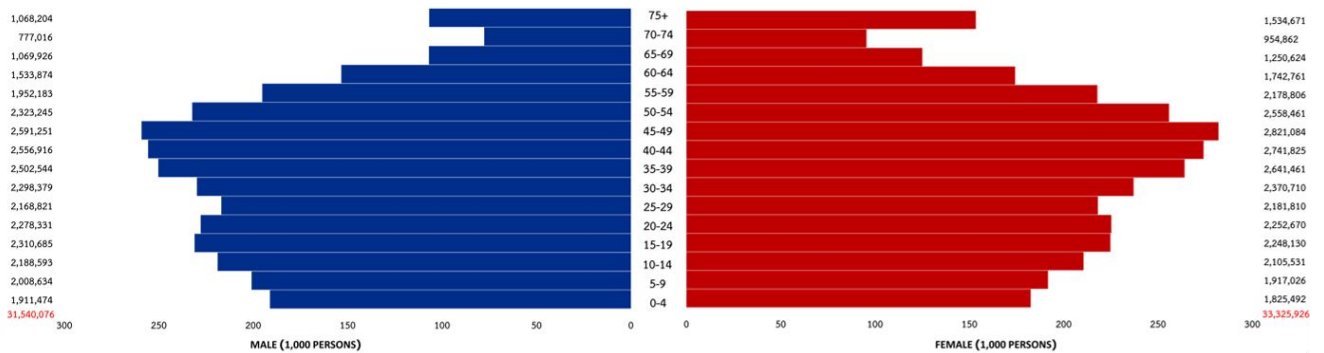
**Table 2.1.1** Land area and estimated population in 2014 (average 2013-2015)

Provinces	Population Density (person / km <sup>2</sup> )	Land area (km <sup>2</sup> )	Estimated population Male	Estimated population Female
Chiang Mai	83.18	20,107	815,000	857,467
Lamphun	89.80	4,505	196,033	208,500
Lampang	58.75	12,534	362,367	374,033
Udon Thani	107.62	11,730	615,567	646,800
Khon Kaen	158.57	10,886	833,567	892,633
Ubon Ratchatani	108.91	15,745	842,633	872,133
Lop Buri	123.34	6,200	381,667	383,033
Bangkok	5,085.05	1,569	3,837,843	4,140,593
Chon Buri	343.52	4,363	718,433	780,333
Songkhla	203.13	7,394	728,600	773,333
Surat Thani	76.15	12,891	478,000	503,667
<b>Thailand</b>	<b>126.41</b>	<b>513,155</b>	<b>31,540,076</b>	<b>33,325,926</b>

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



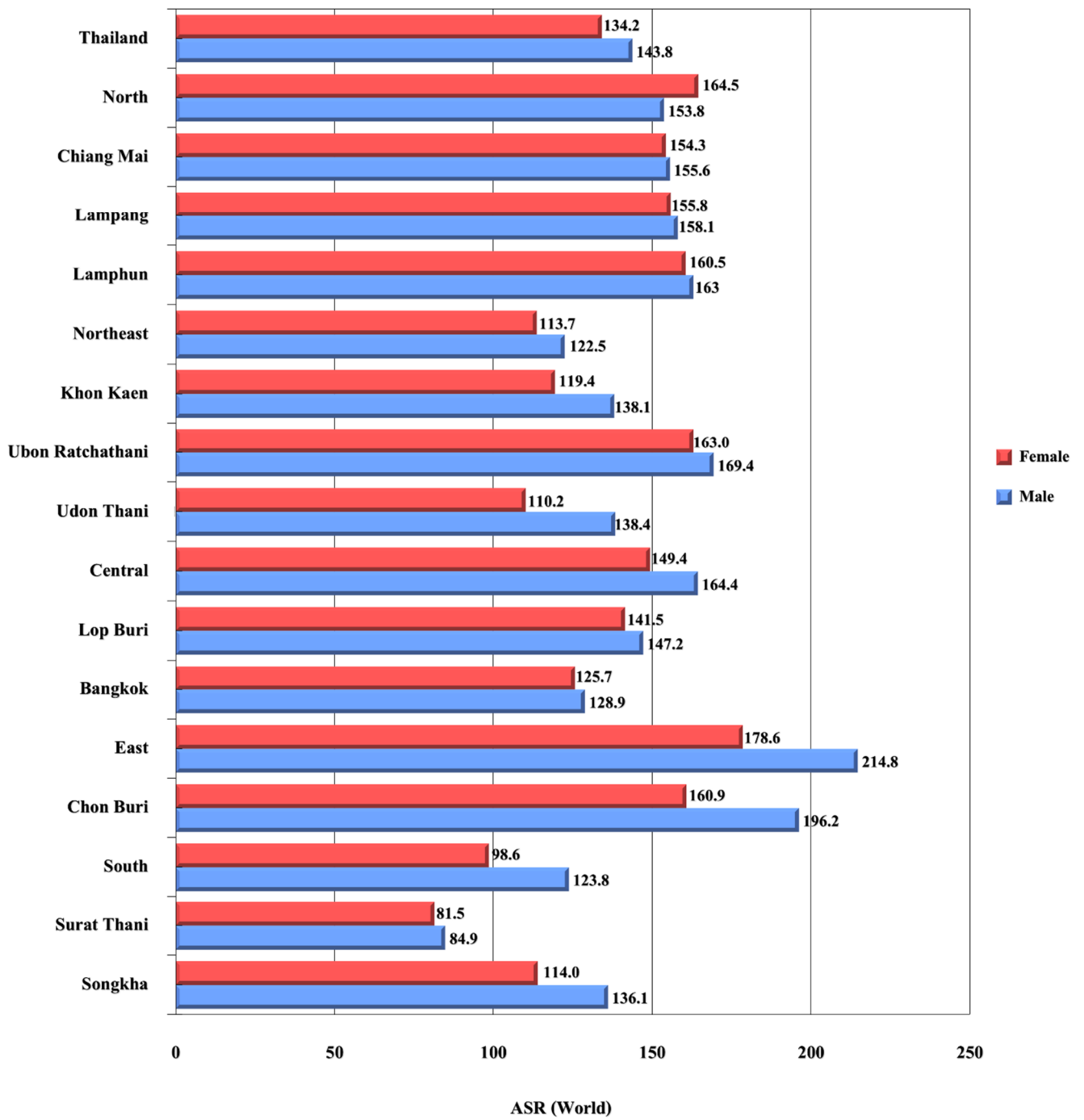
Population pyramid, Thailand  
estimated population in 2014 (average 2013-2015)



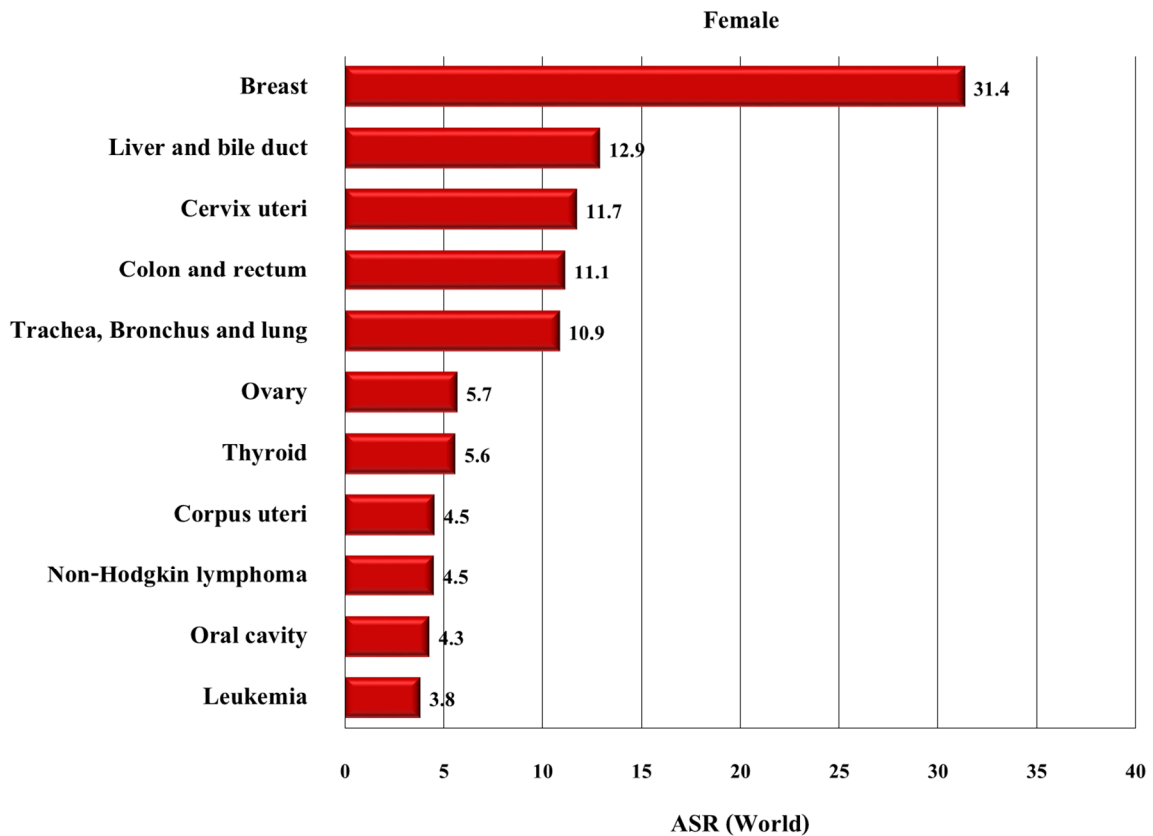
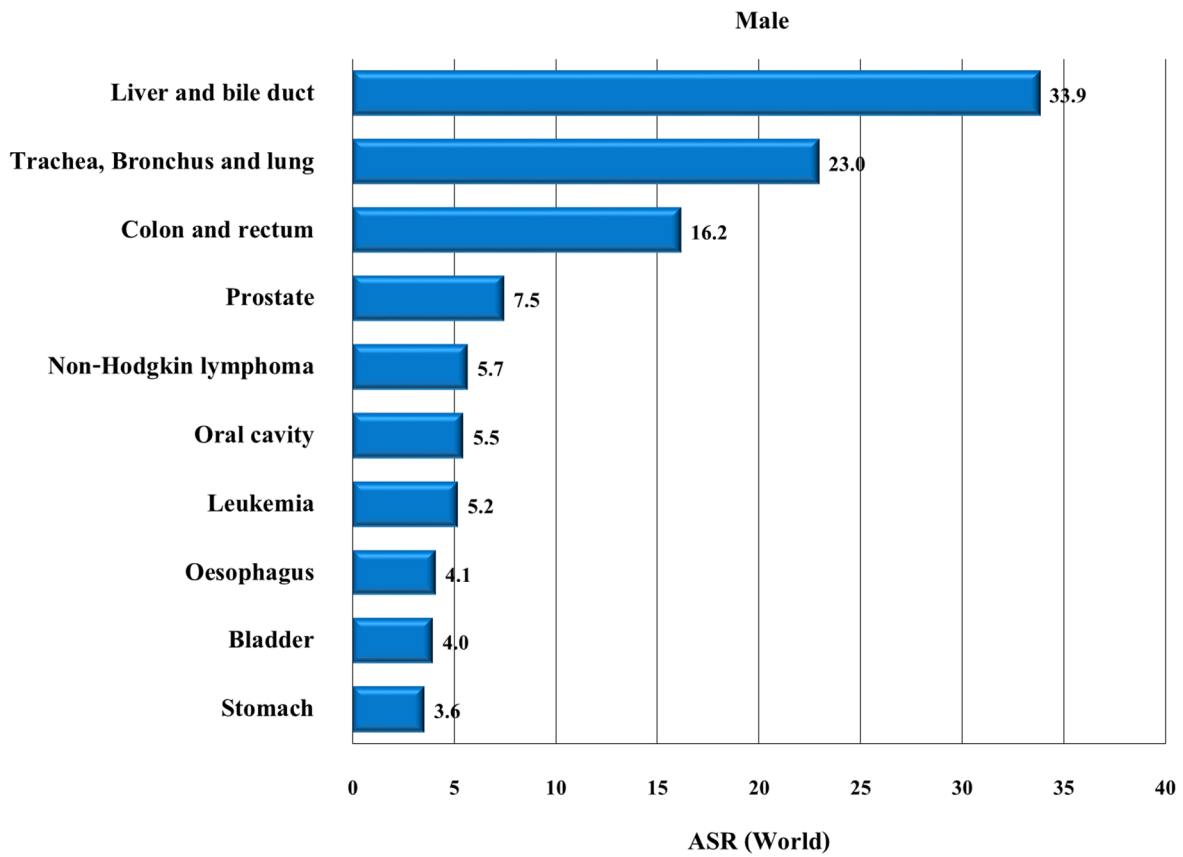
**Table 2.1.2** Mean annual age-standardized incidence rate (ASR per 100,000),all sites, 2013-2015

Area	Male		Female	
	Cases	ASR (per 100,000)	Cases	ASR (per 100,000)
<b>Thailand</b>	<b>61,416</b>	<b>143.8</b>	<b>65,139</b>	<b>134.2</b>
Chiang Mai	1,841	155.6	1,998	154.3
Lamphun	511	163.0	542	160.5
Lampang	1,026	158.1	1,026	155.8
Udon Thani	1,076	134.8	999	125.4
Khon Kaen	1,623	138.1	1,573	119.4
Ubon Ratchatani	1,923	169.4	1,974	163.0
Lop Buri	798	147.2	815	141.5
Bangkok	5,349	129.1	6,762	125.8
Chon Buri	1,348	196.2	1,389	160.9
Songkhla	1,182	136.1	1,151	114.0
Surat Thani	476	84.9	534	81.5

**Figure 2.1.2** Mean annual age-standardized incidence rate (ASR per 100,000), all sites, 2013-2015



**Figure 2.1.3** Leading cancer in Thailand (mean annual ASR 2013-2015)



**Table 2.2.1** Thailand (2014), Mean annual ASR per 100,000 (2013-2015) 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	74	0.00	0.14	0.13	0.00	0.00	0.00	0.06	0.01	0.12	0.13	0.33	0.75	0.26	0.96	1.50	1.13	0.23	0.18	C00
Tongue	1,096	0.00	0.00	0.00	0.04	0.19	0.05	0.49	1.39	3.73	4.95	5.64	9.19	10.49	11.34	15.01	10.39	3.47	2.57	C01-02
Mouth	916	0.67	0.49	0.02	0.00	0.09	0.49	1.19	0.69	1.95	2.75	6.74	6.56	6.93	9.74	10.14	13.13	2.90	2.21	C03-06
Salivary glands	203	0.11	0.00	0.21	0.11	0.16	0.52	0.17	0.10	0.37	0.81	1.11	2.17	2.17	1.94	4.40	1.39	0.64	0.53	C07-08
Tonsil	390	0.16	0.00	0.00	0.05	0.00	0.00	0.00	0.00	1.27	2.28	2.62	2.30	3.93	3.77	3.83	4.48	1.24	0.92	C09
Other oropharynx	185	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.77	0.18	0.41	2.01	1.64	0.84	0.86	1.92	3.20	0.59	0.41	C10
Nasopharynx	1,087	0.00	0.05	0.14	0.20	0.41	1.54	1.15	2.81	3.22	5.08	6.48	10.18	9.66	9.15	9.94	4.86	3.45	2.62	C11
Hypopharynx	576	0.00	0.00	0.00	0.00	0.05	0.00	0.07	0.61	0.79	3.29	3.66	5.38	4.34	6.09	8.98	5.76	1.83	1.34	C12-13
Pharynx unspecified	73	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.05	0.14	0.40	0.98	0.86	0.29	0.40	0.59	0.41	0.23	0.16	C14
Oesophagus	1,769	0.00	0.00	0.00	0.01	0.00	0.00	0.65	1.06	3.08	5.86	12.04	17.47	16.21	21.65	29.27	18.60	5.61	4.12	C15
Stomach	1,506	0.00	0.02	0.00	0.01	0.20	0.36	2.00	1.58	4.70	3.47	6.01	11.46	15.13	19.14	23.93	19.73	4.77	3.56	C16
Small intestine	121	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.51	0.80	0.39	0.90	1.18	0.66	1.92	1.39	0.38	0.28	C17
Colon	3,864	0.00	0.06	0.09	0.34	0.40	0.99	3.89	3.08	7.50	9.05	18.78	21.70	39.36	49.23	66.52	67.60	12.25	9.11	C18
Rectum	2,870	0.00	0.00	0.00	0.01	0.07	1.10	1.75	1.71	4.02	7.54	13.84	20.18	31.17	39.62	45.02	46.40	9.10	6.76	C19-20
Anus	140	0.00	0.00	0.00	0.00	0.08	0.07	0.70	0.17	0.20	0.70	0.41	0.64	1.65	0.72	1.28	2.64	0.44	0.33	C21
Liver and bile duct	14,293	1.20	0.05	0.08	0.64	0.62	1.76	6.37	13.05	25.81	47.63	80.41	125.94	149.96	198.13	203.65	140.74	45.32	33.86	C22,C24
Gallbladder	317	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.10	0.94	1.17	2.36	3.28	5.25	7.40	4.73	1.00	0.75	C23
Pancreas	847	0.00	0.00	0.00	0.00	0.01	0.12	0.67	0.54	2.38	2.69	3.50	5.06	6.48	10.93	14.85	16.18	2.69	1.97	C25
Nose, sinuses etc.	232	0.00	0.00	0.00	0.01	0.06	0.00	0.18	0.47	0.84	0.89	1.52	1.15	1.95	3.06	2.19	3.04	0.74	0.55	C30-31
Larynx	933	0.00	0.00	0.06	0.00	0.00	0.02	0.06	0.24	2.35	2.45	6.44	7.87	9.17	9.36	15.10	12.96	2.96	2.16	C32
Trachea, Bronchus and lung	9,779	0.08	0.05	0.06	0.44	0.44	0.62	3.25	3.86	11.76	17.72	34.12	65.26	96.56	148.40	208.40	192.40	31.00	22.99	C33-34
Other thoracic organs	202	0.21	0.14	0.51	1.23	0.60	0.89	0.14	0.25	0.15	0.32	0.71	1.14	1.62	0.61	1.50	1.83	0.64	0.60	C37-38
Bone	493	0.08	0.57	2.00	1.64	0.99	0.47	0.85	0.40	0.95	1.81	1.43	2.69	4.16	4.08	5.19	2.95	1.56	1.38	C40-C43
Melanoma of skin	215	0.00	0.00	0.08	0.50	0.05	0.08	0.11	0.00	0.53	0.62	0.61	0.98	1.73	1.92	5.57	3.99	0.68	0.53	C41
Other skin	1,347	0.00	0.00	0.07	0.15	0.20	0.29	0.52	0.42	1.44	2.79	3.84	6.55	12.52	15.13	25.74	40.18	4.27	3.09	C44
Mesothelioma	41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.18	0.09	0.00	0.26	0.03	0.00	0.02	C45
Kaposi's sarcoma	10	0.00	0.00	0.00	0.04	0.01	0.27	0.30	0.13	0.06	0.05	0.06	0.10	0.12	0.14	1.04	0.62	0.13	0.11	C46
Connective tissue	474	1.64	0.41	0.55	0.54	0.28	0.28	0.74	1.63	1.16	1.71	1.58	3.06	2.47	4.16	5.95	3.80	1.50	1.32	C47,C49
Breast	162	0.00	0.00	0.00	0.00	0.00	0.52	0.08	0.07	0.70	0.74	0.28	0.67	2.17	1.57	3.34	1.36	0.51	0.41	C50
Vulva	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C51
Vagina	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C52
Cervix uteri	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C53
Corpus uteri	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C54
Uterus unspecified	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C55
Ovary	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C56
Other female genital organs	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C57
Placenta	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C58
Penis	446	0.00	0.05	0.00	0.00	0.19	0.00	0.18	0.78	1.80	1.92	2.33	2.30	3.20	5.44	6.93	5.54	1.41	1.06	C60
Prostate	3,233	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.07	0.22	0.76	2.05	11.59	29.63	50.26	95.33	112.09	10.25	7.48	C61
Testis	150	0.34	0.20	0.08	0.24	0.77	0.71	0.48	0.52	0.37	0.89	0.20	0.44	0.66	0.20	0.99	0.88	0.47	0.44	C62
Kidney	29	0.00	0.00	0.00	0.36	0.04	0.05	0.00	0.00	0.05	0.00	0.28	0.00	0.28	0.13	0.64	0.03	0.09	0.09	C63
Other male genital organs	604	0.55	0.12	0.00	0.00	0.00	0.04	0.86	0.72	1.22	1.89	2.20	5.20	7.93	6.40	7.39	6.28	1.91	1.47	C64
Renal pelvis	64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.20	0.39	0.51	0.82	0.85	1.65	0.29	0.20	0.15	C65
Ureter	44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.05	0.07	0.34	0.15	1.28	1.18	0.79	0.14	0.10	C66
Bladder	1,711	0.16	0.00	0.08	0.00	0.16	0.00	0.39	0.24	1.68	2.27	5.03	10.02	16.16	28.71	29.70	45.70	5.43	3.98	C67
Other urinary organs	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.04	0.22	0.02	0.40	0.36	0.19	0.05	0.04	C68
Eye	100	1.47	0.05	0.00	0.04	0.00	0.04	0.08	0.09	0.51	0.13	0.24	0.51	0.48	0.31	0.65	1.60	0.32	0.34	C69
Brain, nervous system	1,004	2.12	1.65	1.63	1.05	0.55	1.70	2.70	1.78	1.93	3.37	3.57	5.98	8.05	7.51	10.82	8.39	3.18	2.78	C70-72
Thyroid	545	0.08	0.07	0.24	0.49	0.50	0.74	1.82	1.99	1.70	1.28	2.10	5.13	2.88	5.19	5.25	3.77	1.73	1.35	C73
Adrenal gland	59	1.17	0.12	0.08	0.00	0.06	0.00	0.17	0.38	0.11	0.05	0.10	0.10	0.29	0.28	0.20	0.20	0.19	0.24	C74
Other endocrine	47	0.02	0.19	0.32	0.90	0.25	0.07	0.00	0.01	0.00	0.10	0.11	0.08	0.04	0.03	0.00	0.03	0.15	0.17	C75
Hodgkin disease	148	0.00	0.34	0.40	0.80	0.42	0.55	0.39	0.37	0.23	0.31	0.69	0.42	0.69	1.17	0.81	0.66	0.47	0.44	C81
Non-Hodgkin lymphoma	2,234	2.58	0.43	1.64	1.56	1.70	2.86	2.59	3.57	4.23	6.46	9.74	11.90	16.80	22.83	37.80	30.36	7.08	5.70	C82-85,C86
Multiple myeloma	438	0.00	0.00	0.00	0.00	0.05	0.03	0.14	0.14	0.32	1.03	1.83	3.86	5.27	5.49	8.87	6.40	1.39	1.03	C90
Lymphoid leukemia	419	4.27	2.64	2.43	1.16	0.48	0.86	0.32	0.26	0.37	0.34	0.75	1.07	1.21	1.84	2.60	4.30	1.33	1.61	C91
Myeloid leukemia	791	2.28	1.27	0.67	0.97	0.80	1.13	2.24	1.12	1.69	2.72	2.89	3.31	5.20	6.36	9.51	8.98	2.51	2.21	C92-94
Leukemia unspecified	49																			



**Table 2.2.2** Thailand (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10
Lip	267	0.04	0.00	0.51	0.14	0.02	0.54	0.04	0.04	0.32	0.43	0.37	0.56	1.45	2.86	4.62	5.89	0.80	0.55	C00
Tongue	507	0.00	0.00	0.38	0.06	0.05	0.48	0.28	1.12	1.46	2.11	2.05	2.83	3.90	4.56	5.21	4.56	1.52	1.05	C01-02
Mouth	851	0.18	0.75	0.00	0.09	5.48	0.48	0.92	0.95	0.89	1.57	2.54	2.41	4.55	8.97	8.21	12.67	2.55	1.93	C03-06
Salivary glands	300	0.09	0.02	0.12	0.00	1.17	1.64	0.64	1.36	1.24	0.57	1.13	1.15	1.13	1.07	2.40	1.42	0.90	0.73	C07-08
Tonsil	82	0.17	0.00	0.00	0.00	0.00	0.02	0.06	0.12	0.18	0.13	0.33	1.11	0.96	0.36	0.29	0.61	0.25	0.18	C09
Other oropharynx	17	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.06	0.00	0.15	0.00	0.04	0.30	0.07	0.41	0.05	0.03	C10
Nasopharynx	462	0.04	0.00	0.18	0.30	0.14	0.22	0.71	1.50	1.70	2.10	2.82	2.44	3.76	2.77	1.91	2.38	1.39	1.00	C11
Hypopharynx	76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.45	0.46	0.60	0.38	0.21	0.71	1.38	0.23	0.14	C12-13
Pharynx unspecified	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.00	0.00	0.11	0.20	0.56	0.13	0.04	0.03	C14
Oesophagus	267	0.04	0.00	0.00	0.00	1.10	0.11	0.04	0.00	0.20	0.45	1.02	1.76	1.48	3.09	3.86	3.54	0.80	0.56	C15
Stomach	1,347	0.00	0.00	0.00	0.00	2.26	0.44	1.72	2.11	2.72	2.95	8.12	8.34	8.99	13.36	15.98	10.83	4.04	2.82	C16
Small intestine	123	0.00	0.00	0.00	0.00	0.00	0.11	0.04	0.33	0.10	0.16	0.30	0.81	1.32	1.36	2.28	1.06	0.37	0.25	C17
Colon	3,421	0.04	0.00	0.30	0.23	0.43	0.33	2.02	2.68	6.29	9.68	13.05	19.18	27.63	36.51	42.21	47.87	10.27	6.78	C18
Rectum	2,080	0.00	0.00	0.00	0.09	0.11	0.27	0.80	1.99	3.12	5.58	7.70	13.58	18.76	26.23	26.57	23.04	6.24	4.19	C19-20
Anus	92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.09	0.17	0.42	0.53	0.67	1.13	1.24	1.52	0.28	0.18	C21
Liver and bile duct	6,378	0.70	0.37	0.06	0.14	0.34	0.30	3.03	2.87	7.55	12.39	22.98	39.05	62.89	81.23	102.83	71.85	19.14	12.90	C22,C24
Gallbladder	502	0.00	0.00	0.00	0.00	0.01	0.00	0.05	0.17	0.36	0.79	1.63	2.71	3.73	6.57	8.91	8.52	1.51	0.97	C23
Pancreas	772	0.00	0.00	0.12	0.05	1.09	0.17	0.32	0.63	0.65	1.58	2.24	5.22	7.25	9.10	9.81	9.72	2.32	1.58	C25
Nose, sinuses etc.	142	0.09	0.07	0.12	0.00	0.06	0.15	0.09	0.41	0.39	0.32	0.69	0.67	1.41	0.84	1.00	1.42	0.43	0.31	C30-31
Larynx	85	0.00	0.00	0.00	0.00	0.00	0.47	0.01	0.06	0.07	0.46	0.16	0.08	1.17	0.54	1.15	0.88	0.25	0.19	C32
Trachea, Bronchus and lung	5,509	0.00	0.00	0.09	0.20	0.33	0.56	2.35	3.34	5.65	9.82	16.82	29.59	48.11	70.48	89.07	82.21	16.53	10.86	C33-34
Other thoracic organs	68	0.09	0.00	0.09	0.05	0.05	0.05	0.05	0.06	0.07	0.17	0.36	0.44	0.52	0.49	0.99	0.50	0.20	0.15	C37-38
Bone	528	0.10	0.32	1.09	0.69	1.53	2.28	0.85	0.55	1.11	1.81	2.38	2.19	2.30	3.00	4.66	3.34	1.59	1.32	C40-C41
Melanoma of skin	238	0.16	0.00	0.00	0.05	0.09	0.11	0.61	0.74	0.22	0.71	1.22	0.98	1.64	1.76	2.45	2.81	0.71	0.50	C43
Other skin	1,722	0.31	0.00	0.00	0.32	2.22	0.76	0.91	0.83	1.63	2.49	3.90	6.99	11.79	15.20	24.82	39.05	5.17	3.34	C44
Mesothelioma	7	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.03	0.00	0.09	0.03	0.00	0.21	0.02	0.01	C45
Kaposi's sarcoma	26	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.00	0.04	0.00	0.00	0.13	0.79	0.94	0.08	0.05	C46
Connective tissue	525	0.44	0.20	0.38	0.54	3.62	1.53	0.85	1.61	1.26	1.41	1.43	2.20	2.41	3.63	3.07	2.61	1.58	1.35	C47,C49
Breast	14,804	0.04	0.00	0.06	0.00	0.00	4.83	8.42	25.33	37.49	65.62	83.09	92.23	99.15	98.63	88.07	74.26	44.42	31.36	C50
Vulva	223	0.00	0.00	0.00	0.00	0.01	0.11	0.14	0.31	0.99	0.67	1.22	1.31	1.37	1.55	2.03	2.66	0.67	0.44	C51
Vagina	90	0.00	0.00	0.00	0.00	0.00	0.07	0.74	0.74	0.27	0.16	0.33	0.58	0.79	0.82	1.08	1.12	0.19	0.19	C52
Cervix uteri	5,513	0.00	0.00	0.00	0.05	1.88	5.67	10.81	14.70	25.30	31.67	31.84	31.92	28.69	34.12	33.35	23.39	16.54	11.73	C53
Corpus uteri	2,194	0.00	0.00	0.02	0.10	0.12	0.34	1.80	2.83	3.91	7.78	15.38	20.32	21.26	19.21	16.16	8.84	6.58	4.53	C54
Uterus unspecified	220	0.00	0.00	0.09	0.00	1.12	0.08	0.08	0.27	0.48	1.03	1.60	1.11	1.91	1.40	0.81	1.10	0.66	0.49	C55
Ovary	2,547	0.42	0.24	1.47	1.29	1.78	4.16	5.41	4.41	8.29	12.60	16.88	15.82	17.60	15.59	9.99	9.28	7.64	5.68	C56
Other female genital organs	52	0.07	0.00	0.00	0.05	0.00	0.00	0.10	0.09	0.09	0.12	0.37	0.45	0.42	0.38	0.55	0.17	0.16	0.12	C57
Plecenta	75	0.00	0.00	0.00	0.31	1.17	0.40	0.35	0.06	0.26	0.28	0.30	0.00	0.00	0.00	0.03	0.00	0.23	0.23	C58
Penis	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C60
Prostate	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C61
Testis	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C62
Other male genital organs	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C63
Kidney	312	0.46	0.03	0.00	0.11	0.09	0.09	0.13	0.14	0.31	0.86	1.53	2.17	1.95	2.84	4.61	3.69	0.94	0.66	C64
Renal pelvis	25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.11	0.12	0.24	0.34	0.20	0.49	0.07	0.05	C65
Ureter	37	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.04	0.00	0.10	0.06	0.06	0.48	0.42	0.54	0.70	0.11	0.07	C66
Bladder	542	0.00	0.00	0.00	0.00	0.05	0.02	0.15	0.13	1.10	1.30	1.05	2.42	3.49	5.44	9.06	11.22	1.63	1.02	C67
Other urinary organs	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.39	0.11	0.00	0.00	0.06	0.06	0.03	C68
Eye	164	1.48	0.02	0.00	0.00	2.28	0.04	0.05	0.06	0.45	0.30	0.61	0.60	0.34	0.43	0.46	1.06	0.49	0.53	C69
Brain, nervous system	1,150	1.57	2.42	1.94	0.49	1.41	1.85	2.79	2.87	2.41	3.96	5.43	4.74	7.04	8.41	6.94	6.18	3.45	2.89	C70-72
Thyroid	2,332	0.00	0.00	0.76	1.93	8.41	7.40	7.95	9.17	7.96	9.98	9.25	10.75	10.16	11.20	10.14	6.94	7.00	5.59	C73
Adrenal gland	54	0.59	0.21	0.00	0.06	0.00	0.47	0.14	0.13	0.04	0.10	0.27	0.17	0.15	0.18	0.15	0.03	0.16	0.19	C74
Other endocrine	39	0.11	0.00	0.42	0.00	0.04	0.09	0.00	0.35	0.04	0.06	0.05	0.08	0.46	0.10	0.00	0.08	0.12	0.12	C75
Hodgkin disease	101	0.00	0.07	0.30	0.42	0.59	0.35	0.26	0.30	0.22	0.06	0.24	0.29	0.44	0.77	0.46	0.45	0.30	0.28	C81
Non-Hodgkin lymphoma	2,047	0.75	0.23	0.85	0.87	3.26	2.37	2.70	4.06	5.19	4.80	6.06	12.18	13.72	19.51	22.19	19.71	6.14	4.48	C82-85,C96
Multiple myeloma	396	0.00	0.00	0.00	0.00	0.21	0.03	0.03	0.03	0.32	1.33	1.58	1.91	3.60	1.92	7.26	3.60	1.19	0.81	C90
Lymphoid leukemia	319	3.04	2.78	2.29	0.45	0.12	0.23	0.33	0.12	0.54	0.27	0.40	0.69	1.60	1.37	2.10	1.34	0.96	1.22	C91
Myeloid leukemia	675	1.30	0.56	0.34	0.79	0.76	1.67	1.67	1.25	1.61	1.78	2.58	2.67	4.52	5.82	5.27	4.50	2.03	1.67	C92-94
Leukemia unspecified	376	0.68	0.85	0.47	0.45	0.29	0.31	0.94	0.73	0.53	0.88	1.15	1.59	1.74	2.83	3.68	4.44	1.13	0.92	C95
Myelodysplastic disease	359	0.29	0.00	0.00	0.00	0.14	0.15	0.14	0.14	0.56	0.35	0.78	1.63	2.68	4.83	5.89	6.28	1.08	0.73	D45-D47
Other and unspecified	2,022	0.67	0.30	0.30	0.19	1.51	0.44	2.18	1.53	3.40	4.70	5.63	11.87	15.16	22.21	29.62	26.38	6.07	4.17	O&U
<b>All sites</b>	<b>63,095</b>	<b>13.95</b>	<b>9.45</b>	<b>12.79</b>	<b>10.50</b>	<b>50.01</b>	<b>45.45</b>	<b>79.92</b>	<b>105.50</b>	<b>167.29</b>	<b>226.64</b>	<b>291.35</b>	<b>370.40</b>	<b>457.01</b>	<b>549.76</b>	<b>612.51</b>	<b>531.75</b>	<b>189.33</b>	<b>134.15</b>	<b>ALL</b>

## **Chapter III**

Chiang Mai Cancer Registry

Lampang Cancer Registry

Lamphun 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

Songkhla Cancer Registry

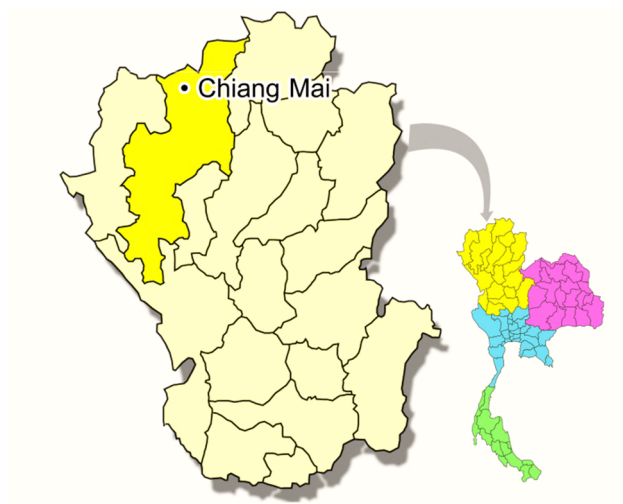
Surat Thani Cancer Registry

## Chiang Mai Cancer Registry

### Registration area

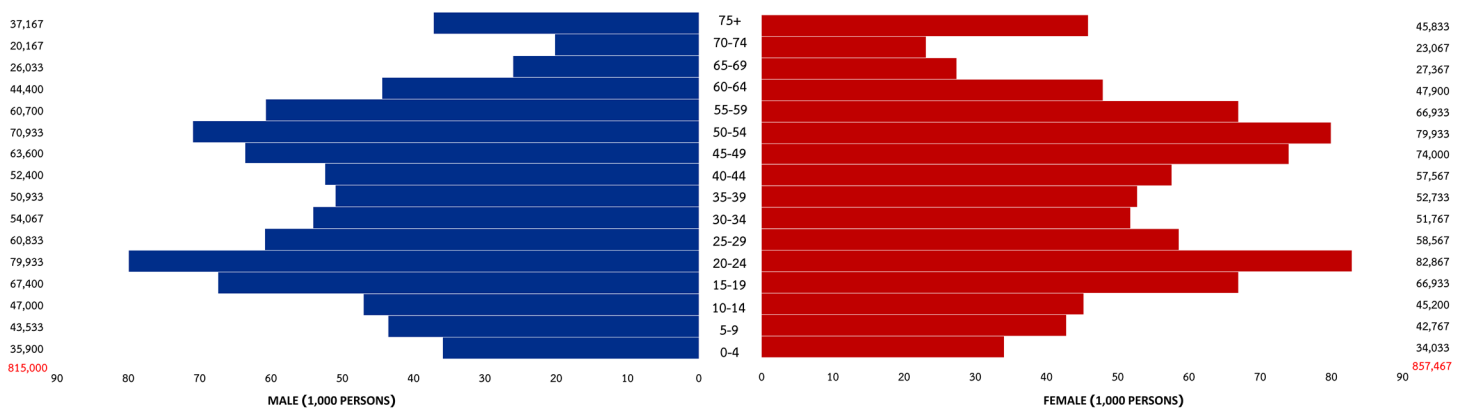
Chiang Mai province is the second largest in Thailand, famous for its situation in the mountainous upper part of the north of Thailand. It is 310 meters above sea level at latitude 16-18 N and longitude 99 E. To the north of Chiang Mai is the country of Myanmar. The land area is 20,107 square kilometers, divided into 25 districts. In the year 2014 the population of Chiang Mai was 1,672,467 of which 857,467 were females and 815,000 were males (Nation Statistics Office, Thailand, 2014). The most crowded district was Mueang district. The population is mainly Thai, but others include Chinese, and hill tribe minority groups.

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



Population pyramid, Chiang Mai

estimated population in 2014 (average 2013-2015)



### **Cancer care facilities**

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

### **Registry procedures**

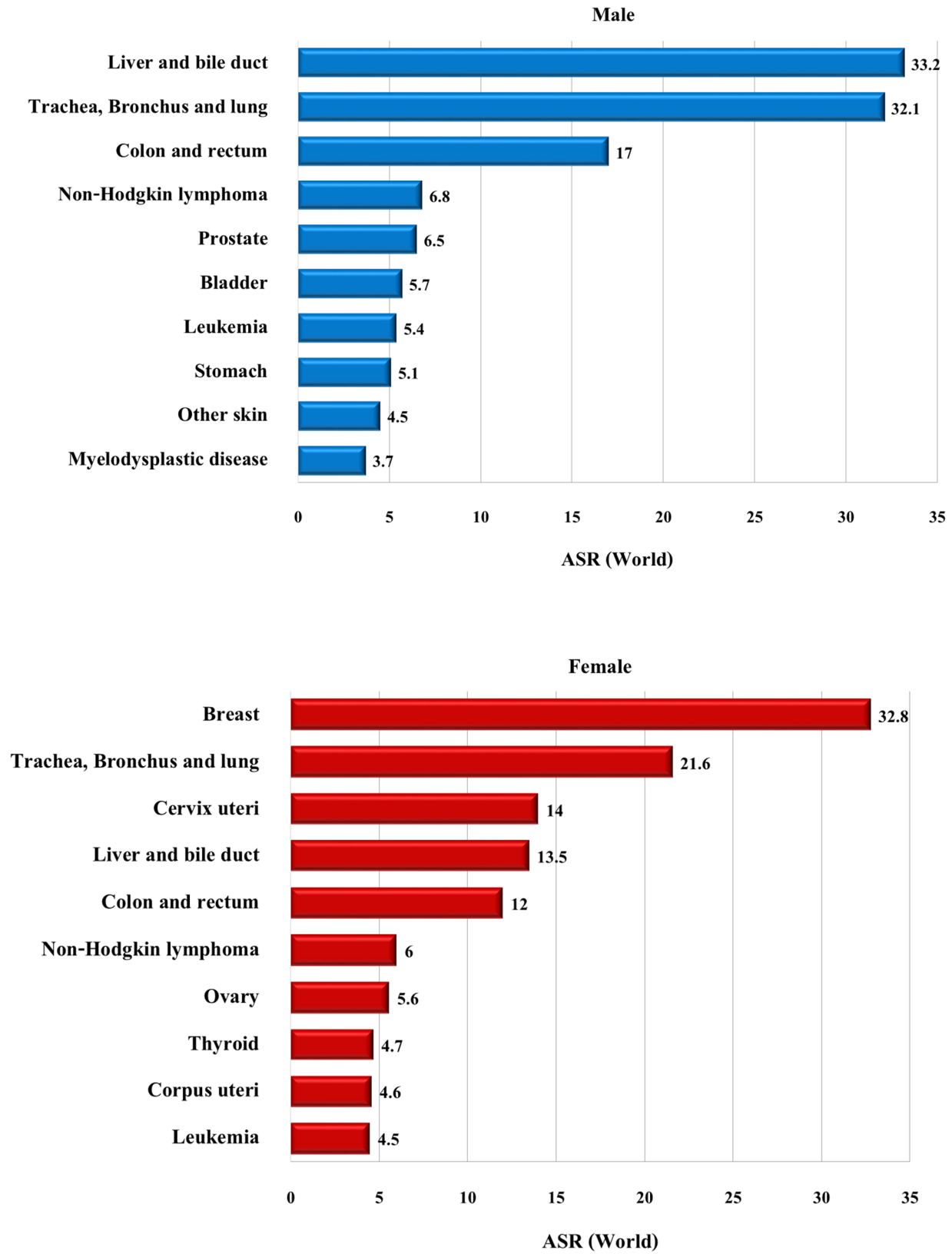
The cancer unit, Faculty of Medicine, Chiang Mai University has been maintaining a hospital-based cancer registry since 1963. Data on cancer patients are now collected actively from every hospital in Chiang Mai. The data of Chiang Mai residents are extracted from the hospital based cancer registry of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

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

### **Summary of results**

New cases registered in 2014, 1,841 were males and 1,998 were females, making 3,839 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 155.6 per 100,000, with liver and bile duct cancer ranking first (ASR = 33.2) followed by lung (ASR = 32.1), and colon and rectum (ASR = 17.0). The ASR of all sites in females was lower than males (ASR = 154.3), the three leading cancers being breast (ASR = 32.8), lung (ASR = 21.6) and cervix (ASR = 14.0).

**Figure 3.1** Leading cancer in Chiang Mai (mean annual ASR 2013-2015)



**Table 3.1.1 Chiang Mai (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Male**

Site	No.Cases Year	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74	
Lip	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.8	1.3	0.0	1.8	0.2	0.1	C00	0.0	0.0
Tongue	18	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.7	2.5	2.1	5.2	4.9	5.3	6.4	6.6	7.2	2.2	1.5	C01-C02	0.1	0.2	
Mouth	18	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	2.5	0.5	4.2	3.3	3.8	7.7	13.2	12.6	2.2	1.5	C03-C06	0.0	0.2	
Salivary glands	5	0.0	0.0	0.0	0.5	0.4	0.0	0.6	0.0	0.5	1.6	1.5	1.6	1.5	0.0	1.7	2.7	0.6	0.4	C07-C08	0.0	0.0	
Tonsil	11	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	2.5	1.0	3.3	2.2	2.3	5.1	6.6	1.8	1.3	1.0	C09	0.1	0.1	
Other oropharynx	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	2.8	0.0	0.8	0.0	3.3	5.4	0.7	0.4	C10	0.0	0.0	
Nasopharynx	27	0.0	0.0	0.0	0.5	0.4	0.5	2.5	3.3	1.9	2.6	8.0	4.5	10.5	10.2	9.9	4.5	3.3	2.4	C11	0.2	0.3	
Hypopharynx	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.8	2.7	3.8	6.4	6.6	6.6	3.6	3.6	1.3	0.9	C12-C13	0.1	0.1	
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14	0.0	0.0	
Oesophagus	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	2.1	3.8	6.6	9.8	14.1	6.6	7.2	2.5	1.7	C15	0.1	0.2	
Stomach	63	0.0	0.0	0.0	0.4	0.5	1.2	2.6	4.5	5.2	11.3	19.2	18.8	26.9	24.8	39.5	7.7	5.1	C16	0.3	0.6		
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	1.1	0.8	0.0	3.3	0.0	0.3	0.2	C17	0.0	0.0	
Colon	107	0.0	0.8	0.0	1.5	0.0	1.1	1.8	4.6	4.5	6.3	18.8	23.1	39.0	52.5	61.2	67.3	13.2	8.9	C18	0.5	1.1	
Rectum	91	0.0	0.0	0.0	0.0	0.0	3.8	1.8	3.3	5.1	6.3	15.0	22.0	33.0	47.4	43.0	52.0	11.1	7.6	C19-C20	0.5	0.9	
Anus	6	0.0	0.0	0.0	0.0	0.4	0.0	0.6	0.0	0.6	1.6	0.9	0.5	2.3	0.0	5.0	1.8	0.7	0.5	C21	0.0	0.1	
Liver and bile duct	397	0.9	0.0	0.0	0.0	0.8	4.9	7.4	19.6	28.6	50.8	81.8	121.9	147.9	169.0	153.7	158.7	48.7	33.2	C22-C24	2.3	3.9	
Gallbladder	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.9	2.6	5.6	7.7	8.3	14.1	13.2	20.6	3.6	2.4	C25	0.1	0.1	
Pancreas	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	3.3	0.0	1.5	2.6	0.0	0.6	0.4	C30-C31	0.0	0.1	
Nose, sinuses etc.	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	3.1	3.8	6.0	6.0	6.8	5.1	5.0	14.3	2.4	1.5	C32	0.1	0.2
Larynx	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C33-C34	1.6	4.1	
Trachea, Bronchus and lung	393	0.0	0.0	0.0	0.5	0.4	0.5	3.1	5.2	14.0	23.1	40.4	89.0	141.9	221.5	289.3	278.9	48.2	32.1	C37-C38	0.0	0.0	
Other thoracic organs	4	0.9	0.0	0.0	1.5	0.4	0.5	0.0	0.7	0.6	0.5	0.5	0.0	0.8	0.0	1.7	0.0	0.4	0.5	C40-C41	0.0	0.1	
Bone	6	0.0	0.8	0.7	1.0	0.4	1.1	0.0	0.7	0.0	1.6	0.0	0.0	3.0	2.6	5.0	0.9	0.7	0.5	C43	0.0	0.1	
Melanoma of skin	5	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0	
Other skin	60	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.3	1.9	2.1	7.5	11.5	14.3	26.9	23.1	69.1	7.3	4.5	C46	0.0	0.0	
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	C47,C49	0.1	0.1	
Kaposi's sarcoma	3	0.0	0.0	0.0	0.5	0.0	1.1	1.2	0.7	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.3	0.3	C48	0.0	0.0	
Connective tissue	9	0.0	0.8	0.0	0.5	0.4	0.5	1.2	1.3	1.3	1.0	0.9	2.2	1.5	2.6	1.7	3.6	1.1	0.9	C49	0.1	0.1	
Breast	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.2	1.0	0.9	2.2	1.5	2.6	1.7	4.5	1.0	0.7	C50	0.0	0.1	
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0	
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0	
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0	
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0	
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0	
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0	
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0	
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0	
Penis	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5	2.6	2.3	3.3	1.5	9.0	6.6	5.4	1.7	1.2	C60	0.1	0.1	
Prostate	87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	3.8	13.7	22.5	42.3	66.1	111.2	10.7	6.5	C61	0.2	0.7	
Testis	3	0.0	0.0	0.0	0.0	0.4	1.1	0.6	0.7	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.3	0.3	C62	0.0	0.0	
Kidney	28	0.9	0.8	0.0	0.0	0.0	0.0	1.2	0.7	0.6	3.1	3.3	7.7	17.3	12.8	11.6	9.9	3.4	2.5	C64	0.2	0.3	
Renal pelvis	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.5	2.6	6.6	6.9	0.4	0.3	C65	0.0	0.1	
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.8	0.0	0.9	0.2	0.1	C66	0.0	0.0	
Bladder	69	0.0	0.0	0.7	0.0	0.0	0.0	1.2	0.7	1.9	6.3	5.6	16.5	24.0	38.4	46.3	50.2	8.5	5.7	C67	0.3	0.7	
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.7	0.9	0.1	C68	0.0	0.0	
Eye	4	4.6	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	2.6	3.3	1.8	0.5	0.8	C69	0.0	0.1	
Brain, nervous system	22	3.7	1.5	1.4	1.0	0.4	2.2	2.5	2.0	2.8	6.6	5.3	9.0	5.0	6.3	2.7	2.5	2.1	1.6	C70-C72	0.2	0.2	
Thyroid	17	0.0	0.0	0.0	0.5	0.8	0.5	1.2	3.3	4.5	2.6	0.9	1.1	0.8	6.4	11.6	9.9	2.1	1.6	C73	0.1	0.2	
Adrenal gland	2	0.9	0.8	0.0	0.0	0.0	0.0	0.6	0.7	0.0	0.0	0.5	0.0	0.0	1.3	0.0	0.0	0.2	0.3	C74	0.0	0.0	
Other endocrine	2	0.0	0.0	0.7	0.5	0.8	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.2	0.2	C75	0.0	0.0	
Hodgkin disease	9	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.7	0.6	2.1	1.9	1.1	0.8	6.4	5.0	2.7	1.1	0.8	C81	0.1	0.1	
Non-Hodgkin lymphoma	78	1.9	0.0	0.7	3.0	3.8	1.6	1.8	7.9	7.0	5.2	11.7	17.0	19.5	26.9	39.7	43.9	9.5	6.8	C82-C85	0.4	0.7	
Multiple myeloma	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	6.6	4.5	6.4	6.6	5.4	1.6	1.0	C90	0.1	0.1	
Lymphoid leukemia	11	3.7	2.3	2.8	2.5	0.6	0.5	0.6	0.0	1.9	0.5	1.6	1.5	0.0	1.7	4.5	1.4	1.7	1.7	C91	0.1	0.1	
Myeloid leukemia	36	3.7	0.8	2.1	2.0	1.3	2.7	3.7	2.0	0.6	4.2	5.6	4.4	6.8	6.4	13.2	25.1	4.4	3.5	C92-C94	0.2	0.3	
Leukemia unspecified	1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.9	0.2	0.2	C95	0.0	0.0	
Myelodysplastic disease	43	1.9	0.0	0.0	0.0	0.4	1.1	1.8	0.7	3.2	5.8	4.7	6.6	12.0	21.8	21.5	31.4	5.2	3.7	D45-D47	0.2	0.4	
Other and unspecified	60	0.0	0.0	0.0	0.5	0.8	1.1	3.1	0.7	3.8	4.7	8.0	13.2	19.5	35.9	23.1	41.3	7.4	5.0	O&U	0.3	0.6	
All sites	1,841	24.1	8.4	9.9	17.8	12.9	27.9	43.2	66.8	108.1	160.9	280.5	439.9	605.1	864.3	960.3	1117.5	225.9	155.6	ALL	9.0	18.2	

**Table 3.1.2** Chiang Mai (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	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	0.7	0.0	4.3	3.6	0.3	0.2	C00	0.0	0.0
Tongue	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.9	1.7	3.0	2.1	3.7	2.9	3.6	1.0	0.7	C01-C02	0.0	0.1
Mouth	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.5	1.0	3.5	0.0	4.3	9.5	1.2	0.6	C03-C06	0.0	0.1
Salivary_glands	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	0.5	0.4	0.5	0.7	1.2	2.9	1.5	0.3	0.3	C07-C08	0.0	0.0
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	2.2	0.2	0.1	C09	0.0	0.0
Other_opharynx	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	2.2	0.2	0.1	C10	0.0	0.0
Nasopharynx	17	0.0	0.0	0.5	0.0	0.6	0.6	1.9	1.2	5.0	3.8	3.5	6.3	2.4	1.4	2.2	1.9	1.3	0.1	C11	0.1	0.1
Hypopharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	C12-C13	0.0	0.0
Pharynx_unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14	0.0	0.0
Oesophagus	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	3.7	0.5	0.7	3.7	2.9	5.1	0.6	0.3	C15	0.0	0.0
Stomach	56	0.0	0.0	0.0	0.0	1.1	2.6	5.1	4.6	5.0	9.2	11.5	14.6	20.7	24.6	17.5	25.5	6.6	4.3	C16	0.3	0.5
Small_intestine	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	0.5	0.7	1.2	1.4	2.2	0.4	0.3	0.3	C17	0.0	0.0
Colon	99	0.0	0.0	0.7	1.0	0.8	0.6	1.9	3.8	4.1	9.0	15.0	24.9	23.7	35.3	36.1	58.9	11.5	7.0	C18	0.4	0.8
Rectum	67	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.2	4.6	4.5	7.9	20.9	17.4	30.5	23.1	34.2	7.8	4.8	C19-C20	0.3	0.6
Anus	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.8	2.0	1.4	0.0	0.0	0.0	1.5	0.0	0.2	C21	0.0	0.0
Liver_and_bile_duct	187	0.0	0.0	0.0	0.5	0.4	0.0	2.6	3.2	6.4	16.2	23.4	40.3	69.6	78.0	86.7	103.3	21.8	13.5	C22-C24	0.8	1.6
Gallbladder	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	2.1	2.0	4.9	7.3	11.6	13.1	1.9	1.1	C25	0.0	0.1
Pancreas	31	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	1.8	5.0	6.5	7.0	19.5	15.9	17.5	3.6	2.3	C23	0.0	0.1	
Nose,_sinuses_etc.	5	0.0	0.8	0.0	0.0	0.4	0.0	0.0	0.0	0.6	0.9	0.4	0.5	2.1	2.4	1.4	2.2	0.6	0.5	C30-C31	0.0	0.0
Larynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.7	1.2	1.4	2.2	0.3	0.2	C32	0.0	0.0
Trachea,_Bronchus_and_lung	300	0.0	0.0	0.0	0.5	0.8	1.1	1.3	3.2	8.1	16.2	25.9	45.8	103.7	168.1	159.0	208.7	35.0	21.6	C33-C34	1.0	2.7
Other_thoracic_organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.1	0.1	C37-C38	0.0	0.0
Bone	6	0.0	0.8	2.9	0.5	0.4	0.0	0.6	1.9	0.0	0.5	0.8	0.5	0.7	1.2	0.0	1.5	0.7	0.8	C40-C41	0.0	0.1
Melanoma_of_skin	7	0.0	0.0	0.0	0.0	0.4	0.6	0.0	0.0	0.0	1.8	1.3	1.0	1.4	1.2	0.0	3.6	0.8	0.5	C43	0.0	0.0
Other_skin	64	0.0	0.0	0.0	0.0	0.0	1.1	1.3	3.2	0.6	2.3	4.6	10.0	12.5	19.5	20.2	71.3	7.5	4.1	C44	0.2	0.4
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's_sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective_tissue	11	2.0	0.8	1.0	1.0	0.8	1.1	1.9	0.6	1.2	0.5	1.3	2.5	1.4	3.7	1.4	2.9	1.3	1.2	C47-C49	0.1	0.1
Breast	420	0.0	0.0	0.0	0.0	0.4	3.4	16.1	42.4	57.9	87.8	100.1	114.5	111.3	108.4	86.7	63.3	49.0	32.8	C50	2.7	3.6
Vulva	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	1.4	1.7	1.5	2.1	2.4	4.3	5.8	1.1	0.7	C51	0.0	0.1
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.7	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix_uteri	173	0.0	0.0	0.0	0.0	0.0	1.2	6.8	14.2	25.3	30.7	33.8	43.0	41.3	29.2	43.4	25.5	20.2	14.0	C53	1.1	1.5
Corpus_uteri	61	0.0	0.0	0.0	0.0	0.0	1.1	1.9	4.4	3.5	5.4	14.2	25.9	18.8	21.9	14.5	8.0	7.1	4.6	C54	0.4	0.6
Uterus_unspecified	4	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.3	0.5	1.7	0.0	1.4	1.2	0.0	1.5	0.5	0.3	C55	0.0	0.0
Ovary	67	1.0	0.0	1.5	1.0	2.0	3.4	3.9	4.4	10.4	11.7	15.0	14.9	20.2	14.6	10.1	9.5	7.8	5.6	C56	0.4	0.6
Other_female_genital_organs	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.8	1.0	1.4	1.2	0.0	0.7	0.3	0.2	C57	0.0	0.0
Placenta	1	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	0.0	0.0	0.0	0.1	0.1	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Kidney	14	1.0	0.0	0.0	0.0	0.0	1.1	0.0	0.6	0.0	1.4	0.8	3.0	2.8	4.9	8.7	9.5	1.6	1.1	C64	0.1	0.1
Renal_pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.7	0.0	0.0	0.0	0.1	0.1	C65	0.0	0.0
Ureter	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.7	1.2	1.4	2.9	0.3	0.2	C66	0.0	0.0
Bladder	28	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.5	0.8	4.5	8.4	11.0	23.1	23.3	3.2	1.9	C67	0.1	0.2
Other_urinary_organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.1	0.0	C68	0.0	0.0
Eye	2	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	0.0	0.0	0.2	0.1	C69	0.0	0.0
Brain,_nervous_system	20	2.9	4.7	0.7	0.5	0.0	0.0	1.3	2.5	0.6	1.8	1.7	2.5	3.5	12.2	4.3	8.0	2.3	2.2	C70-C72	0.1	0.2
Thyroid	52	0.0	0.0	0.0	2.5	4.0	6.3	7.7	11.4	8.1	5.0	4.2	11.0	14.6	4.9	8.7	9.5	6.1	4.7	C73	0.4	0.4
Adrenal_gland	1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	1.4	0.0	0.2	0.2	C74	0.0	0.0
Other_endocrine	1	1.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	C75	0.0	0.0
Hodgkin_disease	4	0.0	0.0	0.7	0.5	1.2	0.0	0.6	0.6	0.6	0.0	1.3	0.0	0.7	1.2	0.0	0.0	0.5	0.4	C81	0.0	0.0
Non-Hodgkin_lymphoma	74	2.0	0.8	0.0	1.5	1.6	1.1	4.5	3.2	7.5	5.0	8.8	14.4	23.7	32.9	27.5	32.0	8.6	6.0	C82-C85	0.4	0.7
Multiple_myeloma	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.4	0.8	3.5	2.8	6.1	7.2	5.8	1.4	0.9	C90	0.0	0.1
Lymphoid_leukemia	10	5.9	1.6	1.5	0.0	0.0	0.6	1.3	0.0	1.2	0.0	0.4	1.0	4.2	3.7	2.9	0.7	1.2	1.6	C91	0.1	0.1
Myeloid_leukemia	27	4.9	0.0	0.0	2.0	0.8	1.1	1.9	2.5	2.9	3.2	4.6	3.0	7.0	8.5	4.3	8.0	3.1	2.7	C92-C94	0.2	0.2
Leukemia_unspecified	2	0.0	0.0	0.0	0.0	0.4	0.6	0.0	1.3	0.0	0.5	0.4	0.0	0.7	0.0	0.0	0.0	0.3	0.2	C95	0.0	0.0
Myelodysplastic_disease	46	2.9	0.0	0.0	0.0	1.2	1.1	1.3	1.3	3.5	1.4	1.7	8.0	13.2	18.3	18.8	36.4	5.4	3.6	D45-D47	0.2	0.4
Other_and_unspecified	50	0.0	0.0	0.0	0.0	0.4	1.7	0.6	1.3	0.0	5.4	5.4	7.5	9.0	29.2	27.5	34.2	5.8	3.6	O&U	0.2	0.4
<b>All sites</b>	<b>1,998</b>	<b>24.5</b>	<b>9.4</b>	<b>8.1</b>	<b>12.5</b>	<b>17.7</b>	<b>37.0</b>	<b>72.8</b>	<b>130.2</b>	<b>165.0</b>	<b>234.2</b>	<b>316.5</b>	<b>436.3</b>	<b>551.8</b>	<b>713.8</b>	<b>698.0</b>	<b>866.9</b>	<b>233.1</b>	<b>154.3</b>	<b>ALL</b>	<b>10.1</b>	<b>17.1</b>

**Table 3.1.3** Mean annual incidence, Chiang Mai, 2013-2015

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	
Lip	2	0.1	0.2	0.1	0.0	0.0	3	0.2	0.3	0.2	0.0	0.0	C00
Tongue	18	1.0	2.2	1.5	0.1	0.2	9	0.5	1.0	0.7	0.0	0.1	C01-02
Mouth	18	1.0	2.2	1.5	0.1	0.2	10	0.5	1.2	0.6	0.0	0.1	C03-06
Salivary glands	5	0.3	0.6	0.4	0.0	0.0	4	0.2	0.5	0.3	0.0	0.0	C07-08
Tonsil	11	0.6	1.3	1.0	0.1	0.1	1	0.1	0.2	0.1	0.0	0.0	C09
Other oropharynx	5	0.3	0.7	0.4	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C10
Nasopharynx	27	1.4	3.3	2.4	0.2	0.3	17	0.8	1.9	1.3	0.1	0.1	C11
Hypopharynx	11	0.6	1.3	0.9	0.1	0.1	1	0.1	0.2	0.1	0.0	0.0	C12-13
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	21	1.1	2.5	1.7	0.1	0.2	5	0.3	0.6	0.3	0.0	0.0	C15
Stomach	63	3.4	7.7	5.1	0.3	0.6	56	2.8	6.6	4.3	0.3	0.5	C16
Small intestine	3	0.1	0.3	0.2	0.0	0.0	4	0.2	0.4	0.3	0.0	0.0	C17
Colon	107	5.8	13.2	8.9	0.5	1.1	99	5.0	11.5	7.0	0.4	0.8	C18
Rectum	91	4.9	11.1	7.6	0.5	0.9	67	3.3	7.8	4.8	0.3	0.6	C19-20
Anus	6	0.3	0.7	0.5	0.0	0.1	4	0.2	0.4	0.2	0.0	0.0	C21
Liver and bile duct	397	21.6	48.7	33.2	2.3	3.9	187	9.4	21.8	13.5	0.8	1.6	C22,C24
Gallbladder	11	0.6	1.3	0.9	0.1	0.1	16	0.8	1.9	1.1	0.0	0.1	C23
Pancreas	30	1.6	3.6	2.4	0.1	0.3	31	1.6	3.6	2.3	0.1	0.3	C25
Nose, sinuses etc.	5	0.3	0.6	0.4	0.0	0.1	5	0.3	0.6	0.5	0.0	0.0	C30-31
Larynx	20	1.1	2.4	1.5	0.1	0.2	2	0.1	0.3	0.2	0.0	0.0	C32
Trachea, Bronchus and lung	393	21.3	48.2	32.1	1.6	4.1	300	15.0	35.0	21.6	1.0	2.7	C33-34
Other thoracic organs	4	0.2	0.4	0.5	0.0	0.0	1	0.0	0.1	0.1	0.0	0.0	C37-38
Bone	6	0.3	0.7	0.7	0.0	0.1	6	0.3	0.7	0.8	0.0	0.1	C40-C41
Melanoma of skin	5	0.3	0.7	0.5	0.0	0.1	7	0.3	0.8	0.5	0.0	0.0	C43
Other skin	60	3.2	7.3	4.5	0.2	0.4	64	3.2	7.5	4.1	0.2	0.4	C44
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C45
Kaposi's sarcoma	3	0.1	0.3	0.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	9	0.5	1.1	0.9	0.1	0.1	11	0.6	1.3	1.2	0.1	0.1	C47,C49
Breast	8	0.4	1.0	0.7	0.0	0.1	420	21.0	49.0	32.8	2.7	3.6	C50
Vulva							10	0.5	1.1	0.7	0.0	0.1	C51
Vagina							1	0.0	0.1	0.0	0.0	0.0	C52
Cervix uteri							173	8.7	20.2	14.0	1.1	1.5	C53
Corpus uteri							61	3.0	7.1	4.6	0.4	0.6	C54
Uterus unspecified							4	0.2	0.5	0.3	0.0	0.0	C55
Ovary							67	3.3	7.8	5.6	0.4	0.6	C56
Other female genital organs							3	0.2	0.3	0.2	0.0	0.0	C57
Placenta							1	0.0	0.1	0.1	0.0	0.0	C58
Penis	14	0.7	1.7	1.2	0.1	0.1							C60
Prostate	87	4.7	10.7	6.5	0.2	0.7							C61
Testis	3	0.1	0.3	0.3	0.0	0.0							C62
Kidney	28	1.5	3.4	2.5	0.2	0.3	14	0.7	1.6	1.1	0.1	0.1	C64
Renal pelvis	4	0.2	0.4	0.3	0.0	0.1	1	0.1	0.1	0.1	0.0	0.0	C65
Ureter	1	0.1	0.2	0.1	0.0	0.0	3	0.1	0.3	0.2	0.0	0.0	C66
Bladder	69	3.7	8.5	5.7	0.3	0.7	28	1.4	3.2	1.9	0.1	0.2	C67
Other urinary organs	1	0.1	0.1	0.1	0.0	0.0	1	0.0	0.1	0.0	0.0	0.0	C68
Eye	4	0.2	0.5	0.8	0.0	0.1	2	0.1	0.2	0.1	0.0	0.0	C69
Brain, nervous system	22	1.2	2.7	2.5	0.2	0.2	20	1.0	2.3	2.2	0.1	0.2	C70-72
Thyroid	17	0.9	2.1	1.6	0.1	0.2	52	2.6	6.1	4.7	0.4	0.4	C73
Adrenal gland	2	0.1	0.2	0.3	0.0	0.0	1	0.1	0.2	0.2	0.0	0.0	C74
Other endocrine	2	0.1	0.2	0.2	0.0	0.0	1	0.1	0.1	0.2	0.0	0.0	C75
Hodgkin disease	9	0.5	1.1	0.8	0.0	0.1	4	0.2	0.5	0.4	0.0	0.0	C81
Non-Hodgkin lymphoma	78	4.2	9.5	6.8	0.4	0.7	74	3.7	8.6	6.0	0.4	0.7	C82-85,C96
Multiple myeloma	13	0.7	1.6	1.0	0.1	0.1	12	0.6	1.4	0.9	0.0	0.1	C90
Lymphoid leukemia	11	0.6	1.4	1.7	0.1	0.1	10	0.5	1.2	1.6	0.1	0.1	C91
Myeloid leukemia	36	2.0	4.4	3.5	0.2	0.3	27	1.3	3.1	2.7	0.2	0.2	C92-94
Leukemia unspecified	1	0.1	0.2	0.2	0.0	0.0	2	0.1	0.3	0.2	0.0	0.0	C95
Myelodysplastic disease	43	2.3	5.2	3.7	0.2	0.4	46	2.3	5.4	3.6	0.2	0.4	D45-D47
Other and unspecified	60	3.3	7.4	5.0	0.3	0.6	50	2.5	5.8	3.6	0.2	0.4	O&U
<b>All sites</b>	<b>1,841</b>	<b>100.0</b>	<b>225.9</b>	<b>155.6</b>	<b>9.0</b>	<b>18.2</b>	<b>1,998</b>	<b>100.0</b>	<b>233.1</b>	<b>154.3</b>	<b>10.1</b>	<b>17.1</b>	<b>ALL</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	128	96.1	0.0	78	97.4	1.3	C00-C08
Oropharynx	49	95.9	0.0	8	87.5	0.0	C09-C10,C14
Nasopharynx	80	96.3	0.0	50	98.0	0.0	C11
Hypopharynx	32	96.9	0.0	4	100.0	0.0	C12-C13
Esophagus	62	93.5	0.0	15	93.3	0.0	C15
Stomach	189	92.1	1.1	169	87.0	3.6	C16
Small intestine	8	100.0	0.0	11	81.8	0.0	C17
Colon and rectum	611	87.7	0.2	508	90.9	0.4	C18-C21
Liver and bile duct	1,191	17.0	1.5	561	23.7	2.7	C22,C24
Gallbladder	33	33.3	3.0	49	46.9	2.0	C23
pancrease	89	33.7	0.0	93	38.7	0.0	C25
Nose,sinuses etc	15	93.3	0.0	16	100.0	0.0	C30-C31
Larynx	59	93.2	1.7	7	57.1	0.0	C32
Trachea, brochus and lung	1,178	60.0	2.5	900	57.0	2.0	C33-C34
Other thoracic organs	11	90.9	0.0	2	100.0	0.0	C37-C38
Bone	17	70.6	11.8	19	89.5	5.3	C40-C41
Melanoma of skin	16	100.0	0.0	20	100.0	0.0	C43
Other skin	179	97.8	0.6	192	100.0	0.0	C44
Mesothelioma	1	100.0	0.0	1	100.0	0.0	C45
Kaposi sarcoma	8	100.0	0.0	1	100.0	0.0	C46
Connective and soft tissue	27	92.6	0.0	34	94.1	0.0	C47,C49
Breast	24	100.0	0.0	1,260	98.4	0.5	C50
Vulva				29	96.6	0.0	C51
Vagina				2	100.0	0.0	C52
Cervix uteri				519	99.0	0.2	C53
Corpus uteri				182	98.9	0.0	C54
Uterus unspecified				12	75.0	8.3	C55
Ovary				200	91.0	1.5	C56
Other female genital organs				9	100.0	0.0	C57
Placenta				2	100.0	0.0	C58
Penis	41	97.6	0.0				C60
Prostate	262	82.1	0.4				C61
Testis	8	75.0	0.0				C62
Other male genital organs	0	0.0	0.0				C63
Kidney	84	77.4	1.2	42	71.4	0.0	C64
Renal pelvis	11	81.8	0.0	3	66.7	0.0	C65
Ureter	4	75.0	0.0	8	87.5	0.0	C66
Bladder	207	89.4	0.5	83	85.5	2.4	C67
Other urinary organs	3	100.0	0.0	2	100.0	0.0	C68
Eye	13	92.3	0.0	5	100.0	0.0	C69
Brain, nervous system	67	71.6	3.0	60	60.0	0.0	C70-C72
Thyroid	51	98.0	0.0	157	94.9	0.6	C73
Adrenal gland	6	66.7	0.0	4	100.0	0.0	C74
Other endocrine	6	100.0	0.0	3	100.0	0.0	C75
Hodgkin disease	27	100.0	0.0	13	100.0	0.0	C81
Non-Hodgkin lymphoma	233	100.0	0.0	222	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	39	100.0	0.0	35	100.0	0.0	C90
Leukemia	146	100.0	0.0	117	100.0	0.0	C91-C95
Myelodysplastic	128	100.0	0.0	138	100.0	0.0	D45-D47
Other and unspecified	181	63.5	6.6	150	56.0	8.0	O&U
<b>All site</b>	<b>5,524</b>	<b>66.6</b>	<b>1.3</b>	<b>5,995</b>	<b>80.8</b>	<b>1.2</b>	<b>All</b>
<b>All site without liver</b>	<b>4,333</b>	<b>80.2</b>	<b>1.2</b>	<b>5,434</b>	<b>86.7</b>	<b>1.0</b>	<b>All</b>

# Lampang Cancer Registry

## Registration area

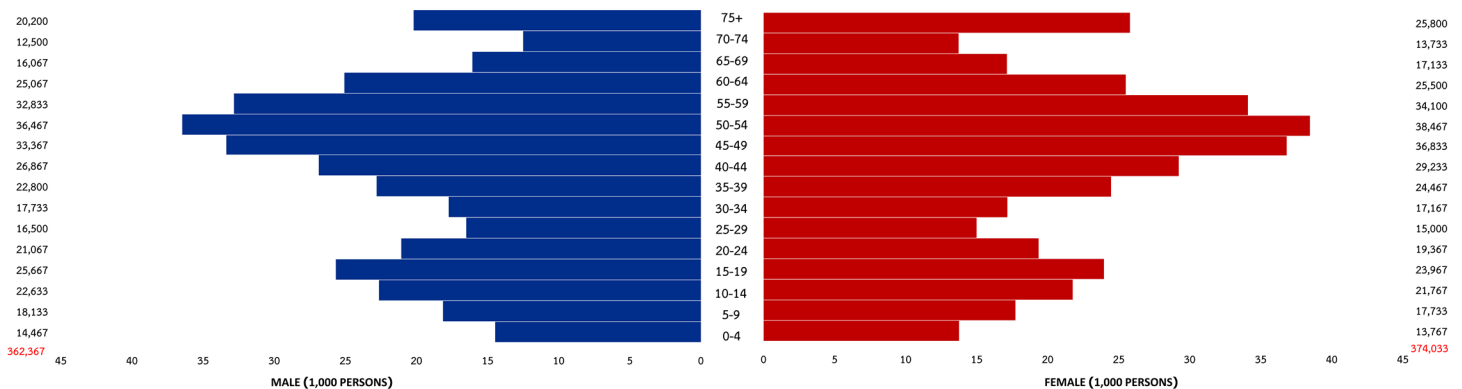
Lampang is one of the 17 provinces of the Northern region of Thailand, located at latitude 17-19 °N and longitude 98-100 °E. It is 268.8 meters above sea level with a land area of 12,534 km<sup>2</sup>. It has common boundary with Chiang Mai and Phayao in the north, Phare in the east, Tak and Sukhothai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

The total population in 2010 (housing census by National Statistics Office, Thailand) was 736,402 with 362,368 males and 374,034 females. About 30% of the populations live in urban areas; 97% are Buddhists, the remainder being mainly Christians or Muslims. The average population density is about 59.75 persons per square kilometer (National Statistics Office, Thailand, 2016).

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 2014 (average 2013-2015)



## 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)

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

## Registry procedures

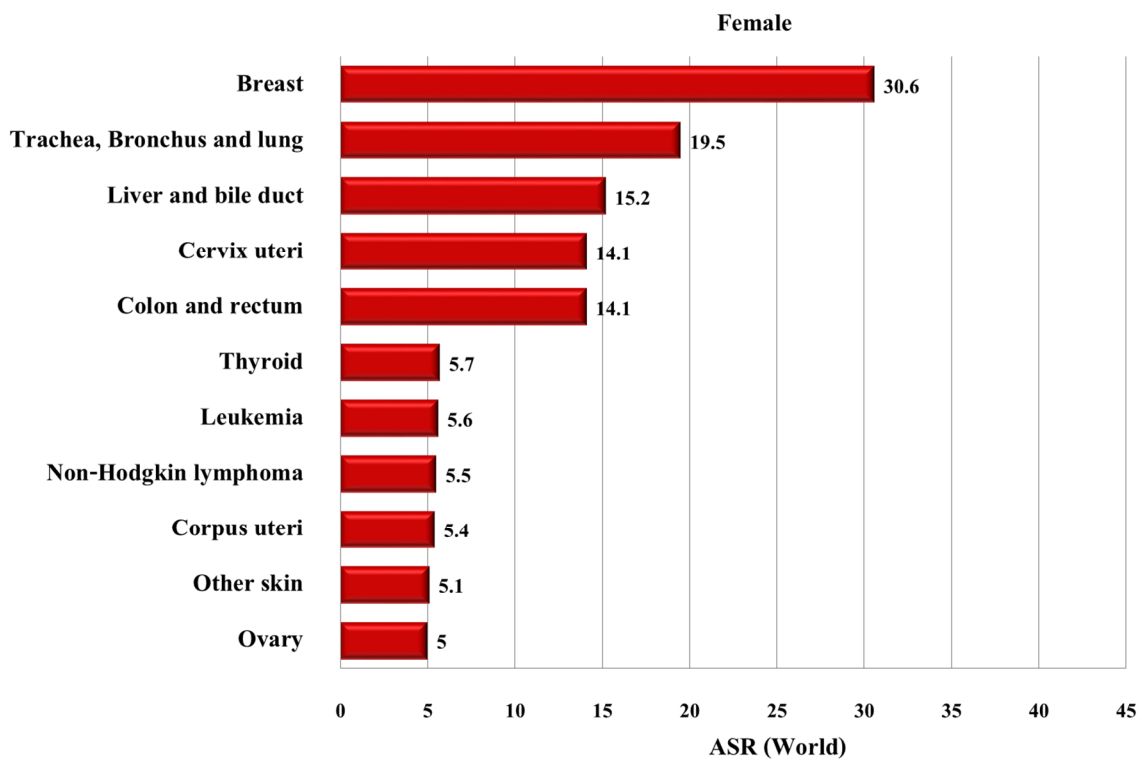
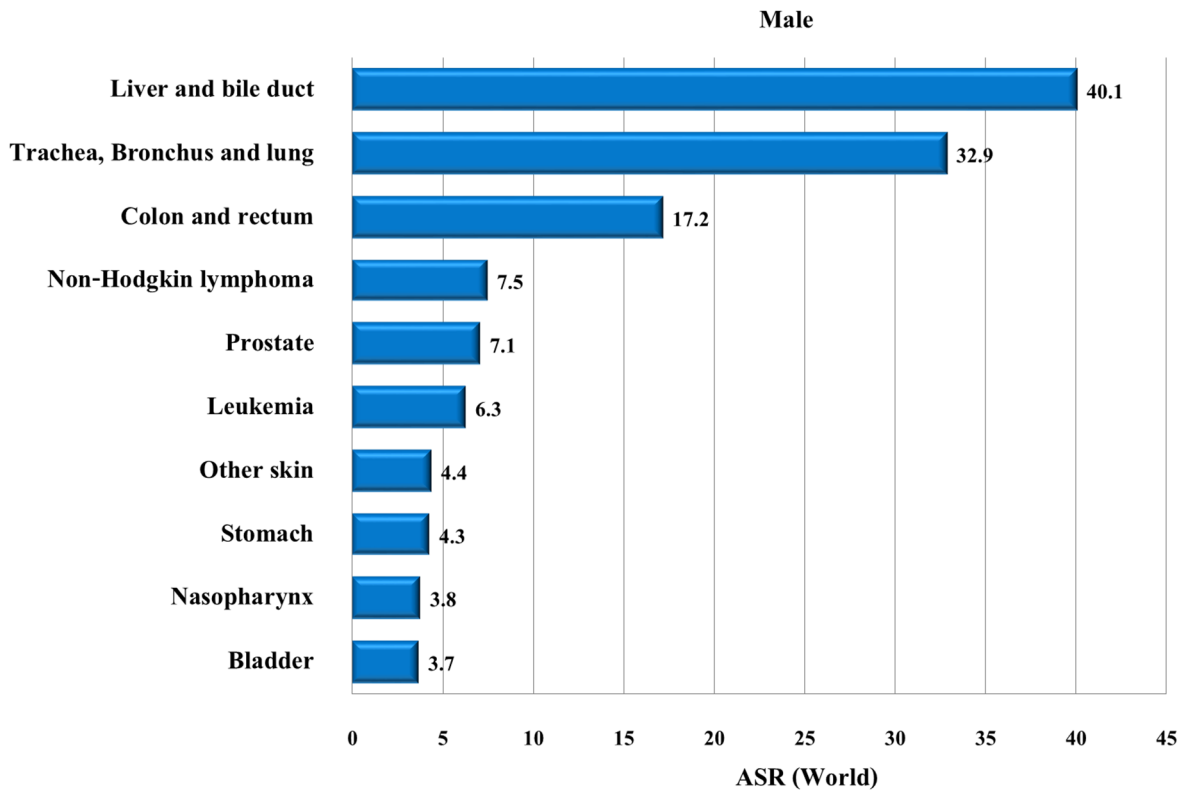
The registry unit is located within Lampang Cancer Hospital. The Lampang registry was established in 1995 with the backup data of cancer cases in Lampang since 1983 which collected by Dr. Nimit Martin. A part time physician, a full time nurse, five full time health workers responsible for the registry.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

Data collection consists of: registry number, name, residential address, date of birth, age, sex, date of diagnosis, site of cancer, histology of cancer, staging, extension of disease, method of diagnosis, treatment, date of last contact and vital status of cancer patients. The primary site and histology were coded according to ICD-O-3 first revision edition (*Fritz et al.*, 2013). Second primary cancer was also registered by multiple primary rule (IARC, 2004). Death certificates were obtained from Bureau of Policy and Strategy, Ministry of Public Health. The follow-up of all registered cases were carried out by passive methods with linking database of National Health Security office. The completed data forms were checked manually, and entered into the database file in a personal computer at Cancer Registry Unit of Lampang Cancer Hospital. CanReg5 software was using input, store, check and analyze cancer registry data. IARCcrgtools program was using validate data and quality control.

## **Summary of Results**

New cases registered in 2014, 1026 were males and 1026 were females, making 2,052 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 158.1 per 100,000, with liver and bile duct cancer ranking first (ASR = 40.1) followed by lung (ASR = 32.9) and colon and rectum (ASR = 17.2). The ASR of all cancer sites in females was 155.8 per 100,000, the three leading cancer sites being breast (ASR = 30.6), lung (ASR = 19.5) and liver and bile duct (ASR = 15.2).

**Figure 3.2** Leading cancer in Lampung (mean annual ASR 2013-2015)



**Table 3.2.1** Lampang (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Male

Site	No.Case Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+ Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate 0-74	
Lip	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	1.7	0.3	C00	0.0	0.0	
Tongue	10	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.2	1.0	7.3	5.1	6.6	4.1	10.7	3.3	2.7	1.5	C01-C02	0.1	0.2
Mouth	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.8	2.0	5.3	8.3	5.3	8.3	1.8	1.0	C03-C06	0.1	0.1
Salivary glands	3	0.0	0.0	1.5	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.9	1.0	0.0	2.1	2.7	3.3	0.7	0.5	C07-C08	0.0	0.0
Tonsil	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	3.3	0.6	0.3	C09	0.0	0.0
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.3	0.1	C10	0.0	0.0
Nasopharynx	22	0.0	0.0	0.0	1.3	1.6	4.0	1.9	2.9	7.4	4.0	12.8	14.2	10.6	12.4	5.3	8.3	6.1	3.8	C11	0.3	0.4
Hypopharynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	3.0	0.0	4.1	2.7	0.0	0.9	0.5	C12-C13	0.0	0.1
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.1	0.0	C14	0.0	0.0
Oesophagus	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.5	4.0	8.2	3.0	4.0	12.4	5.3	8.3	3.2	1.8	C15	0.1	0.2
Stomach	30	0.0	0.0	0.0	0.0	0.0	2.0	0.0	1.5	1.2	4.0	8.2	12.2	14.6	18.7	40.0	44.6	8.3	4.3	C16	0.2	0.5
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	0.0	0.0	0.0	1.7	0.1	0.0	C17	0.0	0.0
Colon	53	0.0	0.0	0.0	2.6	1.6	2.0	3.8	5.8	6.2	6.0	12.8	22.3	29.3	41.5	45.3	71.0	14.6	8.1	C18	0.5	0.9
Rectum	58	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	6.2	8.0	13.7	27.4	46.5	45.6	66.7	54.5	15.9	8.6	C19-C20	0.5	1.1
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.2	1.0	0.9	0.0	2.7	0.0	2.7	0.0	0.6	0.5	C21	0.0	0.1
Liver and bile duct	260	2.3	0.0	0.0	0.0	3.2	4.0	15.0	29.2	49.6	50.0	77.7	138.1	198.1	166.0	194.7	222.8	71.8	40.1	C22,C24	2.8	4.6
Gallbladder	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.0	0.0	0.0	0.0	6.2	13.3	8.3	2.0	1.1	C23	0.1	0.2
Pancreas	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	5.0	4.0	6.4	8.1	5.3	18.7	16.0	26.4	5.4	2.9	C25	0.2	0.3
Nose, sinuses etc.	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.0	0.0	1.0	1.3	4.1	0.0	0.0	0.6	0.4	C30-C31	0.0	0.0
Larynx	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.8	3.0	1.3	2.1	5.3	6.6	1.4	0.7	C32	0.0	0.1
Trachea, Bronchus and lung	231	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	11.2	12.0	45.7	75.1	156.9	211.6	346.7	325.1	63.8	32.9	C33-C34	1.5	4.3
Other thoracic organs	0	0.0	0.0	0.0	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	0.1	0.1	C37-C38	0.0	0.0
Bone	3	0.0	1.8	0.0	0.0	0.0	0.0	0.0	1.5	0.0	2.0	0.0	0.0	2.7	2.1	0.0	1.7	0.7	0.6	C40-C41	0.0	0.1
Melanoma of skin	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.0	2.7	4.1	5.3	1.7	0.9	0.5	C43	0.0	0.1
Other skin	33	0.0	0.0	0.0	0.0	0.0	0.0	3.8	1.5	3.7	3.0	1.8	13.2	16.0	10.4	29.3	77.6	9.1	4.4	C44	0.2	0.4
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C46	0.0	0.0
Connective tissue	7	0.0	0.0	0.0	1.3	0.0	0.0	1.9	2.9	0.0	1.0	4.6	4.1	5.3	2.1	5.3	1.7	2.0	1.3	C47,C49	0.1	0.1
Breast	2	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.0	0.0	1.0	2.7	0.0	0.0	1.7	0.6	0.4	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	5.0	0.0	0.0	4.0	2.1	8.0	3.3	1.6	1.0	C60	0.1	0.1
Prostate	54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.8	16.2	22.6	35.3	93.3	122.1	15.0	7.1	C61	0.2	0.9
Testis	2	0.0	0.0	0.0	2.6	1.6	0.0	0.0	1.5	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.5	0.5	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.1	0.1	C63	0.0	0.0
Kidney	14	4.6	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.0	5.5	8.1	2.7	10.4	13.3	14.9	3.8	2.5	C64	0.1	0.2
Renal pelvis	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.0	2.7	4.1	4.0	2.1	2.7	1.7	1.4	0.7	C65	0.1	0.1
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	1.7	0.2	0.1	C66	0.0	0.0
Bladder	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.7	12.2	16.0	12.4	18.7	77.6	8.2	3.7	C67	0.2	0.3
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C68	0.0	0.0
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.7	0.0	0.3	0.1	C69	0.0	0.0
Brain, nervous system	13	0.0	1.8	0.0	1.3	0.0	2.0	0.0	1.5	2.5	3.0	4.6	5.1	4.0	10.4	21.3	8.3	3.7	2.4	C70-C72	0.1	0.3
Thyroid	7	0.0	0.0	1.5	0.0	0.0	4.0	3.8	0.0	0.0	0.0	3.7	1.0	2.7	8.3	2.7	5.0	1.8	1.4	C73	0.1	0.1
Adrenal gland	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.1	0.1	C74	0.0	0.0
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C75	0.0	0.0
Hodakin disease	3	0.0	0.0	1.5	2.6	3.2	0.0	0.0	0.0	0.0	0.0	0.9	1.0	4.0	0.0	0.0	0.0	0.9	0.9	C81	0.1	0.1
Non-Hodgkin lymphoma	44	4.6	0.0	0.0	1.3	3.2	2.0	7.5	1.5	3.7	10.0	13.7	15.2	25.3	27.0	61.3	36.3	12.1	7.5	C82-C85,C96	0.4	0.9
Multiple myeloma	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	3.7	5.1	8.0	8.3	2.7	14.9	3.0	1.5	C90	0.1	0.2
Lymphoid leukemia	7	2.3	5.5	2.9	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.9	1.0	1.3	6.2	8.0	1.7	1.8	2.1	C91	0.1	0.2
Myeloid leukemia	11	6.9	0.0	0.0	2.6	3.2	4.0	1.9	0.0	5.0	0.0	1.8	1.0	10.6	2.1	8.0	6.6	3.0	3.0	C92-C94	0.2	0.2
Leukemia unspecified	6	2.3	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.0	4.0	8.3	0.0	11.6	1.7	1.2	C95	0.1	0.1
Myelodysplastic disease	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.7	2.1	2.7	0.0	0.6	0.3	D45-D47	0.0	0.0
Other and unspecified	31	6.9	0.0	0.0	0.0	0.0	0.0	0.0	2.9	1.2	6.0	5.5	7.1	14.6	29.0	56.0	38.0	8.6	5.3	O&U	0.2	0.6
All sites	1,026	30.0	9.2	7.4	16.9	26.9	26.3	45.1	67.3	115.4	141.9	258.7	427.4	647.6	744.8	1106.7	1226.1	283.2	158.1	ALL	9.1	18.4

**Table 3.2.2** Lampung (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Female

Site	No. Case Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C00	0.0	0.0
Tongue	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.3	0.9	3.5	2.9	2.6	3.9	12.1	6.5	2.2	1.2	C01-02	0.1	0.1
Mouth	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.7	1.0	3.9	9.7	0.0	16.8	2.2	1.0	C03-06	0.0	0.1
Salivary glands	2	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	1.0	2.6	0.0	0.0	1.3	0.4	0.3	C07-08	0.0	0.0
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	2.4	2.6	0.4	0.2	C09	0.0	0.0
Other oropharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C10	0.0	0.0
Nasopharynx	9	0.0	0.0	1.4	1.7	0.0	0.0	1.4	3.4	1.8	6.1	2.0	3.9	7.8	2.4	1.3	2.3	1.5	1.1	C11	0.1	0.2
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	2.4	0.0	0.2	0.1	C12-13	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.1	0.0	C14	0.0	0.0
Oesophagus	2	0.0	0.0	0.0	0.0	0.0	2.2	1.9	4.1	2.3	9.0	2.6	1.0	0.0	1.9	0.0	1.3	0.6	0.4	C15	0.0	0.0
Stomach	25	0.0	0.0	0.0	0.0	0.0	2.2	1.9	4.1	2.3	9.0	9.5	9.8	15.7	11.7	17.0	16.8	6.8	3.7	C16	0.3	0.4
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.9	0.0	1.0	3.9	3.9	0.0	1.3	0.9	0.5	C17	0.0	0.1
Colon	58	0.0	0.0	1.5	0.0	1.7	0.0	7.8	8.2	5.7	14.5	16.5	22.5	24.8	38.9	41.3	55.6	15.5	8.3	C18	0.5	0.9
Rectum	39	0.0	0.0	0.0	1.4	0.0	2.2	5.8	1.4	2.3	7.2	11.3	13.7	24.8	21.4	38.8	37.5	10.5	5.6	C19-20	0.4	0.7
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	2.4	6.5	0.6	0.2	C21	0.0	0.0
Liver and bile duct	113	0.0	0.0	0.0	0.0	3.4	0.0	1.9	2.7	12.5	23.5	16.5	50.8	71.9	85.6	97.1	112.4	30.2	15.2	C22,C24	0.9	1.8
Gallbladder	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.9	2.6	5.9	5.2	5.8	9.7	27.1	3.8	1.6	C23	0.1	0.2
Pancreas	17	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.1	2.7	6.1	7.8	7.8	17.5	19.4	11.6	4.6	2.4	C25	0.1	0.3
Nose, sinuses etc.	1	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0	2.4	0.0	0.3	0.2	C30-31	0.0	0.0
Larynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	7.3	2.6	0.5	0.3	C32	0.0	0.0
Trachea, Bronchus and lung	147	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	19.4	15.4	19.1	38.1	91.5	108.9	225.7	160.2	39.3	19.5	C33-34	0.9	2.6
Other thoracic organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C37-38	0.0	0.0
Bone	5	0.0	1.9	1.5	0.0	1.7	2.2	5.8	0.0	1.1	1.8	0.9	2.0	1.3	0.0	0.0	1.3	1.3	1.4	C40-C41	0.1	0.1
Melanoma of skin	4	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.9	2.6	1.0	1.3	3.9	2.4	1.3	1.1	0.8	C43	0.0	0.1
Other skin	38	2.4	0.0	0.0	2.8	0.0	0.0	3.9	1.4	5.7	8.1	3.5	7.8	17.0	17.5	19.4	65.9	10.1	5.1	C44	0.3	0.4
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.1	0.0	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	7	0.0	0.0	0.0	1.4	0.0	6.7	1.9	0.0	4.5	1.7	2.0	2.0	1.3	0.0	0.0	6.5	1.8	1.4	C47,C49	0.1	1.1
Breast	196	0.0	0.0	0.0	0.0	0.0	8.9	19.4	27.2	74.1	87.8	84.9	105.6	95.4	95.4	68.0	47.8	52.4	30.6	C50	2.5	3.3
Vulva	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	1.7	1.0	1.3	0.0	0.0	3.9	0.8	0.4	C51	0.0	0.0
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.2	0.1	C52	0.0	0.0
Cervix uteri	86	0.0	0.0	0.0	0.0	1.7	8.9	21.4	10.9	27.4	40.7	45.1	37.1	41.8	25.3	24.3	27.1	23.1	14.1	C53	1.2	1.4
Corpus uteri	36	0.0	0.0	0.0	0.0	1.7	0.0	5.8	0.0	1.1	7.2	18.2	22.5	31.4	29.2	12.1	9.0	9.6	5.4	C54	0.4	0.6
Uterus unspecified	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	C55	0.0	0.0
Ovary	31	0.0	0.0	0.0	4.2	0.0	6.7	1.9	4.1	3.4	5.4	24.3	16.6	19.6	7.8	7.3	7.8	8.2	5.0	C56	0.4	0.5
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	1.3	0.0	0.0	0.0	0.0	0.1	C57	0.0	0.0
Placenta	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	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.1	0.0	0.9	0.0	1.3	3.9	4.9	5.2	1.1	0.6	C64	0.0	0.1
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.9	0.0	2.6	0.4	0.2	C65	0.0	0.0
Ureter	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	0.0	0.0	0.0	0.1	0.1	C66	0.0	0.0
Bladder	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.8	0.0	1.0	5.2	11.7	9.7	27.1	3.5	1.5	C67	0.0	0.2
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	C68	0.0	0.0
Eye	1	7.3	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	1.3	0.4	0.9	C69	0.0	0.0
Brain, nervous system	14	0.0	1.9	3.1	0.0	0.0	0.0	1.9	4.1	3.4	3.6	4.3	5.9	7.8	5.8	7.3	6.5	3.7	2.5	C70-72	0.2	0.2
Thyroid	30	0.0	0.0	0.0	5.6	6.9	4.4	7.8	13.6	8.0	8.1	16.5	10.8	3.9	11.7	4.9	10.3	7.9	5.7	C73	0.4	0.5
Adrenal gland	2	2.4	1.9	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.9	0.9	1.0	1.3	0.0	0.0	0.0	0.6	0.8	C74	0.1	0.1
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.1	0.0	C75	0.0	0.0
Hodgkin disease	1	0.0	0.0	0.0	0.0	1.7	0.0	0.0	1.4	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.3	0.3	C81	0.0	0.0
Non-Hodgkin lymphoma	36	0.0	0.0	1.5	0.0	3.4	2.2	7.8	2.7	5.7	7.2	10.4	15.6	14.4	23.3	24.3	31.0	9.6	5.5	C82-85,C96	0.4	0.6
Multiple myeloma	6	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	1.1	0.9	0.9	2.9	2.6	5.8	4.9	5.2	1.6	0.9	C90	0.1	0.1
Lymphoid leukemia	5	4.8	1.9	1.5	2.8	0.0	0.0	0.0	1.4	0.0	0.9	0.9	2.0	0.0	4.9	2.6	1.3	1.6	0.9	C91	0.1	0.1
Myeloid leukemia	10	2.4	0.0	0.0	1.4	3.4	0.0	1.9	4.1	1.1	1.8	1.7	4.9	3.9	7.8	2.4	5.2	2.7	2.1	C92-94	0.1	0.2
Leukemia unspecified	5	7.3	0.0	1.5	1.4	1.7	4.4	0.0	0.0	0.0	0.0	0.0	1.3	0.0	2.4	7.8	1.4	1.9	0.6	C95	0.1	0.1
Myelodysplastic disease	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.9	1.0	3.9	3.9	4.9	3.9	1.2	0.6	D45-D47	0.0	0.1
Other and unspecified	29	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	4.6	3.6	6.1	9.8	14.4	23.3	41.3	25.8	7.7	3.9	O&U	0.2	0.5
All sites	1,026	29.1	7.5	10.7	22.3	32.7	53.3	104.9	99.5	195.0	245.2	325.8	407.6	555.9	595.3	725.7	770.0	274.2	155.8	ALL	10.4	17.1

**Table 3.2.3** Mean annual incidence, Lampung, 2013-2015

Site	Male						Female						ICD-10
	No.Cases	Freq.	Crude	ASR	Cum.	Rate.	No.Cases	Freq.	Crude	ASR	Cum.	Rate.	
	Year	(%)	rate	world	0-64	0-74	Year	(%)	rate	world	0-64	0-74	
			(per 100,000)		(percent)			(per 100,000)		(percent)			
Lip	1	0.1	0.3	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C00
Tongue	10	0.9	2.7	1.5	0.1	0.2	8	0.8	2.2	1.2	0.1	0.1	C01-02
Mouth	7	0.6	1.8	1.0	0.1	0.1	8	0.8	2.2	1.0	0.0	0.1	C03-06
Salivary glands	3	0.3	0.7	0.5	0.0	0.0	2	0.2	0.4	0.3	0.0	0.0	C07-08
Tonsil	2	0.2	0.6	0.3	0.0	0.0	1	0.1	0.4	0.2	0.0	0.0	C09
Other oropharynx	1	0.1	0.3	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C10
Nasopharynx	22	2.1	6.1	3.8	0.3	0.4	9	0.8	2.3	1.5	0.1	0.2	C11
Hypopharynx	3	0.3	0.9	0.5	0.0	0.1	1	0.1	0.2	0.1	0.0	0.0	C12-13
Pharynx unspecified	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C14
Oesophagus	12	1.1	3.2	1.8	0.1	0.2	2	0.2	0.6	0.4	0.0	0.0	C15
Stomach	30	2.9	8.3	4.3	0.2	0.5	25	2.5	6.8	3.7	0.3	0.4	C16
Small intestine	0	0.0	0.1	0.0	0.0	0.0	3	0.3	0.9	0.5	0.0	0.1	C17
Colon	53	5.2	14.6	8.1	0.5	0.9	58	5.7	15.5	8.3	0.5	0.9	C18
Rectum	58	5.6	15.9	8.6	0.5	1.1	39	3.8	10.5	5.6	0.4	0.7	C19-20
Anus	2	0.2	0.6	0.5	0.0	0.1	2	0.2	0.6	0.2	0.0	0.0	C21
Liver and bile duct	260	25.4	71.8	40.1	2.8	4.6	113	11.0	30.2	15.2	0.9	1.8	C22,C24
Gallbladder	7	0.7	2.0	1.1	0.1	0.2	14	1.4	3.8	1.6	0.1	0.2	C23
Pancreas	20	1.9	5.4	2.9	0.2	0.3	17	1.7	4.6	2.4	0.1	0.3	C25
Nose, sinuses etc.	2	0.2	0.6	0.4	0.0	0.0	1	0.1	0.3	0.2	0.0	0.0	C30-31
Larynx	5	0.5	1.4	0.7	0.0	0.1	2	0.2	0.5	0.3	0.0	0.0	C32
Trachea, Bronchus and lung	231	22.5	63.8	32.9	1.5	4.3	147	14.3	39.3	19.5	0.9	2.6	C33-34
Other thoracic organs	0	0.0	0.1	0.1	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C37-38
Bone	3	0.3	0.7	0.6	0.0	0.1	5	0.5	1.3	1.4	0.1	0.1	C40-C41
Melanoma of skin	3	0.3	0.9	0.5	0.0	0.1	4	0.4	1.1	0.8	0.0	0.1	C43
Other skin	33	3.2	9.1	4.4	0.2	0.4	38	3.7	10.1	5.1	0.3	0.4	C44
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C45
Kaposi's sarcoma	0	0.0	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	7	0.7	2.0	1.3	0.1	0.1	7	0.6	1.8	1.4	0.1	0.1	C47,C49
Breast	2	0.2	0.6	0.4	0.0	0.0	196	19.1	52.4	30.6	2.5	3.3	C50
Vulva							3	0.3	0.8	0.4	0.0	0.0	C51
Vagina							1	0.1	0.2	0.1	0.0	0.0	C52
Cervix uteri							86	8.4	23.1	14.1	1.2	1.4	C53
Corpus uteri							36	3.5	9.6	5.4	0.4	0.6	C54
Uterus unspecified							0	0.0	0.1	0.1	0.0	0.0	C55
Ovary							31	3.0	8.2	5.0	0.4	0.5	C56
Other female genital organs							0	0.0	0.1	0.1	0.0	0.0	C57
Placenta							1	0.1	0.2	0.1	0.0	0.0	C58
Penis	6	0.6	1.6	1.0	0.1	0.1							C60
Prostate	54	5.3	15.0	7.1	0.2	0.9							C61
Testis	2	0.2	0.5	0.5	0.0	0.0							C62
Other male genital organs	0	0.0	0.1	0.1	0.0	0.0							C63
Kidney	14	1.3	3.8	2.5	0.1	0.2	4	0.4	1.1	0.6	0.0	0.1	C64
Renal pelvis	5	0.5	1.4	0.7	0.1	0.1	1	0.1	0.4	0.2	0.0	0.0	C65
Ureter	1	0.1	0.2	0.1	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0	C66
Bladder	30	2.9	8.2	3.7	0.2	0.3	13	1.3	3.5	1.5	0.0	0.2	C67
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	C68
Eye	1	0.1	0.3	0.1	0.0	0.0	1	0.1	0.4	0.9	0.0	0.0	C69
Brain, nervous system	13	1.3	3.7	2.4	0.1	0.3	14	1.4	3.7	2.5	0.2	0.2	C70-72
Thyroid	7	0.6	1.8	1.4	0.1	0.1	30	2.9	7.9	5.7	0.4	0.5	C73
Adrenal gland	0	0.0	0.1	0.1	0.0	0.0	2	0.2	0.6	0.8	0.1	0.1	C74
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C75
Hodgkin disease	3	0.3	0.9	0.9	0.1	0.1	1	0.1	0.3	0.3	0.0	0.0	C81
Non-Hodgkin lymphoma	44	4.3	12.1	7.5	0.4	0.9	36	3.5	9.6	5.5	0.4	0.6	C82-85,C96
Multiple myeloma	11	1.1	3.0	1.5	0.1	0.2	6	0.6	1.6	0.9	0.1	0.1	C90
Lymphoid leukemia	7	0.6	1.8	2.1	0.1	0.2	5	0.5	1.3	1.6	0.1	0.1	C91
Myeloid leukemia	11	1.1	3.0	3.0	0.2	0.2	10	1.0	2.7	2.1	0.1	0.2	C92-94
Leukemia unspecified	6	0.6	1.7	1.2	0.1	0.1	5	0.5	1.4	1.9	0.1	0.1	C95
Myelodysplastic disease	2	0.2	0.6	0.3	0.0	0.0	4	0.4	1.2	0.6	0.0	0.1	D45-D47
Other and unspecified	31	3.1	8.6	5.3	0.2	0.6	29	2.8	7.7	3.9	0.2	0.5	O&U
<b>All sites</b>	<b>1,026</b>	<b>100.0</b>	<b>283.2</b>	<b>158.1</b>	<b>9.1</b>	<b>18.4</b>	<b>1,026</b>	<b>100.0</b>	<b>274.2</b>	<b>155.8</b>	<b>10.4</b>	<b>17.1</b>	<b>ALL</b>



**Table 3.2.4** Percentage of morphologically verified and death certificate only cases, Lampung

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	60	98.3	0.0	55	96.4	1.8	C00-C08
Oropharynx	10	90.0	0.0	5	100.0	0.0	C09-C10,C14
Nasopharynx	66	90.9	0.0	26	96.2	0.0	C11
Hypopharynx	10	100.0	0.0	2	100.0	0.0	C12-C13
Esophagus	35	82.9	2.9	7	71.4	0.0	C15
Stomach	90	86.7	1.1	76	90.8	0.0	C16
Small intestine	1	100.0	0.0	10	80.0	0.0	C17
Colon and rectum	339	84.4	0.3	299	87.0	0.7	C18-C21
Liver and bile duct	781	17.8	3.3	339	22.1	2.1	C22,C24
Gallbladder	22	31.8	9.1	43	67.4	2.3	C23
pancreas	59	33.9	1.7	52	32.7	0.0	C25
Nose,sinuses etc	6	100.0	0.0	3	100.0	0.0	C30-C31
Larynx	15	80.0	0.0	6	100.0	0.0	C32
Trachea, brochus and lung	694	44.4	2.7	441	49.9	4.8	C33-C34
Other thoracic organs	1	0.0	0.0	1	100.0	0.0	C37-C38
Bone	8	25.0	25.0	15	73.3	0.0	C40-C41
Melanoma of skin	10	100.0	0.0	12	100.0	0.0	C43
Other skin	99	94.9	0.0	113	95.6	0.0	C44
Mesothelioma	0	0.0	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	22	90.9	0.0	20	90.0	0.0	C47,C49
Breast	6	50.0	0.0	588	92.3	0.3	C50
Vulva				9	100.0	0.0	C51
Vagina				2	100.0	0.0	C52
Cervix uteri				259	90.7	0.4	C53
Corpus uteri				108	94.4	0.0	C54
Uterus unspecified				1	0.0	0.0	C55
Ovary				92	88.0	0.0	C56
Other female genital organs				1	100.0	0.0	C57
Placenta				2	50.0	0.0	C58
Penis	17	94.1	0.0				C60
Prostate	163	87.7	0.0				C61
Testis	5	80.0	0.0				C62
Other male genital organs	1	100.0	0.0				C63
Kidney	41	85.4	2.4	12	75.0	0.0	C64
Renal pelvis	15	93.3	0.0	4	50.0	0.0	C65
Ureter	2	100.0	0.0	1	0.0	0.0	C66
Bladder	89	91.0	0.0	39	97.4	0.0	C67
Other urinary organs	1	100.0	0.0	1	100.0	0.0	C68
Eye	3	100.0	0.0	4	100.0	0.0	C69
Brain, nervous system	40	45.0	10.0	42	42.9	9.5	C70-C72
Thyroid	20	90.0	0.0	89	88.8	0.0	C73
Adrenal gland	1	100.0	0.0	7	100.0	0.0	C74
Other endocrine	0	0.0	0.0	1	100.0	0.0	C75
Hodgkin disease	10	100.0	0.0	3	100.0	0.0	C81
Non-Hodgkin lymphoma	131	100.0	0.0	108	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	33	100.0	0.0	18	100.0	0.0	C90
Leukemia	72	98.6	0.0	61	100.0	0.0	C91-C95
Myelodysplastic	6	100.0	0.0	13	100.0	0.0	D45-D47
Other and unspecified	94	40.4	11.7	86	36.0	8.1	O&U
<b>All sites</b>	<b>3,079</b>	<b>57.8</b>	<b>2.2</b>	<b>3,077</b>	<b>74.6</b>	<b>1.5</b>	<b>All</b>
<b>All sites without liver</b>	<b>2,298</b>	<b>71.4</b>	<b>1.9</b>	<b>2,738</b>	<b>81.1</b>	<b>1.4</b>	<b>All</b>

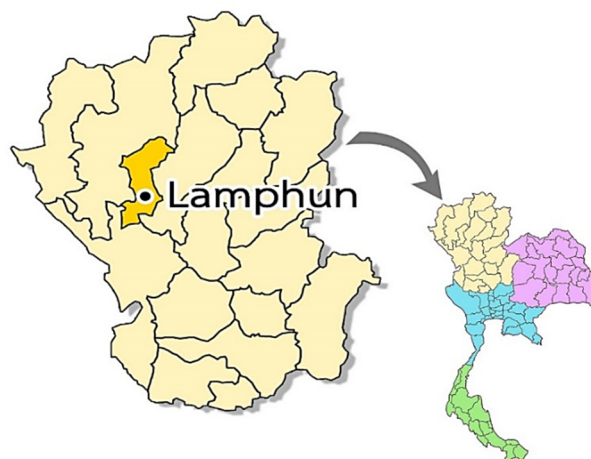
## Lamphun Cancer Registry

### 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.

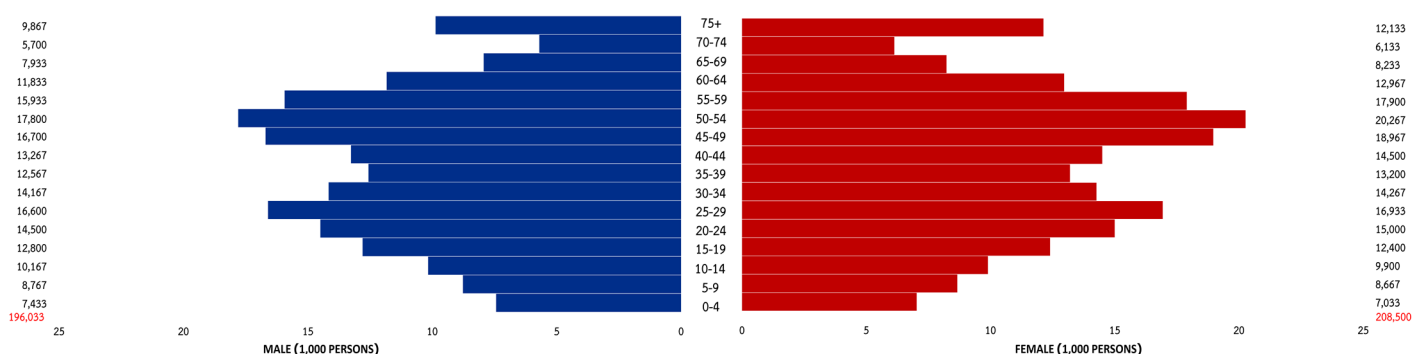
The total population in 2014 (housing census by National Statistics Office, Thailand) was 404,533 with 196,033 males and 208,500 females. The average population density is about 89.8 persons per square kilometer (National Statistics Office, Thailand, 2012).

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 2014 (average 2013-2015)



### **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 1:3,945. The ratio between registered nurses to population is 1:483 (Ministry of public Health, 2017).

### **Registry procedures**

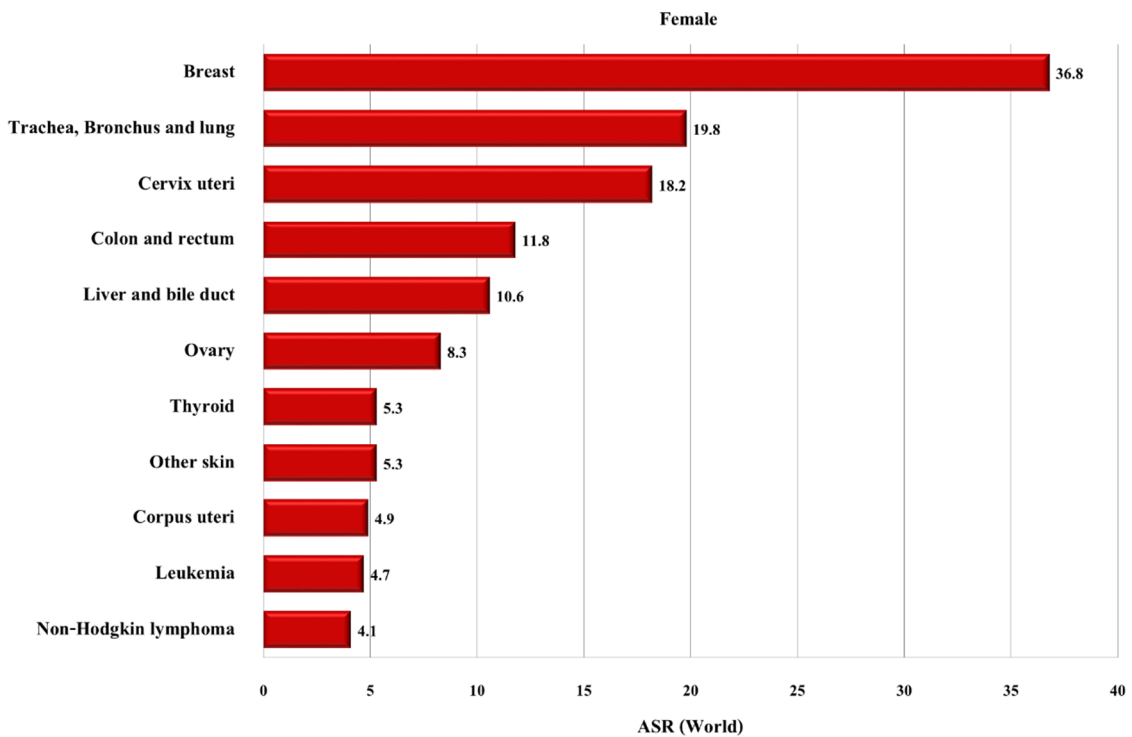
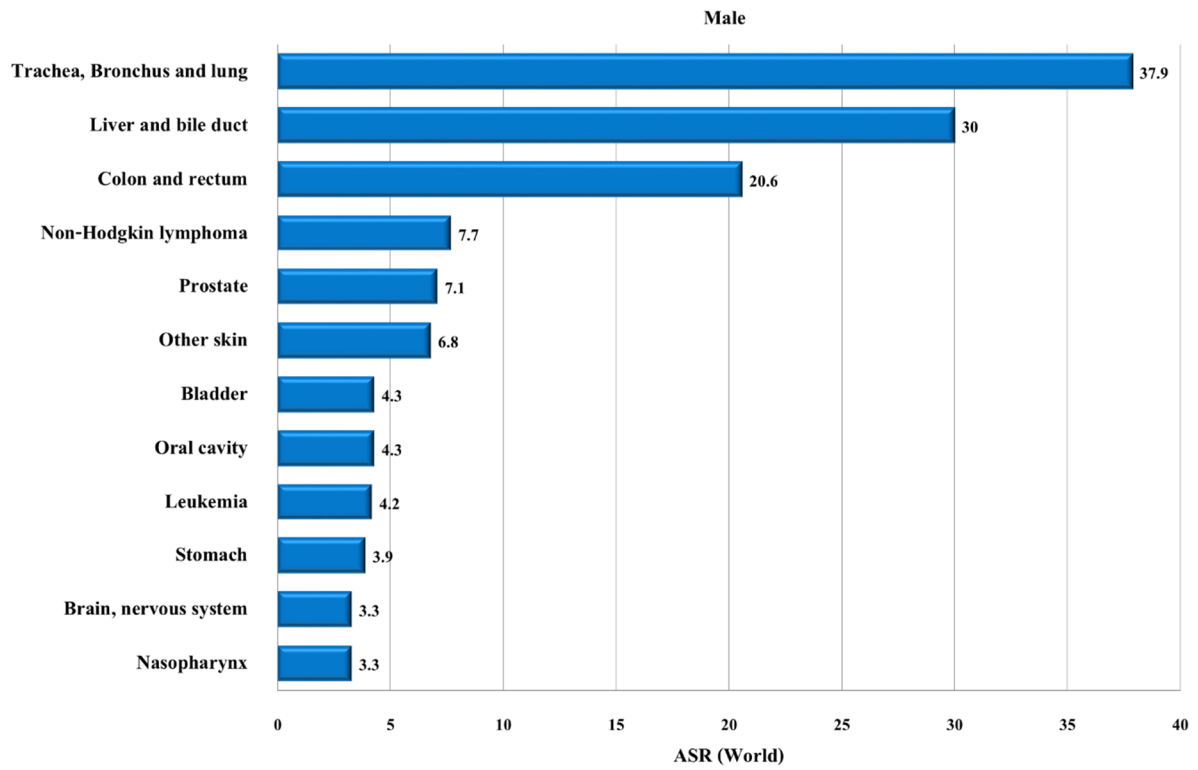
Population-based cancer registration of Lamphun province was established by Cancer Registry Unit of Lampang Cancer Hospital in 2004 with the back-up cancer data since 1983 to 1994 of all cancer cases in Lamphun province, which was collected by Dr. Nimit Martin, the expert consultant. All data on cancer 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-3 first revision edition (*Fritz et al.*, 2013). Second primary cancer was also registered; a new registration number was given for each new primary cancer (IARC, 2004). The completed data forms were checked manually, and entered into the database file in a personal computer at Cancer Registry Unit of Lampang Cancer Hospital. CanReg5 software was using input, store, check and analyze cancer registry data. IARCcrgTools program was using validate data and quality control.

### **Summary of Results**

New cases registered in 2014, 511 were males and 542 were females, making 1,053 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 163.0 per 100,000, with lung cancer ranking first (ASR = 37.9) followed by liver and bile duct (ASR = 30.0) and colon and rectum (ASR = 20.6). The ASR of all cancer sites in females was 160.5 per 100,000, the three leading cancer sites being breast (ASR = 36.8), lung (ASR = 19.8) and cervix (ASR = 18.2).

**Figure 3.3** Leading cancer in Lamphun (mean annual ASR 2013-2015)



**Table 3.3.1 Lamphun (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Male**

Site	No. Case Year	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	5.6	12.6	5.8	3.4	0.5	0.3	C00	0.0	0.0
Tongue	8	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	2.0	7.5	12.6	5.6	12.6	5.8	13.5	4.1	2.4	C01-C02	0.2	0.3
Mouth	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	7.5	2.1	2.8	8.4	11.7	13.5	2.6	1.4	C03-C06	0.1	0.2
Salivary glands	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	4.2	0.0	0.0	0.3	0.2	C07-C08	0.0	0.0
Tonsil	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	1.9	6.3	2.8	0.0	11.7	3.4	1.5	0.9	C09	0.1	0.1
Other oropharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	2.1	2.8	0.0	5.8	3.4	1.0	0.6	C10	0.0	0.1
Nasopharynx	10	0.0	0.0	0.0	0.0	2.3	2.0	0.0	2.7	7.5	6.0	5.6	14.6	8.5	12.6	5.8	13.5	5.1	3.3	C11	0.2	0.3
Hypopharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	8.5	0.0	0.0	3.4	0.9	0.5	C12-C13	0.1	0.1
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14	0.0	0.0
Oesophagus	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.0	5.6	6.3	2.8	25.2	11.7	3.4	3.1	2.0	C15	0.1	0.3
Stomach	12	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	5.0	6.0	3.7	12.6	25.4	16.8	23.4	20.3	6.3	3.9	C16	0.3	0.5
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	2.1	8.5	0.0	5.8	0.0	0.9	0.5	C17	0.1	0.1
Colon	35	0.0	0.0	0.0	0.0	0.0	0.0	4.7	5.3	7.5	8.0	22.5	31.4	67.6	75.6	46.8	57.4	17.9	11.0	C18	0.7	1.3
Rectum	1	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	3.4	0.7	0.4	C21	0.0	0.0
Liver and bile duct	93	4.5	0.0	0.0	0.0	0.0	6.0	14.1	15.9	27.6	45.9	61.8	125.5	146.5	142.9	122.8	101.4	47.6	30.0	C22-C24	2.2	3.6
Gallbladder	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	4.2	5.8	10.1	0.6	1.0	0.6	C23	0.0	0.1
Pancreas	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	11.3	8.4	11.7	6.8	2.2	1.3	C25	0.1	0.2
Nose, sinuses etc.	3	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	4.0	1.9	0.0	5.6	0.0	11.7	0.0	1.4	1.0	C30-C31	0.1	1.4
Larynx	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	8.0	5.6	10.5	5.6	16.8	17.5	0.0	0.0	3.7	2.4	C32	0.2	0.3
Trachea, Bronchus and lung	126	0.0	0.0	0.0	0.0	0.0	4.0	2.4	2.7	22.6	25.9	65.5	87.9	169.0	231.1	362.6	331.1	64.3	37.9	C33-C34	1.9	4.9
Other thoracic organs	1	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.3	0.3	C37-C38	0.0	0.0
Bone	2	0.0	0.0	3.3	2.6	2.3	0.0	0.0	0.0	0.0	0.0	1.9	0.0	5.6	0.0	0.0	3.4	1.2	1.1	C40-C41	0.1	0.1
Melanoma of skin	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.1	5.6	0.0	11.7	3.4	1.2	0.7	C43	0.0	0.1
Other skin	23	0.0	0.0	0.0	0.0	2.3	0.0	2.4	0.0	2.5	4.0	13.1	8.4	31.0	33.6	52.6	87.8	11.9	6.8	C44	0.3	0.7
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Connective tissue	1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.5	0.8	C47-C49	0.0	0.0
Breast	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	4.2	0.0	3.4	0.9	0.5	C50	0.0	0.1
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	4	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.7	2.5	0.0	1.9	4.2	5.6	0.0	5.8	6.8	1.9	1.2	C60	0.1	0.1
Prostate	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	12.6	31.0	58.8	93.6	81.1	12.2	7.1	C61	0.2	1.0
Testis	1	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	3.4	0.5	0.3	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.2	0.1	C63	0.0	0.0
Kidney	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	4.0	5.6	8.4	19.7	4.2	0.0	0.0	3.1	1.9	C64	0.2	0.2
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.2	0.1	C66	0.0	0.0
Bladder	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	2.0	0.0	18.8	11.3	42.0	46.8	30.4	7.1	4.3	C67	0.2	0.6
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	5.8	0.0	0.3	0.2	C68	0.0	0.1
Eye	2	9.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	10.1	1.2	1.6	C69	0.1	0.1
Brain, nervous system	9	0.0	0.0	3.3	2.6	2.3	4.0	4.7	2.7	0.0	2.0	3.7	8.4	2.8	8.4	17.5	23.6	4.8	3.3	C70-C72	0.2	0.3
Thyroid	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.0	1.9	4.2	5.6	0.0	5.8	3.4	1.5	0.9	C73	0.1	0.1
Adrenal gland	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	4.2	0.0	0.0	0.3	0.3	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.5	0.4	C75	0.0	0.0
Hodgkin disease	1	0.0	0.0	0.0	0.0	2.3	2.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.5	0.5	C81	0.0	0.0
Non-Hodgkin lymphoma	22	0.0	0.0	6.6	2.6	4.6	10.0	0.0	5.3	10.1	8.0	16.9	20.9	16.9	21.0	40.9	27.0	11.1	7.7	C82-C85/C96	0.5	0.8
Multiple myeloma	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	8.4	5.8	0.0	0.7	0.5	C90	0.0	0.1
Lymphoid leukemia	2	0.0	3.8	0.0	2.6	0.0	2.0	0.0	0.0	2.5	2.0	1.9	2.1	0.0	0.0	0.0	0.0	1.2	1.2	C91	0.1	0.1
Myeloid leukemia	6	0.0	0.0	0.0	0.0	0.0	4.0	2.4	0.0	0.0	8.0	1.9	0.0	8.5	16.8	5.8	3.4	2.9	2.1	C92-C94	0.1	0.2
Leukemia unspecified	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	2.0	1.9	0.0	5.6	4.2	0.0	6.8	1.4	0.9	C95	0.1	0.1
Myelodysplastic disease	10	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	5.0	0.0	3.7	10.5	5.6	8.4	23.4	30.4	4.9	3.1	D45-D47	0.2	0.3
Other and unspecified	16	0.0	0.0	0.0	2.6	0.0	0.0	4.7	2.7	2.5	6.0	9.4	8.4	25.4	37.8	46.8	20.3	8.3	5.5	O&U	0.3	0.7
All sites	511	17.9	3.8	13.1	20.8	20.7	38.2	56.5	55.7	113.1	161.7	288.4	460.3	718.3	890.8	1076.0	983.1	260.5	163.0	ALL	9.8	19.7

**Table 3.3.2** Lamphun (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Female

Site	No.Case Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74	
Lip	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	5.5	0.5	0.2	C00	0.0	0.0	
Tongue	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	8.1	0.0	0.0	0.5	0.3	C01-C02	0.0	0.1	
Mouth	3	4.7	0.0	0.0	0.0	2.3	2.5	0.0	1.8	1.6	0.0	1.6	0.0	5.1	4.0	0.0	2.7	1.4	1.4	C03-C06	0.1	0.1	
Salivary glands	2	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	1.6	1.9	0.0	8.1	0.0	2.7	1.1	0.7	C07-C08	0.0	0.1	
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.7	2.6	0.0	0.0	0.0	0.6	0.3	C09	0.0	0.0	
Other oropharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C10	0.0	0.0	
Nasopharynx	5	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.5	0.0	3.5	6.6	0.0	0.0	16.2	5.4	2.7	2.2	1.5	C11	0.1	0.2	
Hypopharynx	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	2.6	0.0	0.0	2.7	0.5	0.2	C12-C13	0.0	0.0	
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.2	0.1	C14	0.0	0.0	
Oesophagus	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	2.6	4.0	0.0	8.2	0.8	0.4	C15	0.0	0.0	
Stomach	12	0.0	0.0	0.0	0.0	2.0	0.0	0.0	6.6	9.3	10.3	12.1	27.2	13.7	13.7	27.2	13.7	5.8	3.6	C16	0.2	0.4	
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	5.6	0.0	0.0	0.0	2.7	0.0	0.0	2.7	0.8	0.4	C17	0.0	0.0	
Colon	24	0.0	0.0	0.0	0.0	2.2	0.0	0.0	13.8	8.8	8.2	22.3	30.8	24.3	16.3	60.4	11.5	6.3	18.8	C18	0.4	0.6	
Rectum	19	0.0	0.0	0.0	0.0	4.7	5.1	0.0	9.2	14.1	14.8	7.4	22.3	15.4	20.2	32.6	27.5	9.0	5.4	C19-C20	0.4	0.6	
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	2.6	0.0	0.0	0.0	0.2	0.1	C21	0.0	0.0	
Liver and bile duct	38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	11.5	14.1	29.6	33.5	33.4	56.7	81.5	54.9	18.2	10.6	C22,C24	0.6	1.3	
Gallbladder	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	3.3	3.7	0.0	4.0	4.0	16.3	11.0	2.1	1.1	C23	0.0	0.1	
Pancreas	7	0.0	0.0	0.0	0.0	2.3	2.5	2.3	2.5	2.3	4.9	5.6	12.9	4.0	0.0	13.7	3.2	4.2	1.8	C25	0.2	0.2	
Nose, sinuses etc.	2	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	1.8	1.6	0.0	0.0	2.6	0.0	0.0	2.7	0.8	0.5	C30-C31	0.0	0.0	
Larynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	5.4	5.5	1.0	0.5	C32	0.0	0.1	
Trachea, Bronchus and lung	73	0.0	0.0	0.0	0.0	2.3	2.0	2.3	17.6	23.0	17.6	23.0	54.0	90.0	157.9	173.9	159.3	35.2	19.8	C33-C34	1.0	2.6	
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	5.4	0.0	0.2	0.1	C37-C38	0.0	0.0	
Bone	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	2.6	4.0	0.0	2.7	1.0	1.0	C40-C41	0.1	0.1	
Melanoma of skin	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	1.9	0.0	4.0	5.4	2.7	1.0	0.6	C43	0.0	0.1	
Other skin	21	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	2.3	1.8	4.9	11.2	18.0	24.3	59.8	71.4	10.1	5.3	C44	0.2	0.6	
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.2	0.1	C45	0.0	0.0	
Connective tissue	3	0.0	0.0	0.0	0.0	2.2	0.0	2.3	0.0	2.3	0.0	0.0	0.0	2.6	12.1	5.4	0.0	1.3	1.0	C47,C49	0.0	0.1	
Breast	123	0.0	0.0	0.0	0.0	4.4	0.0	11.7	45.5	64.4	107.2	103.6	117.3	156.8	97.2	125.0	60.4	59.2	36.8	C50	3.1	4.2	
Vulva	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	5.6	2.6	4.0	0.0	5.5	1.3	0.7	C51	0.1	0.1	
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.2	0.1	C52	0.0	0.0	
Cervix uteri	59	0.0	0.0	0.0	0.0	0.0	2.0	14.0	35.4	43.7	43.9	49.3	44.7	48.8	60.7	43.5	44.0	28.3	18.2	C53	1.4	1.9	
Corpus uteri	17	0.0	0.0	0.0	0.0	0.0	0.0	4.7	2.5	4.6	10.5	14.8	18.6	23.1	24.3	5.4	13.7	8.2	4.9	C54	0.4	0.5	
Uterus unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.3	0.2	C55	0.0	0.0	
Ovary	25	0.0	0.0	0.0	0.0	5.4	8.9	3.9	5.1	20.7	19.3	18.1	16.8	23.1	16.2	5.4	19.2	12.0	8.3	C56	0.7	0.8	
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.7	0.0	4.0	0.0	0.0	0.6	0.4	C57	0.0	0.0	
Placenta	1	0.0	0.0	0.0	0.0	0.0	2.0	2.3	2.5	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	C58	0.0	0.0	
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0	
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0	
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0	
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0	
Kidney	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	9.3	2.6	0.0	0.0	0.0	1.1	0.6	C64	0.1	0.1	
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C66	0.0	0.0	
Bladder	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	1.8	0.0	1.9	10.3	8.1	10.9	8.2	2.2	1.4	C67	0.1	0.2	
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68	0.0	0.0	
Eye	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.3	0.0	0.0	0.0	2.6	4.0	0.0	2.7	0.8	0.6	C69	0.0	0.1	
Brain, nervous system	13	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.5	9.2	7.0	13.2	7.4	18.0	16.2	10.9	8.2	6.1	3.8	C70-C72	0.3	0.4	
Thyroid	15	0.0	0.0	0.0	0.0	5.4	8.9	3.9	4.7	7.6	9.2	3.5	13.2	11.2	15.4	12.1	5.4	5.5	7.2	5.3	C73	0.4	0.5
Adrenal gland	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C74	0.0	0.0	
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C75	0.0	0.0	
Hodgkin disease	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.2	0.1	C81	0.0	0.0	
Non-Hodgkin lymphoma	13	0.0	3.8	0.0	2.7	2.2	0.0	4.7	0.0	2.3	5.3	4.9	11.2	10.3	20.2	16.3	27.5	6.4	4.1	C82-85,C96	0.2	0.4	
Multiple myeloma	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	3.3	7.4	0.0	0.0	0.0	0.0	1.8	1.0	C90	0.1	0.2	
Lymphoid leukemia	2	4.7	0.0	0.0	2.7	2.2	0.0	0.0	0.0	0.0	1.8	1.6	0.0	0.0	0.0	0.0	0.0	0.8	1.2	C91	0.1	0.1	
Myeloid leukemia	7	0.0	3.8	0.0	5.4	0.0	0.0	0.0	7.6	0.0	3.5	3.3	3.7	5.1	16.2	0.0	5.5	3.2	2.6	C92-94	0.2	0.2	
Leukemia unspecified	2	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	2.6	4.0	0.0	2.7	0.8	0.9	C95	0.0	0.1	
Myelodysplastic disease	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	5.3	1.6	0.0	5.1	4.0	5.4	24.7	2.9	1.5	D45-D47	0.1	0.1	
Other and unspecified	14	0.0	0.0	0.0	2.7	2.2	0.0	0.0	0.0	2.3	7.0	4.9	13.0	10.3	16.2	21.7	38.5	6.9	3.8	O&U	0.2	0.4	
All sites	542	14.2	7.7	6.7	24.2	33.3	17.7	79.4	136.4	220.7	295.3	347.0	435.8	586.1	684.2	706.5	719.8	260.0	160.5	ALL	11.0	18.0	

**Table 3.3.3** Mean annual incidence, Lamphun, 2013-2015

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	
			(per 100,000)		(percent)				(per 100,000)		(percent)		
Lip	1	0.2	0.5	0.3	0.0	0.0	1	0.2	0.5	0.2	0.0	0.0	C00
Tongue	8	1.6	4.1	2.4	0.2	0.3	1	0.2	0.5	0.3	0.0	0.1	C01-02
Mouth	5	1.0	2.6	1.4	0.1	0.2	3	0.6	1.4	1.4	0.1	0.1	C03-06
Salivary glands	1	0.1	0.3	0.2	0.0	0.0	2	0.4	1.1	0.7	0.0	0.1	C07-08
Tonsil	3	0.6	1.5	0.9	0.1	0.1	1	0.2	0.6	0.3	0.0	0.0	C09
Other oropharynx	2	0.4	1.0	0.6	0.0	0.1	0	0.0	0.0	0.0	0.0	0.0	C10
Nasopharynx	10	2.0	5.1	3.3	0.2	0.3	5	0.9	2.2	1.5	0.1	0.2	C11
Hypopharynx	2	0.3	0.9	0.5	0.1	0.1	1	0.2	0.5	0.2	0.0	0.0	C12-13
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0	0.1	0.2	0.1	0.0	0.0	C14
Oesophagus	6	1.2	3.1	2.0	0.1	0.3	2	0.3	0.8	0.4	0.0	0.0	C15
Stomach	12	2.4	6.3	3.9	0.3	0.5	12	2.2	5.8	3.6	0.2	0.4	C16
Small intestine	2	0.3	0.9	0.5	0.1	0.1	2	0.3	0.8	0.4	0.0	0.0	C17
Colon	35	6.9	17.9	11.0	0.7	1.3	24	4.4	11.5	6.3	0.4	0.6	C18
Rectum	29	5.7	14.8	9.2	0.5	1.2	19	3.4	9.0	5.4	0.4	0.6	C19-20
Anus	1	0.3	0.7	0.4	0.0	0.0	0	0.1	0.2	0.1	0.0	0.0	C21
Liver and bile duct	93	18.3	47.6	30.0	2.2	3.6	38	7.0	18.2	10.6	0.6	1.3	C22,C24
Gallbladder	2	0.4	1.0	0.6	0.0	0.1	4	0.8	2.1	1.1	0.0	0.1	C23
Pancreas	4	0.8	2.2	1.3	0.1	0.2	7	1.2	3.2	1.8	0.2	0.2	C25
Nose, sinuses etc.	3	0.5	1.4	1.0	0.1	0.1	2	0.3	0.8	0.5	0.0	0.0	C30-31
Larynx	7	1.4	3.7	2.4	0.2	0.3	2	0.4	1.0	0.5	0.0	0.1	C32
Trachea, Bronchus and lung	126	24.7	64.3	37.9	1.9	4.9	73	13.5	35.2	19.8	1.0	2.6	C33-34
Other thoracic organs	1	0.1	0.3	0.3	0.0	0.0	0	0.1	0.2	0.1	0.0	0.0	C37-38
Bone	2	0.5	1.2	1.1	0.1	0.1	2	0.4	1.0	1.0	0.1	0.1	C40-C41
Melanoma of skin	2	0.5	1.2	0.7	0.0	0.1	2	0.4	1.0	0.6	0.0	0.1	C43
Other skin	23	4.6	11.9	6.8	0.3	0.7	21	3.9	10.1	5.3	0.2	0.6	C44
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0	0.1	0.2	0.1	0.0	0.0	C45
Connective tissue	1	0.2	0.5	0.8	0.0	0.0	3	0.5	1.3	1.0	0.0	0.1	C47,C49
Breast	2	0.3	0.9	0.5	0.0	0.1	123	22.8	59.2	36.8	3.1	4.2	C50
Vulva							3	0.5	1.3	0.7	0.1	0.1	C51
Vagina							0	0.1	0.2	0.1	0.0	0.0	C52
Cervix uteri							59	10.9	28.3	18.2	1.4	1.9	C53
Corpus uteri							17	3.1	8.2	4.9	0.4	0.5	C54
Uterus unspecified							1	0.1	0.3	0.2	0.0	0.0	C55
Ovary							25	4.6	12.0	8.3	0.7	0.8	C56
Other female genital organs							1	0.2	0.6	0.4	0.0	0.0	C57
Placenta							1	0.2	0.6	0.6	0.0	0.0	C58
Penis	4	0.7	1.9	1.2	0.1	0.1							C60
Prostate	24	4.7	12.2	7.1	0.2	1.0							C61
Testis	1	0.2	0.5	0.3	0.0	0.0							C62
Other male genital organs	0	0.1	0.2	0.1	0.0	0.0							C63
Kidney	6	1.2	3.1	1.9	0.2	0.2	2	0.4	1.1	0.6	0.1	0.1	C64
Ureter	0	0.1	0.2	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C66
Bladder	14	2.7	7.1	4.3	0.2	0.6	5	0.9	2.2	1.4	0.1	0.2	C67
Other urinary organs	1	0.1	0.3	0.2	0.0	0.1	0	0.0	0.0	0.0	0.0	0.0	C68
Eye	2	0.5	1.2	1.6	0.1	0.1	2	0.3	0.8	0.6	0.0	0.1	C69
Brain, nervous system	9	1.8	4.8	3.3	0.2	0.3	13	2.3	6.1	3.8	0.3	0.4	C70-72
Thyroid	3	0.6	1.5	0.9	0.1	0.1	15	2.8	7.2	5.3	0.4	0.5	C73
Adrenal gland	1	0.1	0.3	0.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C74
Other endocrine	1	0.2	0.5	0.4	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C75
Hodgkin disease	1	0.2	0.5	0.5	0.0	0.0	0	0.1	0.2	0.1	0.0	0.0	C81
Non-Hodgkin lymphoma	22	4.2	11.1	7.7	0.5	0.8	13	2.5	6.4	4.1	0.2	0.4	C82-85,C96
Multiple myeloma	1	0.3	0.7	0.5	0.0	0.1	4	0.7	1.8	1.0	0.1	0.2	C90
Lymphoid leukemia	2	0.5	1.2	1.2	0.1	0.1	2	0.3	0.8	1.2	0.1	0.1	C91
Myeloid leukemia	6	1.1	2.9	2.1	0.1	0.2	7	1.2	3.2	2.6	0.2	0.2	C92-94
Leukemia unspecified	3	0.5	1.4	0.9	0.1	0.1	2	0.3	0.8	0.9	0.0	0.1	C95
Myelodysplastic disease	10	1.9	4.9	3.1	0.2	0.3	6	1.1	2.9	1.5	0.1	0.1	D45-D47
Other and unspecified	16	3.2	8.3	5.5	0.3	0.7	14	2.6	6.9	3.8	0.2	0.4	O&U
<b>All sites</b>	<b>511</b>	<b>100.0</b>	<b>260.5</b>	<b>163.0</b>	<b>9.8</b>	<b>19.7</b>	<b>542</b>	<b>100.0</b>	<b>260.0</b>	<b>160.5</b>	<b>11.0</b>	<b>18.0</b>	<b>ALL</b>

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

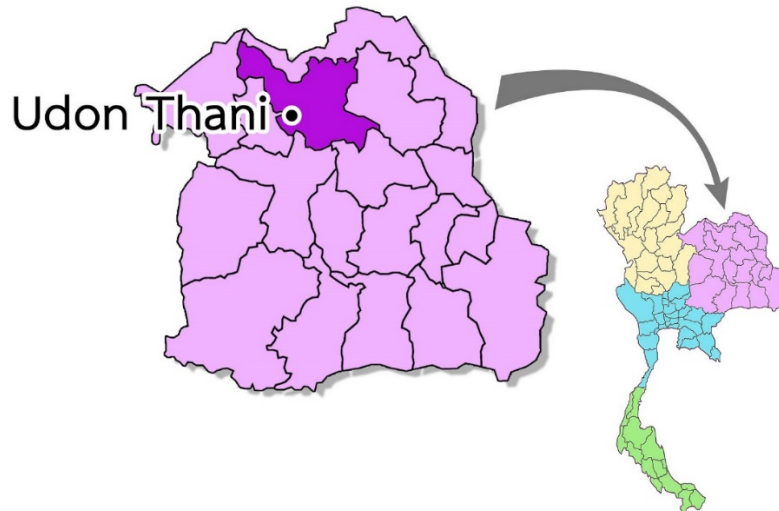
Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	44	81.8	0.0	22	54.5	0.0	C00-C08
Oropharynx	15	100.0	0.0	5	60.0	0.0	C09-C10,C14
Nasopharynx	30	90.0	0.0	14	85.7	0.0	C11
Hypopharynx	5	80.0	0.0	3	100.0	0.0	C12-C13
Esophagus	18	77.8	5.6	5	100.0	0.0	C15
Stomach	37	70.3	0.0	36	72.2	2.8	C16
Small intestine	5	60.0	0.0	5	60.0	0.0	C17
Colon and rectum	196	83.2	0.0	129	79.1	0.0	C18-C21
Liver and bile duct	280	11.8	5.7	114	18.4	8.8	C22,C24
Gallbladder	6	33.3	0.0	13	38.5	7.7	C23
pancreas	13	23.1	0.0	20	25.0	0.0	C25
Nose,sinuses etc	8	87.5	0.0	5	100.0	0.0	C30-C31
Larynx	22	68.2	4.5	6	50.0	0.0	C32
Trachea, bronchus and lung	378	48.4	9.5	220	40.9	5.5	C33-C34
Other thoracic organs	2	50.0	0.0	1	0.0	0.0	C37-C38
Bone	7	42.9	14.3	6	50.0	0.0	C40-C41
Melanoma of skin	7	100.0	0.0	6	100.0	0.0	C43
Other skin	70	84.3	0.0	63	82.5	0.0	C44
Mesothelioma	0	0.0	0.0	1	100.0	0.0	C45
Kaposi sarcoma	0	0.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	3	100.0	0.0	8	87.5	0.0	C47,C49
Breast	5	100.0	0.0	370	90.8	0.8	C50
Vulva				8	62.5	0.0	C51
Vagina				1	100.0	0.0	C52
Cervix uteri				177	75.7	0.6	C53
Corpus uteri				51	96.1	0.0	C54
Uterus unspecified				2	100.0	0.0	C55
Ovary				75	53.3	1.3	C56
Other female genital organs				4	50.0	0.0	C57
Placenta				4	50.0	0.0	C58
Penis	11	72.7	0.0				C60
Prostate	72	62.5	4.2				C61
Testis	3	66.7	0.0				C62
Other male genital organs	1	0.0	0.0				C63
Kidney	18	61.1	5.6	7	85.7	0.0	C64
Renal pelvis	0	0.0	0.0	0	0.0	0.0	C65
Ureter	1	100.0	0.0	0	0.0	0.0	C66
Bladder	42	81.0	2.4	14	92.9	0.0	C67
Other urinary organs	2	50.0	0.0	0	0.0	0.0	C68
Eye	7	71.4	0.0	5	80.0	20.0	C69
Brain, nervous system	28	25.0	10.7	38	10.5	15.8	C70-C72
Thyroid	9	55.6	0.0	45	84.4	0.0	C73
Adrenal gland	2	50.0	0.0	0	0.0	0.0	C74
Other endocrine	3	33.3	0.0	0	0.0	0.0	C75
Hodgkin disease	3	100.0	0.0	1	100.0	0.0	C81
Non-Hodgkin lymphoma	65	100.0	0.0	40	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	4	100.0	0.0	11	100.0	0.0	C90
Leukemia	32	100.0	0.0	30	100.0	0.0	C91-C95
Myelodysplastic	29	100.0	0.0	18	100.0	0.0	D45-D47
Other and unspecified	49	36.7	20.4	43	30.2	32.6	O&U
<b>All sites</b>	<b>1,532</b>	<b>57.5</b>	<b>4.8</b>	<b>1,626</b>	<b>68.5</b>	<b>3.1</b>	<b>All</b>
<b>All sites without liver</b>	<b>1,252</b>	<b>67.7</b>	<b>4.6</b>	<b>1,512</b>	<b>72.2</b>	<b>2.6</b>	<b>All</b>



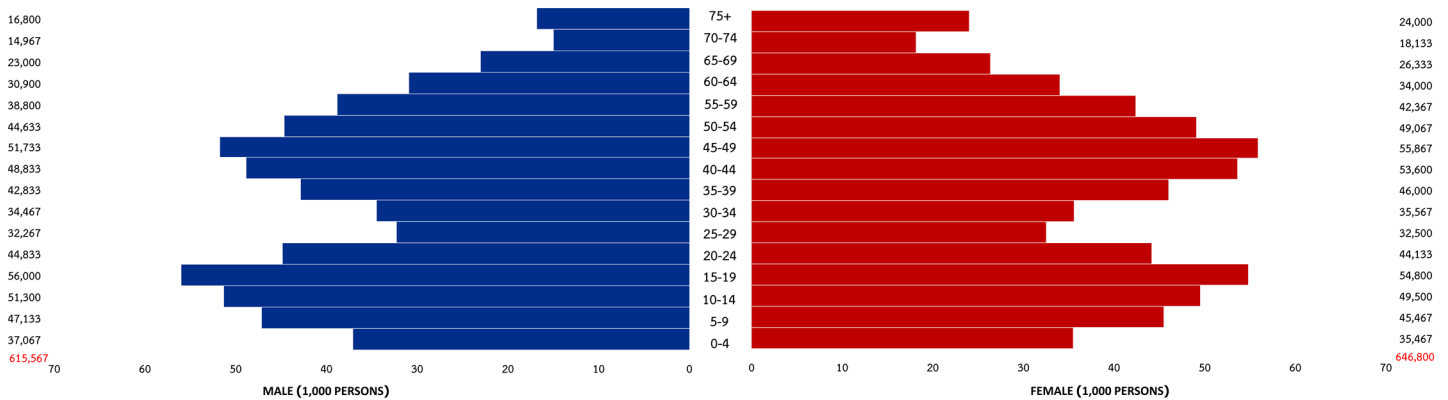
# Udon Thani Cancer Registry

## 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 2014 was 1,262,367. About 95% of the population are Buddhists. The remainder are mainly Christians and Moslems.



Population pyramid, Udon Thani  
estimated population in 2014 (average 2013-2015)



### **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. Hutchu 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.

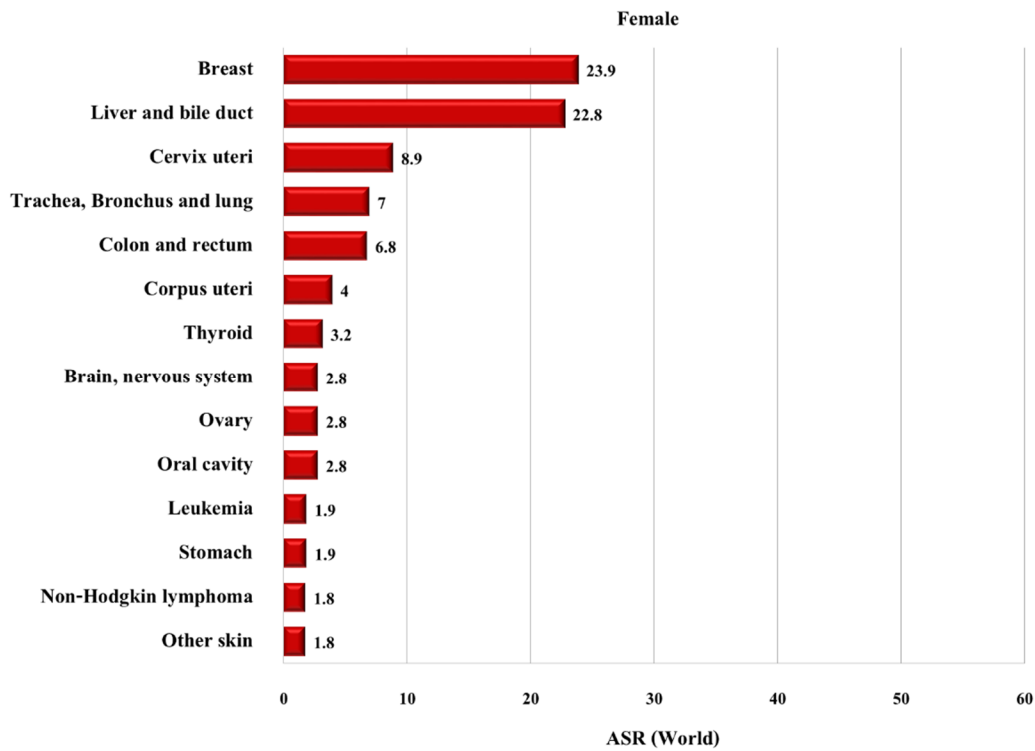
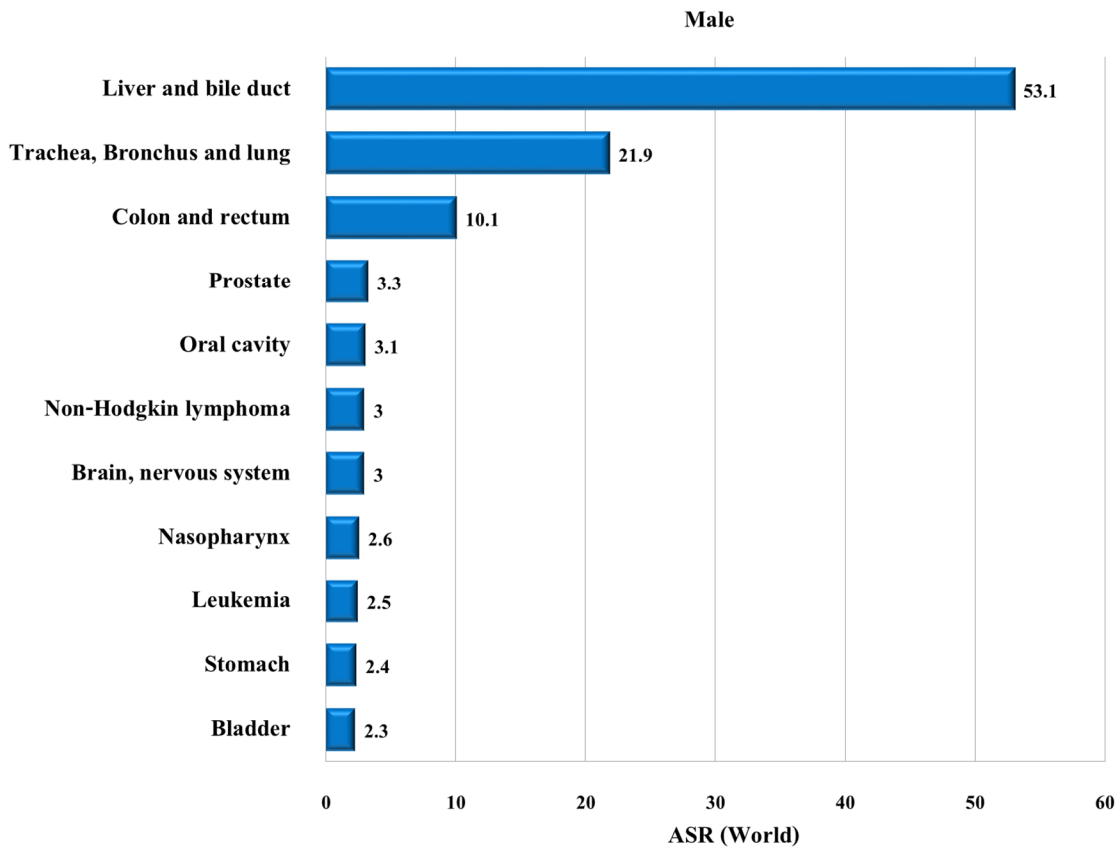
The sources of information on cancer cases are mainly hospital and pathology laboratory records. Each completed case notification form is checked for duplication with computer software for Thai names before entering into the database program, CanReg4.

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 2014, 1,076 were males and 999 were females, making 2,075 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 134.8 per 100,000, with liver and bile duct cancer ranking first (ASR = 53.1) followed by lung (ASR = 21.9) and colon and rectum (ASR = 10.1). The ASR of all cancer sites in females was 110.2 per 100,000, the three leading cancer sites being breast (ASR = 23.9), liver and bile duct (ASR = 22.8) and cervix (ASR = 8.9).

**Figure 3.4** Leading cancer in Udon Thani (mean annual ASR 2013-2015)



**Table 3.4.1** Udon Thani (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Male

Site	No. Case Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.7	0.0	0.0	0.9	0.0	0.0	2.2	4.0	0.3	0.2	C00	0.0	0.0
Tongue	11	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.8	2.0	2.6	5.2	4.3	6.5	7.2	0.0	2.0	1.8	1.4	C01-02	0.1	0.1
Mouth	9	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.6	0.7	0.6	5.2	0.9	1.1	2.9	13.4	9.9	1.4	1.1	C03-06	0.1	0.1
Salivary glands	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	1.3	0.0	0.0	0.9	2.2	1.4	2.2	0.0	0.6	0.4	C07-08	0.0	0.1
Tonsil	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.7	3.4	0.0	0.0	0.0	2.0	0.5	0.4	C09	0.0	0.0
Other oropharynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.3	0.7	0.9	0.0	2.9	2.2	0.0	0.4	0.3	C10	0.0	0.0
Nasopharynx	20	0.0	0.7	0.6	0.0	0.0	0.0	0.0	6.2	4.1	3.2	6.7	3.4	6.5	17.4	8.9	9.9	3.3	2.6	C11	0.2	0.3
Hypopharynx	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.3	0.7	2.6	1.1	2.9	4.5	0.0	0.7	0.5	C12-13	0.0	0.1
Pharynx unspecified	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	C14	0.0	0.0
Oesophagus	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.9	0.7	5.2	5.2	6.5	5.8	2.2	7.9	1.5	1.1	C15	0.1	0.1
Stomach	19	0.0	0.0	0.0	0.0	0.0	1.0	1.9	0.8	1.4	1.9	3.0	5.2	11.9	17.4	11.1	17.9	3.0	2.4	C16	0.1	0.3
Small intestine	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.4	0.0	0.0	0.0	0.0	1.4	4.5	2.0	0.4	0.3	C17	0.0	0.0
Colon	38	0.0	0.0	1.2	0.7	0.0	1.0	0.8	5.5	8.4	5.5	8.4	12.0	11.9	23.2	35.6	37.7	6.2	4.7	C18	0.3	0.5
Rectum	40	0.0	0.0	0.0	0.0	0.0	1.0	1.0	3.1	1.4	9.0	14.2	13.7	21.6	20.3	26.7	31.7	6.4	4.9	C19-20	0.3	0.6
Anus	3	0.0	0.0	0.0	0.0	0.7	1.0	0.0	0.0	0.0	0.0	0.7	2.6	2.2	1.4	0.0	2.0	0.5	0.5	C21	0.0	0.0
Liver and bile duct	433	0.9	0.0	0.0	0.6	1.5	3.1	13.5	30.4	30.7	56.7	115.0	183.0	208.2	334.8	356.3	307.5	70.3	53.1	C22.C24	3.2	6.7
Gallbladder	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	1.9	3.0	0.9	9.7	10.1	20.0	17.9	2.4	1.8	C23	0.1	0.2
Pancreas	9	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.8	0.0	1.9	1.5	5.2	3.2	2.9	11.1	9.9	1.5	1.2	C25	0.1	0.1
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.8	0.7	1.3	0.7	1.7	0.0	2.9	0.0	2.0	0.6	0.5	C30-31	0.0	0.0
Larynx	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.9	1.5	1.5	3.4	7.6	4.3	4.5	4.0	1.3	1.0	C32	0.1	0.1
Trachea, Bronchus and lung	179	0.0	0.0	0.0	1.2	1.5	2.1	2.9	6.2	15.7	21.9	36.6	70.4	85.2	124.6	169.3	178.6	29.0	21.9	C33-34	1.2	2.7
Other thoracic organs	5	0.0	0.0	0.6	1.2	0.0	0.0	1.0	1.6	0.0	0.0	0.7	2.6	1.1	4.3	2.2	2.0	0.9	0.7	C37-38	2.0	0.1
Bone	13	0.0	0.0	1.3	0.6	1.5	0.0	0.0	0.8	1.4	0.6	3.0	0.0	10.8	2.9	24.5	4.0	2.1	1.7	C40-C41	0.1	0.2
Melanoma of skin	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	4.3	4.5	4.0	0.4	0.4	C43	0.0	0.0
Other skin	11	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.4	0.6	1.5	1.7	5.4	8.7	13.4	15.9	1.8	1.4	1.4	C44	0.1	0.2
Connective tissue	5	0.9	0.0	0.0	0.6	0.7	1.0	1.0	2.3	0.7	0.0	0.7	0.0	2.2	1.4	0.0	6.0	0.8	0.8	C47.C49	0.0	0.1
Breast	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.9	2.2	1.4	0.0	0.0	0.3	0.2	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.6	3.0	1.7	4.3	4.3	0.0	4.0	1.0	0.7	C60	0.1	0.1
Prostate	27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.5	5.2	8.6	21.7	44.5	53.6	4.3	3.3	C61	0.1	0.4
Testis	3	0.0	0.0	0.6	0.0	0.7	1.0	1.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.4	0.4	C62	0.0	0.0
Kidney	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.6	2.2	5.2	6.5	4.3	4.5	2.0	1.3	1.0	C64	0.1	0.1
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.1	0.0	0.0	0.0	0.1	0.1	C65	0.0	0.0
Bladder	18	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.9	3.0	0.9	9.7	14.5	17.8	29.8	2.9	2.3	C67	0.1	0.3
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.1	0.0	C68	0.0	0.0
Eye	1	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	2.0	0.2	0.3	C69	0.0	0.0
Brain, nervous system	23	0.0	1.4	0.0	0.0	0.7	1.0	2.9	4.7	3.4	1.9	6.0	7.7	9.7	5.8	22.3	13.9	3.7	3.0	C70-72	0.2	0.3
Thyroid	5	0.0	0.0	0.6	0.0	0.0	1.0	1.0	0.8	1.4	0.6	0.0	1.7	4.3	1.4	0.0	2.0	0.8	0.7	C73	0.1	0.1
Adrenal gland	2	2.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	C74	0.0	0.0
Other endocrine	1	0.0	0.7	0.6	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C75	0.0	0.0
Hodgkin disease	3	0.0	0.0	0.0	0.0	0.7	2.1	1.9	0.8	0.0	0.6	0.7	0.0	0.0	1.4	2.2	0.0	0.5	0.6	C81	0.0	0.1
Non-Hodgkin Lymphoma	22	1.8	1.4	0.0	0.6	0.0	0.0	6.8	1.6	2.0	6.4	5.2	6.0	3.2	14.5	17.8	9.9	3.6	3.0	C82-85.C96	0.2	0.3
Multiple myeloma	3	0.0	0.0	0.0	0.0	0.7	0.0	1.0	0.0	0.7	0.0	0.7	1.7	1.1	2.9	0.0	2.0	0.5	0.4	C90	0.0	0.0
Lymphoid leukemia	1	0.0	0.0	0.6	0.0	0.7	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C91	0.0	0.0
Myeloid leukemia	1	0.0	0.0	0.6	0.0	0.7	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	C92-94	0.0	0.0
Leukemia unspecified	15	0.9	2.1	0.0	0.6	0.0	3.1	1.0	0.8	2.0	4.5	1.5	5.2	4.3	7.2	4.5	9.9	2.4	2.1	C95	0.1	0.2
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	2.2	2.0	0.1	0.1	D45-D47	0.0	0.0
Other and unspecified	82	0.0	0.0	0.0	0.0	1.5	4.1	6.8	3.9	6.8	7.7	16.4	24.1	39.9	76.8	69.0	71.4	13.4	10.5	O&U	0.6	1.3
All sites	1,076	9.9	7.1	5.8	7.1	14.1	22.7	48.4	75.5	98.3	146.9	251.7	386.6	499.5	760.9	906.5	882.9	174.9	134.8	ALL	7.9	16.2

**Table 3.4.2** Udon Thani (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Female

Site	No.Case Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	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	2.9	3.8	9.2	12.5	1.0	0.7	C00	0.0	0.1
Tongue	4	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.6	0.6	1.4	0.0	2.9	1.3	0.0	4.2	0.7	0.5	C01-C02	0.0	0.0
Mouth	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	1.4	2.4	4.9	5.1	14.7	30.6	2.4	1.5	C03-C06	0.1	0.2
Salivary glands	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.3	1.8	0.0	0.2	0.1	C07-C08	0.0	0.0
Tonsil	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	2.4	2.9	0.0	1.8	0.0	0.5	0.3	C09	0.0	0.0
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	1.4	0.0	0.0	1.3	0.0	0.2	0.1	0.1	C10	0.0	0.0
Nasopharynx	11	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.7	2.5	3.0	3.4	2.4	6.9	0.0	3.7	5.6	1.6	1.1	C11	0.1	0.1
Hypopharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.1	0.0	C12-C13	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.1	0.0	C14	0.0	0.0
Oesophagus	2	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.6	0.0	0.0	0.0	1.0	1.3	1.8	0.0	0.3	0.2	C15	0.0	0.0
Stomach	17	0.0	0.0	0.0	0.0	0.0	2.1	2.8	0.0	1.9	4.2	2.7	6.3	2.0	12.7	5.5	12.5	2.6	1.9	C16	0.1	0.2
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	3.7	0.0	0.1	0.1	C17	0.0	0.0
Colon	32	0.0	0.0	0.0	0.0	1.5	0.0	1.9	0.0	2.5	1.2	6.8	12.6	11.8	27.8	14.7	25.0	4.9	3.4	C18	0.2	0.4
Rectum	31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	1.9	5.4	6.8	14.2	15.7	15.2	16.5	15.3	4.7	3.2	C19-C20	0.2	0.4
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.3	0.0	4.2	0.3	0.2	C21	0.0	0.0
Liver and bile duct	216	1.9	0.0	0.0	0.6	0.0	0.0	3.7	6.5	10.6	17.9	42.8	69.2	110.8	140.5	172.8	161.1	33.4	22.8	C22-C24	1.3	2.9
Gallbladder	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.9	0.6	1.4	4.7	4.9	6.3	11.0	9.7	1.9	1.2	C23	0.1	0.2
Pancreas	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.4	1.4	2.4	2.9	5.1	7.4	12.5	1.5	1.0	C25	0.0	0.1
Nose, sinuses etc.	2	0.9	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.8	2.0	1.3	0.0	0.0	0.3	0.3	C30-C31	0.0	0.0
Larynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	2.0	0.0	0.0	0.0	0.2	0.2	C32	0.0	0.0
Trachea, Bronchus and lung	66	0.0	0.0	0.0	0.6	0.8	0.0	0.9	6.5	5.6	7.8	19.0	22.8	32.4	31.6	42.3	34.7	10.2	7.0	C33-C34	0.5	0.9
Other thoracic organs	3	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.6	0.0	1.4	0.0	2.0	1.3	0.0	1.4	0.4	0.3	C37-C38	0.0	0.0
Bone	10	0.0	0.0	1.3	0.6	0.0	0.0	0.0	1.4	0.0	0.6	2.7	0.0	3.9	8.9	7.4	5.6	1.5	1.1	C40-C41	0.1	0.1
Melanoma of skin	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	2.8	0.2	0.1	C43	0.0	0.0
Other skin	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	3.4	3.1	7.8	7.6	9.2	31.9	2.8	1.8	C44	0.1	0.2
Connective tissue	6	0.9	0.0	0.0	0.0	0.0	0.0	0.9	0.7	1.2	0.6	1.4	1.6	2.0	5.1	0.0	1.4	0.9	0.7	C47,C49	0.0	0.1
Breast	216	0.0	0.0	0.0	0.0	1.5	5.1	20.6	29.0	64.7	65.6	74.7	79.5	54.9	69.6	44.1	25.0	33.3	23.9	C50	2.0	2.5
Vulva	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.4	2.9	2.5	1.8	1.4	0.6	0.4	C51	0.0	0.1
Vagina	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.7	1.6	1.0	2.5	1.8	0.0	0.5	0.3	C52	0.0	0.0
Cervix uteri	79	0.0	0.0	0.0	0.0	0.0	2.1	10.3	13.0	18.7	19.1	19.7	19.7	29.4	30.4	27.6	30.6	12.3	8.9	C53	0.7	1.0
Corpus uteri	38	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	3.1	5.4	20.4	22.8	15.7	10.1	22.1	2.8	5.8	4.0	C54	0.3	0.5
Uterus unspecified	4	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	0.0	0.0	1.4	0.8	1.0	2.5	3.7	1.4	0.6	0.4	C55	0.0	0.1
Ovary	24	0.0	0.0	0.0	1.8	3.0	1.0	0.9	3.6	1.2	7.8	9.5	6.3	5.9	8.9	7.4	5.6	3.7	2.8	C56	0.2	0.3
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C57	0.0	0.0
Placenta	2	0.0	0.0	0.0	0.6	0.0	1.0	0.9	0.0	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Kidney	4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.8	0.7	1.6	1.0	3.8	1.8	0.0	0.7	0.5	C64	0.0	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C65	0.0	0.0
Bladder	2	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.6	1.2	0.7	0.0	0.0	1.3	0.0	1.4	0.4	0.3	C67	0.0	0.0
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	1	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C69	0.0	0.0
Brain, nervous system	22	0.9	1.5	2.0	0.6	0.8	2.1	1.9	6.5	4.4	3.6	2.7	3.1	7.8	8.9	3.7	8.3	3.3	2.8	C70-C72	0.2	0.3
Thyroid	24	0.0	0.0	0.7	0.6	3.8	5.1	6.6	3.6	3.1	4.2	4.8	7.9	5.9	7.6	11.0	2.8	3.8	3.2	C73	0.2	0.3
Adrenal gland	1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C74	0.0	0.0
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C75	0.0	0.0
Hodgkin disease	1	0.0	0.0	0.7	0.6	0.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	C81	0.0	0.0
Non-Hodgkin lymphoma	14	0.9	0.0	0.0	0.6	0.8	2.1	2.8	1.4	1.9	1.8	3.4	3.9	5.9	3.8	7.4	4.2	2.2	1.8	C82-85,C96	0.1	0.2
Multiple myeloma	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.7	0.0	0.0	3.8	3.7	0.0	0.4	0.3	C90	0.0	0.0
Lymphoid leukemia	1	0.0	0.7	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	0.1	0.1	C91	0.0	0.0
Myeloid leukemia	3	0.9	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.6	0.6	0.0	0.8	1.0	1.3	1.8	0.0	0.5	0.4	C92-94	0.0	0.0
Leukemia unspecified	12	0.0	0.0	0.7	0.6	1.5	0.0	2.8	1.4	1.9	2.4	3.4	2.4	3.9	3.8	5.5	2.8	1.9	1.4	C95	0.1	0.2
Myelodysplastic disease	1	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.1	0.1	D45-D47	0.0	0.0
Other and unspecified	69	0.0	0.0	0.0	0.0	0.8	1.0	2.8	4.3	6.2	7.8	9.5	17.3	27.5	43.0	58.8	61.1	10.7	7.4	O&U	0.4	0.9
All sites	999	10.3	2.2	6.1	7.9	15.9	27.7	66.5	84.8	141.8	173.0	250.0	316.3	387.3	482.3	525.7	520.8	154.5	110.2	ALL	7.4	12.5

**Table 3.4.3** Mean annual incidence, Udon Thani, 2013-2015

Site	Male						Female						ICD-10
	No.Cases	Freq.	Crude	ASR	Cum.	Rate.	No.Cases	Freq.	Crude	ASR	Cum.	Rate.	
	Year	(%)	rate	world	0-64	0-74	Year	(%)	rate	world	0-64	0-74	
			(per 100,000)		(percent)			(per 100,000)		(percent)			
Lip	2	0.2	0.3	0.2	0.0	0.0	7	0.7	1.0	0.7	0.0	0.1	C00
Tongue	11	1.1	1.8	1.4	0.1	0.1	4	0.4	0.7	0.5	0.0	0.0	C01-02
Mouth	9	0.8	1.4	1.1	0.1	0.1	16	1.6	2.4	1.5	0.1	0.2	C03-06
Salivary glands	4	0.3	0.6	0.4	0.0	0.1	1	0.1	0.2	0.1	0.0	0.0	C07-08
Tonsil	3	0.3	0.5	0.4	0.0	0.0	3	0.3	0.5	0.3	0.0	0.0	C09
Other oropharynx	3	0.2	0.4	0.3	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C10
Nasopharynx	20	1.9	3.3	2.6	0.2	0.3	11	1.1	1.6	1.1	0.1	0.1	C11
Hypopharynx	4	0.4	0.7	0.5	0.0	0.1	0	0.0	0.1	0.0	0.0	0.0	C12-13
Pharynx unspecified	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C14
Oesophagus	9	0.8	1.5	1.1	0.1	0.1	2	0.2	0.3	0.2	0.0	0.0	C15
Stomach	19	1.7	3.0	2.4	0.1	0.3	17	1.7	2.6	1.9	0.1	0.2	C16
Small intestine	2	0.2	0.4	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C17
Colon	38	3.5	6.2	4.7	0.3	0.5	32	3.2	4.9	3.4	0.2	0.4	C18
Rectum	40	3.7	6.4	4.9	0.3	0.6	31	3.1	4.7	3.2	0.2	0.4	C19-20
Anus	3	0.3	0.5	0.5	0.0	0.0	2	0.2	0.3	0.2	0.0	0.0	C21
Liver and bile duct	433	40.2	70.3	53.1	3.2	6.7	216	21.6	33.4	22.8	1.3	2.9	C22,C24
Gallbladder	15	1.4	2.4	1.8	0.1	0.2	12	1.2	1.9	1.2	0.1	0.2	C23
Pancreas	9	0.9	1.5	1.2	0.1	0.1	10	1.0	1.5	1.0	0.0	0.1	C25
Nose, sinuses etc.	4	0.3	0.6	0.5	0.0	0.0	2	0.2	0.3	0.3	0.0	0.0	C30-31
Larynx	8	0.7	1.3	1.0	0.1	0.1	1	0.1	0.2	0.2	0.0	0.0	C32
Trachea, Bronchus and lung	179	16.6	29.0	21.9	1.2	2.7	66	6.6	10.2	7.0	0.5	0.9	C33-34
Other thoracic organs	5	0.5	0.9	0.7	0.0	0.1	3	0.3	0.4	0.3	0.0	0.0	C37-38
Bone	13	1.2	2.1	1.7	0.1	0.2	10	1.0	1.5	1.1	0.1	0.1	C40-C41
Melanoma of skin	3	0.2	0.4	0.4	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C43
Other skin	11	1.0	1.8	1.4	0.1	0.2	18	1.8	2.8	1.8	0.1	0.2	C44
Connective tissue	5	0.5	0.8	0.8	0.0	0.1	6	0.6	0.9	0.7	0.0	0.1	C47,C49
Breast	2	0.2	0.3	0.2	0.0	0.0	216	21.6	33.3	23.9	2.0	2.5	C50
Vulva							4	0.4	0.6	0.4	0.0	0.1	C51
Vagina							3	0.3	0.5	0.3	0.0	0.0	C52
Cervix uteri							79	7.9	12.3	8.9	0.7	1.0	C53
Corpus uteri							38	3.8	5.8	4.0	0.3	0.5	C54
Uterus unspecified							4	0.4	0.6	0.4	0.0	0.1	C55
Ovary							24	2.4	3.7	2.8	0.2	0.3	C56
Other female genital organs							0	0.0	0.1	0.1	0.0	0.0	C57
Placenta							2	0.2	0.3	0.3	0.0	0.0	C58
Penis	6	0.6	1.0	0.7	0.1	0.1							C60
Prostate	27	2.5	4.3	3.3	0.1	0.4							C61
Testis	3	0.2	0.4	0.4	0.0	0.0							C62
Kidney	8	0.7	1.3	1.0	0.1	0.1	4	0.4	0.7	0.5	0.0	0.1	C64
Renal pelvis	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.1	0.0	0.0	0.0	C65
Bladder	18	1.7	2.9	2.3	0.1	0.3	2	0.2	0.4	0.3	0.0	0.0	C67
Other urinary organs	0	0.0	0.1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C68
Eye	1	0.1	0.2	0.3	0.0	0.0	1	0.1	0.1	0.2	0.0	0.0	C69
Brain, nervous system	23	2.1	3.7	3.0	0.2	0.3	22	2.2	3.3	2.8	0.2	0.3	C70-72
Thyroid	5	0.5	0.8	0.7	0.1	0.1	24	2.4	3.8	3.2	0.2	0.3	C73
Adrenal gland	2	0.2	0.3	0.4	0.0	0.0	1	0.1	0.2	0.2	0.0	0.0	C74
Other endocrine	1	0.1	0.2	0.2	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0	C75
Hodgkin disease	3	0.3	0.5	0.6	0.0	0.1	1	0.1	0.2	0.3	0.0	0.0	C81
Non-Hodgkin lymphoma	22	2.1	3.6	3.0	0.2	0.3	14	1.4	2.2	1.8	0.1	0.2	C82-85,C96
Multiple myeloma	3	0.3	0.5	0.4	0.0	0.0	3	0.3	0.4	0.3	0.0	0.0	C90
Lymphoid leukemia	1	0.1	0.2	0.2	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C91
Myeloid leukemia	1	0.1	0.2	0.2	0.0	0.0	3	0.3	0.5	0.4	0.0	0.0	C92-94
Leukemia unspecified	15	1.4	2.4	2.1	0.1	0.2	12	1.2	1.9	1.4	0.1	0.2	C95
Myelodysplastic disease	1	0.1	0.1	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	D45-D47
Other and unspecified	82	7.6	13.4	10.5	0.6	1.3	69	6.9	10.7	7.4	0.4	0.9	O&U
<b>All sites</b>	<b>1,076</b>	<b>100.0</b>	<b>174.9</b>	<b>134.8</b>	<b>7.9</b>	<b>16.2</b>	<b>999</b>	<b>100.0</b>	<b>154.5</b>	<b>110.2</b>	<b>7.4</b>	<b>12.5</b>	<b>ALL</b>

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

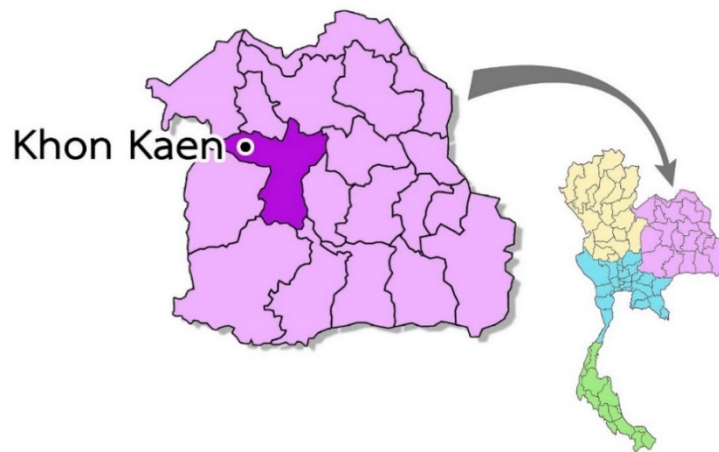
Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	76	93.4	6.6	83	90.4	9.6	C00-C08
Oropharynx	19	73.7	21.1	13	76.9	15.4	C09-C10,C14
Nasopharynx	61	91.8	6.6	32	93.8	3.1	C11
Hypopharynx	13	100.0	0.0	1	100.0	0.0	C12-C13
Esophagus	27	85.2	7.4	5	60.0	20.0	C15
Stomach	56	57.1	39.3	51	54.9	37.3	C16
Small intestine	7	85.7	14.3	2	100.0	0.0	C17
Colon and rectum	243	95.5	0.4	193	96.4	0.0	C18-C21
Liver and bile duct	1,299	46.9	7.4	648	48.6	8.5	C22,C24
Gallbladder	44	22.7	75.0	36	27.8	58.3	C23
pancreas	28	39.3	25.0	30	23.3	36.7	C25
Nose,sinuses etc	11	100.0	0.0	6	100.0	0.0	C30-C31
Larynx	24	87.5	8.3	4	100.0	0.0	C32
Trachea, bronchus and lung	536	56.5	2.4	197	61.9	2.5	C33-C34
Other thoracic organs	16	75.0	12.5	8	87.5	0.0	C37-C38
Bone	38	26.3	73.7	29	27.6	72.4	C40-C41
Melanoma of skin	8	100.0	0.0	4	100.0	0.0	C43
Other skin	33	87.9	6.1	55	96.4	1.8	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	17	88.2	5.9	C47,C49
Breast	5	100.0	0.0	647	98.5	0.0	C50
Vulva				11	100.0	0.0	C51
Vagina				9	100.0	0.0	C52
Cervix uteri				238	100.0	0.0	C53
Corpus uteri				113	97.3	0.9	C54
Uterus unspecified				11	18.2	81.8	C55
Ovary				72	75.0	18.1	C56
Other female genital organs				1	0.0	100.0	C57
Placenta				5	100.0	0.0	C58
Penis	18	94.4	5.6				C60
Prostate	80	65.0	25.0				C61
Testis	8	100.0	0.0				C62
Other male genital organs	0	0.0	0.0				C63
Kidney	24	62.5	16.7	13	92.3	7.7	C64
Renal pelvis	2	100.0	0.0	1	100.0	0.0	C65
Ureter	0	0.0	0.0	0	0.0	0.0	C66
Bladder	54	81.5	13.0	7	85.7	14.3	C67
Other urinary organs	1	100.0	0.0	0	0.0	0.0	C68
Eye	4	100.0	0.0	2	100.0	0.0	C69
Brain, nervous system	68	29.4	1.5	65	27.7	0.0	C70-C72
Thyroid	15	93.3	6.7	73	95.9	2.7	C73
Adrenal gland	5	60.0	20.0	3	100.0	0.0	C74
Other endocrine	4	75.0	0.0	1	100.0	0.0	C75
Hodgkin disease	10	100.0	0.0	4	100.0	0.0	C81
Non-Hodgkin lymphoma	67	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	10	100.0	0.0	8	100.0	0.0	C90
Leukemia	51	100.0	0.0	47	100.0	0.0	C91-C95
Myelodysplastic	2	100.0	0.0	2	100.0	0.0	D45-D47
Other and unspecified	247	89.1	5.3	208	90.9	5.3	O&U
<b>All sites</b>	<b>3,229</b>	<b>63.0</b>	<b>8.4</b>	<b>2,997</b>	<b>78.6</b>	<b>6.2</b>	<b>All</b>
<b>All sites without liver</b>	<b>1,930</b>	<b>73.8</b>	<b>9.0</b>	<b>2,349</b>	<b>86.9</b>	<b>5.5</b>	<b>All</b>

# Khon Kaen Cancer Registry

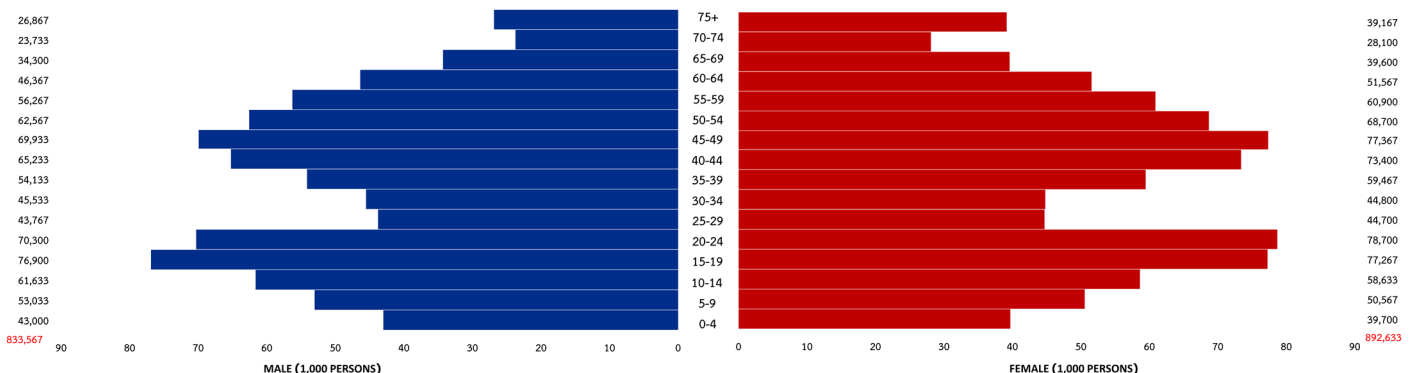
## Registration area

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 2014 (average 2013-2015)





### **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.

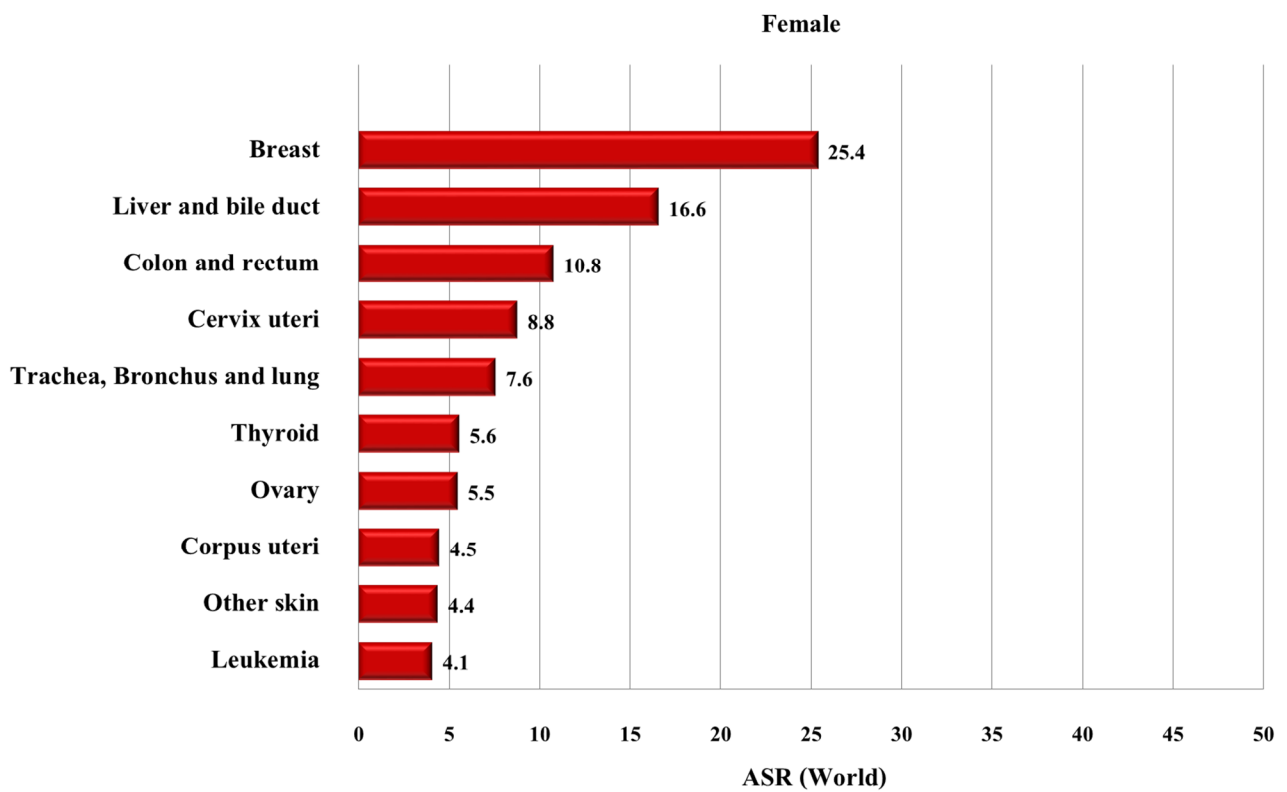
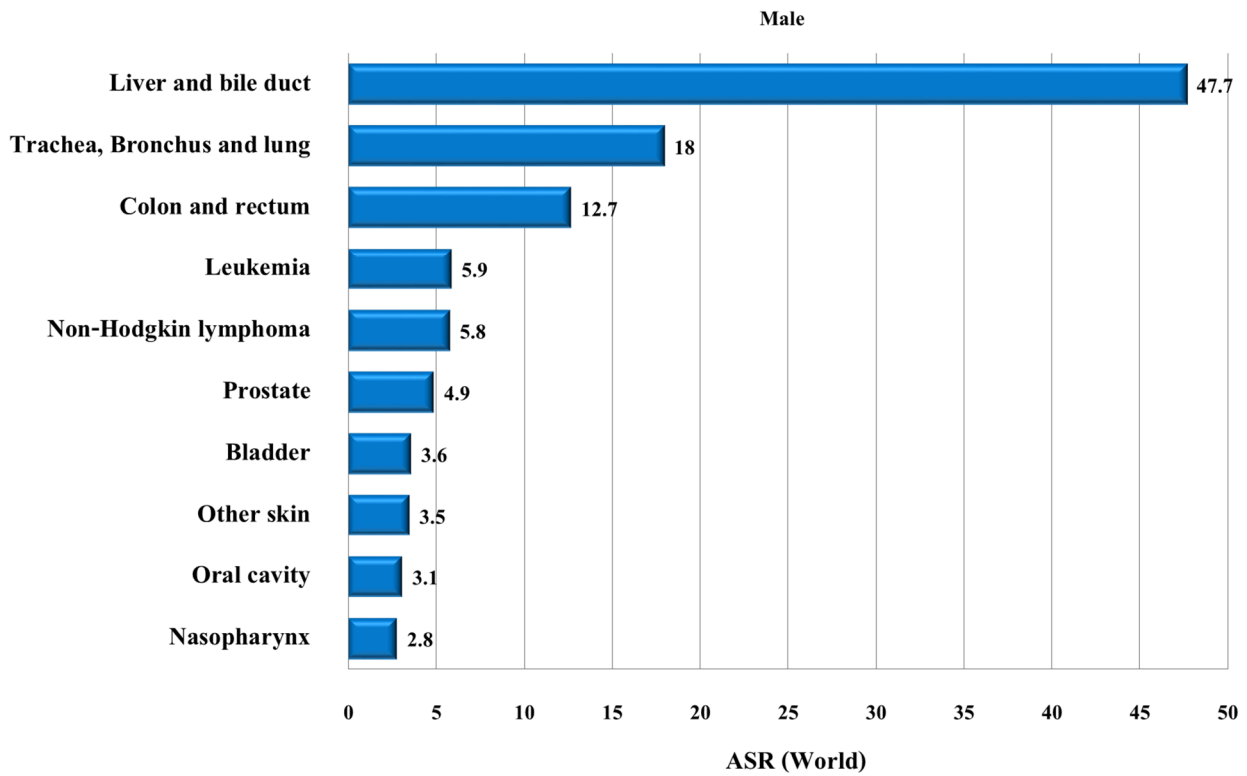
### **Registry procedures**

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

### **Summary of results**

New cases registered in 2014, 1,728 were males and 1,620 were females, making 3,348 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males is 138.1 per 100,000, with liver and bile duct cancer ranking first (ASR = 47.7) followed by lung (ASR = 18) and colon and rectum (ASR = 12.7). The ASR for all cancer sites in females was 119.4 per 100,000 the three leading cancer sites in females being breast (ASR = 25.4), liver and bile duct (ASR = 16.6) and colon and rectum (ASR = 10.8).

**Figure 3.5** Leading cancer in Khon Kaen (mean annual ASR 2013-2015)



**Table 3.5.1** Khon Kaen (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+ Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.6	0.7	0.0	2.8	1.2	0.3	C00	0.0	0.0
Tongue	19	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	3.6	1.9	4.8	4.1	5.0	3.9	12.6	9.9	2.2	C01-C02	0.1	0.2
Mouth	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.0	2.4	2.7	1.8	2.2	4.2	12.4	1.5	1.0	C03-C06	0.1	0.1
Salivary glands	4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	1.9	0.0	1.2	1.4	1.0	1.4	1.2	0.5	C07-C08	0.0	0.0
Tonsil	8	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	2.0	2.9	1.1	1.2	2.9	2.9	1.4	0.0	0.9	C09	0.1	0.1
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.2	0.0	0.1	C10	0.0	0.0
Nasopharynx	32	0.0	0.0	0.5	0.4	0.5	0.8	2.2	3.7	5.1	5.7	5.9	12.4	6.5	8.7	8.4	5.0	3.8	C11	0.2	0.3
Hypopharynx	10	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0	2.4	2.7	1.8	0.7	1.9	8.4	6.2	1.2	C12-C13	0.0	0.1
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.6	0.0	0.0	0.0	0.0	0.1	C14	0.0	0.0
Oesophagus	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.0	2.9	4.8	5.3	5.8	9.7	7.0	5.0	2.2	C15	0.1	0.2
Stomach	33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	3.1	1.9	6.4	6.5	11.5	11.7	21.1	24.8	4.0	C16	0.2	0.3
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.1	3.0	0.0	0.0	0.0	0.0	0.4	C17	0.0	0.0
Colon	69	0.0	0.0	0.0	0.0	0.9	0.8	2.9	3.7	6.1	5.2	13.3	14.8	20.1	27.2	37.9	45.9	8.2	C18	0.3	0.7
Rectum	79	0.0	0.0	0.0	0.0	0.0	2.3	0.7	4.3	3.6	6.7	16.0	16.0	35.2	33.0	32.3	53.3	9.5	C19-C20	0.4	0.8
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.5	0.0	1.2	0.0	1.0	0.0	1.2	0.3	C21	0.0	0.0
Liver and bile duct	580	1.6	0.0	0.0	1.7	0.5	2.3	6.6	22.2	29.6	55.8	121.5	170.6	181.2	247.8	276.7	359.8	69.6	C22,C24	3.0	5.6
Gallbladder	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.1	3.6	2.2	14.6	16.9	23.6	2.4	C23	0.0	0.2
Pancreas	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.0	2.4	0.5	2.4	4.3	5.8	2.8	12.4	1.5	C25	0.1	0.1
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.4	0.5	0.0	0.7	2.9	2.8	1.2	0.5	C30-C31	0.0	0.0
Larynx	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.4	4.3	8.3	7.9	7.8	12.6	7.4	2.5	C32	0.1	0.2
Trachea, Bronchus and lung	219	0.0	0.0	0.0	0.4	0.5	0.8	1.5	4.3	7.2	16.7	31.4	37.3	74.0	126.3	113.8	198.5	26.3	C33-C34	0.9	2.1
Other thoracic organs	5	0.0	0.0	1.3	1.4	0.8	0.0	0.0	0.0	0.0	0.5	0.5	1.8	2.2	0.0	0.0	0.0	0.6	C37-C38	0.0	0.0
Bone	7	0.0	0.6	1.1	1.7	0.9	0.0	0.7	0.0	0.5	0.5	0.6	1.4	1.0	1.4	5.6	0.0	0.8	C40-C41	0.0	0.1
Melanoma of skin	5	0.0	0.0	0.0	0.0	0.5	0.8	0.0	0.0	0.0	0.0	0.5	0.6	1.4	1.0	7.0	5.0	0.6	C43	0.0	0.1
Other skin	44	0.0	0.0	0.0	0.4	0.0	0.0	0.7	0.6	1.5	3.3	3.7	10.1	12.9	14.6	39.3	39.7	5.2	C44	0.2	0.4
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	7	0.8	0.0	0.0	0.4	0.0	0.0	0.7	0.6	0.0	1.0	2.1	1.2	2.9	1.0	4.2	2.5	0.9	C47,C49	0.0	0.1
Breast	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.6	0.7	0.0	1.4	2.5	0.4	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	16	0.0	0.0	0.0	0.0	0.5	0.0	0.0	2.5	2.0	1.9	4.8	2.4	5.0	6.8	4.2	7.4	2.0	C60	0.1	0.2
Prostate	60	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.6	0.5	0.0	1.6	7.1	24.4	34.0	53.4	68.2	7.2	C61	0.2	0.6
Testis	4	0.8	0.0	0.0	0.4	0.5	4.6	0.0	0.0	0.0	0.5	0.5	0.6	0.0	0.0	1.4	0.0	0.5	C62	0.0	0.0
Kidney	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	2.9	3.2	5.9	4.3	4.9	1.4	3.7	1.6	C64	0.1	0.1
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.2	0.0	0.0	0.0	1.4	0.0	0.2	C65	0.0	0.0
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C66	0.0	0.0
Bladder	44	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	2.0	2.4	3.7	10.7	12.2	26.2	21.1	44.7	5.2	C67	0.2	0.4
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	2	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.6	0.0	0.0	0.0	0.0	0.2	C69	0.0	0.0
Brain, nervous system	15	2.3	1.3	1.1	0.4	0.0	0.8	1.5	3.1	1.5	1.9	2.1	1.8	4.3	2.9	0.0	6.2	1.8	C70-C72	0.1	0.1
Thyroid	12	0.0	0.6	0.0	0.4	0.0	1.5	2.2	0.6	1.0	0.5	2.1	3.6	2.9	3.9	7.0	2.5	1.4	C73	0.1	0.1
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	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	C75	0.0	0.0
Hodgkin disease	4	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	1.0	0.0	2.7	0.0	0.0	1.0	0.0	2.5	0.5	C81	0.0	0.0
Non-Hodgkin lymphoma	64	0.8	1.3	1.1	0.9	1.4	4.6	3.7	4.9	3.6	8.6	7.5	11.3	20.1	24.3	33.7	33.5	7.6	C82-C85,C96	0.3	0.6
Multiple myeloma	18	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.5	1.4	3.2	4.1	7.9	7.8	12.6	9.9	2.2	C90	1.5	0.2
Lymphoid leukemia	10	6.2	1.9	2.7	0.9	0.5	0.0	1.5	1.2	0.0	0.0	1.1	0.0	0.0	1.0	1.4	2.5	1.2	C91	0.1	0.1
Myeloid leukemia	32	3.9	1.3	1.1	1.3	2.4	2.3	4.4	0.6	4.1	3.8	6.9	4.7	5.0	6.8	11.2	11.2	3.8	C92-C94	0.2	0.3
Leukemia unspecified	7	3.9	0.6	0.5	0.9	0.5	0.8	0.0	0.0	0.5	0.5	0.5	0.0	0.7	1.9	2.8	2.5	0.8	C95	0.0	0.1
Myelodysplastic disease	26	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	2.0	1.9	3.7	5.3	7.2	4.9	19.7	27.3	3.1	D45-D47	0.1	0.2
Other and unspecified	72	0.0	0.0	1.1	0.0	0.0	1.5	2.2	3.1	2.6	7.6	12.8	19.0	21.6	29.2	37.9	49.6	8.6	O&U	0.4	0.7
All sites	1,623	23.3	7.5	10.3	12.1	11.4	26.7	36.6	61.6	94.0	156.3	284.5	386.3	499.6	682.2	830.1	1091.8	194.5	138.1	8.1	15.6

**Table 3.5.2** Khon Kaen (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate ASR World	ICD-10	Cum. 0-64	Rate. 0-74	
Lip	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.6	5.9	11.9	19.6	1.7	0.9	C00	0.0	0.1
Tongue	12	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.2	0.9	1.7	1.5	2.2	2.6	1.7	2.4	7.7	1.3	0.9	C01-C02	0.1	0.1
Mouth	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.4	0.4	0.5	1.1	1.3	7.6	2.4	21.3	1.7	1.0	C03-C06	0.0	0.1
Salivary glands	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.9	0.5	0.5	0.0	0.8	2.4	1.7	0.4	0.3	C07-C08	0.0	0.0
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C09	0.0	0.0
Other oropharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C10	0.0	0.0
Nasopharynx	10	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.6	2.3	2.2	1.5	2.2	2.6	3.4	0.0	1.7	1.1	0.8	C11	0.1	0.1
Hypopharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C12-C13	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14	0.0	0.0
Oesophagus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.0	4.4	6.0	1.3	0.8	2.4	0.9	0.3	0.2	C15	0.0	0.0
Stomach	23	0.0	0.0	0.0	0.0	0.0	0.7	2.2	2.8	2.7	3.0	4.4	6.0	3.2	6.7	8.3	6.0	2.6	1.8	C16	0.1	0.2
Small intestine	4	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	0.8	7.1	0.9	0.4	0.3	C17	0.0	0.0
Colon	84	0.0	0.0	0.0	0.0	1.3	0.7	3.0	1.7	3.2	8.2	8.7	18.6	20.7	35.4	43.9	43.4	9.4	5.9	C18	0.3	0.7
Rectum	68	0.0	0.0	0.0	0.0	0.4	0.0	1.5	3.4	0.5	6.0	10.2	13.7	22.0	27.8	32.0	33.2	7.6	4.8	C19-20	0.3	0.6
Anus	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.6	0.0	1.2	0.0	0.1	0.1	C21	0.0	0.0
Liver and bile duct	243	0.8	0.0	0.0	0.4	0.0	0.7	0.0	3.4	5.4	9.9	20.4	52.0	71.1	108.6	138.8	164.3	27.3	16.6	C22,C24	0.8	2.1
Gallbladder	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	1.7	2.4	3.8	3.2	3.4	4.7	12.8	1.7	1.0	C23	0.1	0.1
Pancreas	15	0.0	0.0	0.0	0.0	0.0	0.7	2.2	0.0	1.4	0.9	1.5	0.5	3.2	9.3	8.3	7.7	1.7	1.1	C25	0.1	0.1
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	0.8	0.0	0.9	0.1	0.1	C30-C31	0.0	0.0
Larynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C32	0.0	0.0
Trachea, Bronchus and lung	108	0.0	0.0	0.0	0.0	0.8	0.7	1.5	5.0	3.2	9.9	11.6	25.7	31.0	42.9	49.8	57.9	12.1	7.6	C33-C34	0.4	0.9
Other thoracic organs	4	0.0	0.0	0.6	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.6	0.0	3.6	1.7	0.4	0.3	C37-C38	0.0	0.0
Bone	6	0.0	0.0	0.6	0.0	0.4	0.7	1.5	0.6	0.5	0.9	0.5	1.1	1.3	1.7	0.0	0.9	0.6	0.5	C40-C41	0.0	0.0
Melanoma of skin	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.6	0.0	2.4	6.0	0.3	0.3	C43	0.0	0.0
Other skin	65	0.0	0.0	0.0	0.9	0.4	0.7	0.7	1.7	3.2	3.4	7.3	11.5	16.8	17.7	27.3	57.0	7.3	4.4	C44	0.2	0.5
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	7	0.8	0.7	0.0	0.0	0.4	0.0	1.5	1.1	0.9	0.0	0.5	0.5	2.6	1.7	3.6	0.9	0.8	0.7	C47,C49	0.0	0.1
Breast	327	0.0	0.0	0.0	0.0	0.0	5.2	20.8	38.1	56.8	72.0	82.0	73.9	67.2	62.3	64.1	42.6	36.6	25.4	C50	2.1	2.7
Vulva	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5	2.4	1.7	0.3	0.2	C51	0.0	0.0
Vagina	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.0	0.0	0.6	0.8	1.2	0.9	0.3	0.2	C52	0.0	0.0
Cervix uteri	111	0.0	0.0	0.0	0.0	0.0	6.0	13.4	12.3	18.6	21.1	20.4	21.9	15.5	23.6	30.8	28.9	12.4	8.8	C53	0.6	0.9
Corpus uteri	60	0.0	0.0	0.0	0.4	0.4	0.7	0.0	3.4	4.5	12.1	12.1	19.2	22.0	18.5	7.1	8.5	6.7	4.5	C54	0.4	0.5
Uterus unspecified	4	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.0	0.5	1.9	0.0	0.0	2.6	0.4	0.3	C55	0.0	0.0
Ovary	68	0.0	1.3	2.8	1.3	2.1	2.2	2.2	6.7	5.9	12.9	16.5	19.7	16.2	9.3	13.0	9.4	7.6	5.5	C56	0.4	0.6
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.0	0.0	0.9	0.1	0.1	C57	0.0	0.0
Placenta	2	0.0	0.0	0.0	0.4	0.0	1.5	0.7	0.0	0.5	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.3	0.3	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Kidney	9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.9	1.6	4.5	3.4	3.6	2.6	1.0	0.7	C64	0.0	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	C65	0.0	0.0
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	C66	0.0	0.0
Bladder	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	1.6	2.6	4.2	5.9	8.5	1.2	0.7	C67	0.0	0.1
Other urinary organs	4	4.2	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	0.0	0.9	0.0	0.0	C68	0.0	0.0
Eye	4	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.4	0.0	0.5	0.0	0.0	1.2	1.7	0.4	0.7	C69	0.0	0.0
Brain, nervous system	14	5.9	2.6	1.1	0.9	0.8	0.7	0.0	0.6	0.9	0.0	1.0	1.6	4.5	1.7	4.7	1.7	1.5	1.8	C70-C72	0.1	0.1
Thyroid	62	0.0	1.3	2.5	10.4	8.2	15.1	10.0	10.8	7.8	10.8	7.8	10.4	5.8	10.9	10.7	9.4	6.9	5.6	C73	0.4	0.5
Adrenal gland	1	0.0	1.3	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	C74	0.0	0.0
Other endocrine	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C75	0.0	0.0
Hodgkin disease	3	0.0	0.0	0.0	0.0	0.4	0.7	1.5	0.6	0.5	0.0	0.5	0.0	0.6	0.0	1.2	0.9	0.4	0.3	C81	0.0	0.0
Non-Hodgkin lymphoma	52	0.0	0.7	0.6	0.9	1.3	1.5	3.0	3.9	3.6	6.0	4.9	16.4	11.0	16.8	16.6	20.4	5.9	4.0	C82-C85,C96	0.3	0.4
Multiple myeloma	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.3	3.9	1.6	5.8	9.3	4.7	3.4	1.6	1.0	C90	0.1	0.1
Lymphoid leukemia	8	3.4	4.0	1.7	0.9	0.0	0.0	0.7	0.0	0.9	0.0	0.0	0.0	1.9	0.8	1.2	0.9	0.9	1.3	C91	0.1	0.1
Myeloid leukemia	28	1.7	0.7	0.6	1.3	2.5	1.5	4.5	0.6	3.2	2.6	2.9	3.3	7.8	5.9	4.7	11.1	3.1	2.5	C92-C94	0.2	0.2
Leukemia unspecified	4	0.0	0.0	0.6	0.4	0.4	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	C95	0.0	0.0
Myelodysplastic disease	27	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.4	0.4	3.9	3.3	2.6	16.0	20.2	17.9	3.0	1.8	D45-D47	0.1	0.2
Other and unspecified	47	0.8	0.0	0.0	0.4	0.0	0.7	0.7	0.0	3.6	2.2	6.8	11.5	14.2	16.0	21.4	25.5	5.3	3.4	O&U	0.2	0.4
<b>All sites</b>	<b>1,573</b>	<b>18.5</b>	<b>11.2</b>	<b>9.1</b>	<b>9.9</b>	<b>14.8</b>	<b>37.3</b>	<b>72.9</b>	<b>107.1</b>	<b>142.6</b>	<b>195.6</b>	<b>241.1</b>	<b>332.2</b>	<b>374.9</b>	<b>479.8</b>	<b>571.8</b>	<b>646.8</b>	<b>176.1</b>	<b>119.4</b>	<b>ALL</b>	<b>7.8</b>	<b>13.1</b>

**Table 3.5.3** Mean annual incidence, Khon Kaen, 2013-2015

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. 0-64 (percent)	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. 0-64 (percent)	Rate. 0-74	
Lip	2	0.1	0.3	0.2	0.0	0.0	15	1.0	1.7	0.9	0.0	0.1	C00
Tongue	19	1.2	2.2	1.5	0.1	0.2	12	0.7	1.3	0.9	0.1	0.1	C01-02
Mouth	12	0.8	1.5	1.0	0.1	0.1	15	1.0	1.7	1.0	0.0	0.1	C03-06
Salivary glands	4	0.3	0.5	0.4	0.0	0.0	4	0.2	0.4	0.3	0.0	0.0	C07-08
Tonsil	8	0.5	0.9	0.7	0.1	0.1	1	0.1	0.1	0.1	0.0	0.0	C09
Other oropharynx	1	0.1	0.2	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C10
Nasopharynx	32	2.0	3.8	2.8	0.2	0.3	10	0.6	1.1	0.8	0.1	0.1	C11
Hypopharynx	10	0.6	1.2	0.8	0.0	0.1	1	0.1	0.1	0.1	0.0	0.0	C12-13
Pharynx unspecified	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	18	1.1	2.2	1.5	0.1	0.2	2	0.1	0.3	0.2	0.0	0.0	C15
Stomach	33	2.0	4.0	2.7	0.2	0.3	23	1.5	2.6	1.8	0.1	0.2	C16
Small intestine	3	0.2	0.4	0.2	0.0	0.0	4	0.2	0.4	0.3	0.0	0.0	C17
Colon	69	4.2	8.2	5.8	0.3	0.7	84	5.3	9.4	5.9	0.3	0.7	C18
Rectum	79	4.9	9.5	6.7	0.4	0.8	68	4.3	7.6	4.8	0.3	0.6	C19-20
Anus	2	0.1	0.3	0.2	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C21
Liver and bile duct	580	35.7	69.6	47.7	3.0	5.6	243	15.5	27.3	16.6	0.8	2.1	C22,C24
Gallbladder	21	1.3	2.4	1.6	0.0	0.2	15	1.0	1.7	1.0	0.1	0.1	C23
Pancreas	12	0.8	1.5	1.0	0.1	0.1	15	1.0	1.7	1.1	0.1	0.1	C25
Nose, sinuses etc.	4	0.2	0.5	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C30-31
Larynx	21	1.3	2.5	1.7	0.1	0.2	1	0.1	0.1	0.1	0.0	0.0	C32
Trachea, Bronchus and lung	219	13.5	26.3	18.0	0.9	2.1	108	6.9	12.1	7.6	0.4	0.9	C33-34
Other thoracic organs	5	0.3	0.6	0.5	0.0	0.0	4	0.2	0.4	0.3	0.0	0.0	C37-38
Bone	7	0.4	0.8	0.7	0.0	0.1	6	0.4	0.6	0.5	0.0	0.0	C40-C41
Melanoma of skin	5	0.3	0.6	0.5	0.0	0.1	4	0.3	0.5	0.3	0.0	0.0	C43
Other skin	44	2.7	5.2	3.5	0.2	0.4	65	4.2	7.3	4.4	0.2	0.5	C44
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	7	0.5	0.9	0.7	0.0	0.1	7	0.4	0.8	0.7	0.0	0.1	C47,C49
Breast	3	0.2	0.4	0.2	0.0	0.0	327	20.8	36.6	25.4	2.1	2.7	C50
Vulva	0	0.0	0.0	0.0	0.0	0.0	3	0.2	0.3	0.2	0.0	0.0	C51
Vagina	0	0.0	0.0	0.0	0.0	0.0	3	0.2	0.3	0.2	0.0	0.0	C52
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	111	7.0	12.4	8.8	0.6	0.9	C53
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	60	3.8	6.7	4.5	0.4	0.5	C54
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	4	0.3	0.4	0.3	0.0	0.0	C55
Ovary	0	0.0	0.0	0.0	0.0	0.0	68	4.3	7.6	5.5	0.4	0.6	C56
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C57
Placenta	0	0.0	0.0	0.0	0.0	0.0	2	0.1	0.3	0.3	0.0	0.0	C58
Penis	16	1.0	2.0	1.4	0.1	0.2	0	0.0	0.0	0.0	0.0	0.0	C60
Prostate	60	3.7	7.2	4.9	0.2	0.6	0	0.0	0.0	0.0	0.0	0.0	C61
Testis	4	0.3	0.5	0.6	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C62
Kidney	13	0.8	1.6	1.1	0.1	0.1	9	0.6	1.0	0.7	0.0	0.1	C64
Renal pelvis	1	0.1	0.2	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C65
Ureter	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C66
Bladder	44	2.7	5.2	3.6	0.2	0.4	11	0.7	1.2	0.7	0.0	0.1	C67
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C68
Eye	2	0.1	0.2	0.3	0.0	0.0	4	0.3	0.4	0.7	0.0	0.0	C69
Brain, nervous system	15	0.9	1.8	1.6	0.1	0.1	14	0.9	1.5	1.8	0.1	0.1	C70-72
Thyroid	12	0.7	1.4	1.2	0.1	0.1	62	3.9	6.9	5.6	0.4	0.5	C73
Adrenal gland	1	0.0	0.1	0.2	0.0	0.0	1	0.1	0.1	0.2	0.0	0.0	C74
Other endocrine	1	0.0	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C75
Hodgkin disease	4	0.3	0.5	0.4	0.0	0.0	3	0.2	0.4	0.3	0.0	0.0	C81
Non-Hodgkin lymphoma	64	3.9	7.6	5.8	0.3	0.6	52	3.3	5.9	4.0	0.3	0.4	C82-85,C96
Multiple myeloma	18	1.1	2.2	1.5	0.1	0.2	14	0.9	1.6	1.0	0.1	0.1	C90
Lymphoid leukemia	10	0.6	1.2	1.6	0.1	0.1	8	0.5	0.9	1.3	0.1	0.1	C91
Myeloid leukemia	32	2.0	3.8	3.3	0.2	0.3	28	1.8	3.1	2.5	0.2	0.2	C92-94
Leukemia unspecified	7	0.4	0.8	1.0	0.0	0.1	4	0.2	0.4	0.3	0.0	0.0	C95
Myelodysplastic disease	26	1.6	3.1	2.1	0.1	0.2	27	1.7	3.0	1.8	0.1	0.2	D45-D47
Other and unspecified	72	4.4	8.6	6.0	0.4	0.7	47	3.0	5.3	3.4	0.2	0.4	O&U
<b>All sites</b>	<b>1,623</b>	<b>100.0</b>	<b>194.5</b>	<b>138.1</b>	<b>8.1</b>	<b>15.6</b>	<b>1,573</b>	<b>100.0</b>	<b>176.1</b>	<b>119.4</b>	<b>7.8</b>	<b>13.1</b>	<b>ALL</b>

**Table 3.5.4** Percentage of morphologically verified and death certificate only cases, Khon Kaen

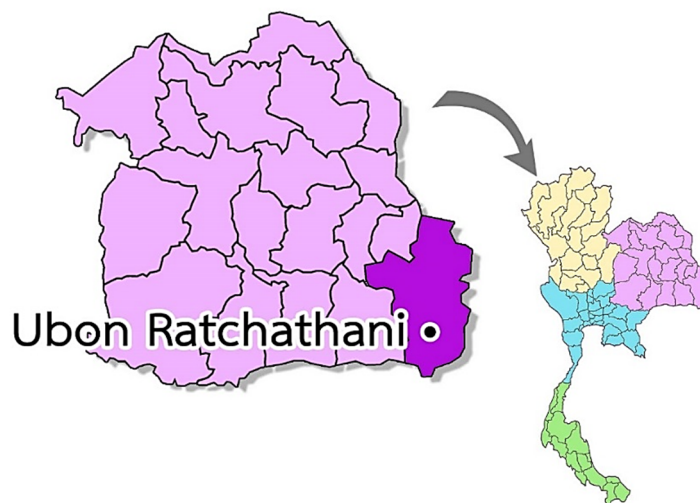
Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	113	93.8	0.0	137	93.4	1.5	C00-C08
Oropharynx	30	96.7	0.0	3	100.0	0.0	C09-C10,C14
Nasopharynx	95	88.4	2.1	30	93.3	3.3	C11
Hypopharynx	30	93.3	0.0	3	100.0	0.0	C12-C13
Esophagus	54	79.6	3.7	7	85.7	0.0	C15
Stomach	99	89.9	2.0	69	82.6	1.4	C16
Small intestine	9	88.9	0.0	11	100.0	0.0	C17
Colon and rectum	451	85.8	0.4	457	83.8	1.1	C18-C21
Liver and bile duct	1,740	11.3	4.4	730	12.7	2.5	C22,C24
Gallbladder	61	37.7	6.6	46	47.8	4.3	C23
pancreas	37	21.6	0.0	45	31.1	4.4	C25
Nose,sinuses etc	12	100.0	0.0	4	75.0	0.0	C30-C31
Larynx	62	88.7	4.8	3	100.0	0.0	C32
Trachea, bronchus and lung	657	47.9	3.0	324	58.6	3.1	C33-C34
Other thoracic organs	15	86.7	6.7	11	81.8	0.0	C37-C38
Bone	21	81.0	14.3	17	64.7	17.6	C40-C41
Melanoma of skin	16	100.0	0.0	13	100.0	0.0	C43
Other skin	131	96.9	0.8	196	99.5	0.5	C44
Mesothelioma	0	0.0	0.0	0	0.0	0.0	C45
Kaposi sarcoma	1	100.0	0.0	1	100.0	0.0	C46
Connective and soft tissue	22	95.5	0.0	21	100.0	0.0	C47,C49
Breast	9	77.8	0.0	981	92.5	0.8	C50
Vulva				9	100.0	0.0	C51
Vagina				9	100.0	0.0	C52
Cervix uteri				332	88.6	0.9	C53
Corpus uteri				179	98.3	0.0	C54
Uterus unspecified				12	75.0	8.3	C55
Ovary				204	82.4	0.5	C56
Other female genital organs				3	100.0	0.0	C57
Placenta				7	100.0	0.0	C58
Penis	49	93.9	0.0				C60
Prostate	180	86.7	0.6				C61
Testis	13	76.9	7.7				C62
Other male genital organs	0	0.0	0.0				C63
Kidney	39	84.6	0.0	27	85.2	0.0	C64
Renal pelvis	4	75.0	0.0	1	100.0	0.0	C65
Ureter	0	0.0	0.0	1	100.0	0.0	C66
Bladder	131	79.4	0.0	33	84.8	0.0	C67
Other urinary organs	0	0.0	0.0	1	100.0	0.0	C68
Eye	5	100.0	0.0	12	83.3	0.0	C69
Brain, nervous system	44	59.1	13.6	41	61.0	19.5	C70-C72
Thyroid	36	97.2	0.0	185	90.8	0.0	C73
Adrenal gland	2	100.0	0.0	3	100.0	0.0	C74
Other endocrine	2	100.0	0.0	0	0.0	0.0	C75
Hodgkin disease	13	100.0	0.0	10	100.0	0.0	C81
Non-Hodgkin lymphoma	191	99.5	0.5	157	99.4	0.6	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	54	100.0	0.0	43	97.7	0.0	C90
Leukemia	145	95.9	4.1	118	99.2	0.0	C91-C95
Myelodysplastic	77	100.0	0.0	80	100.0	0.0	D45-D47
Other and unspecified	216	48.1	12.0	141	39.7	9.9	O&U
<b>All site</b>	<b>4,866</b>	<b>53.1</b>	<b>3.2</b>	<b>4,717</b>	<b>74.1</b>	<b>1.7</b>	<b>All</b>
<b>All site without liver</b>	<b>3,126</b>	<b>76.4</b>	<b>2.6</b>	<b>3,987</b>	<b>85.4</b>	<b>1.6</b>	<b>All</b>

# Ubon Ratchathani Cancer Registry

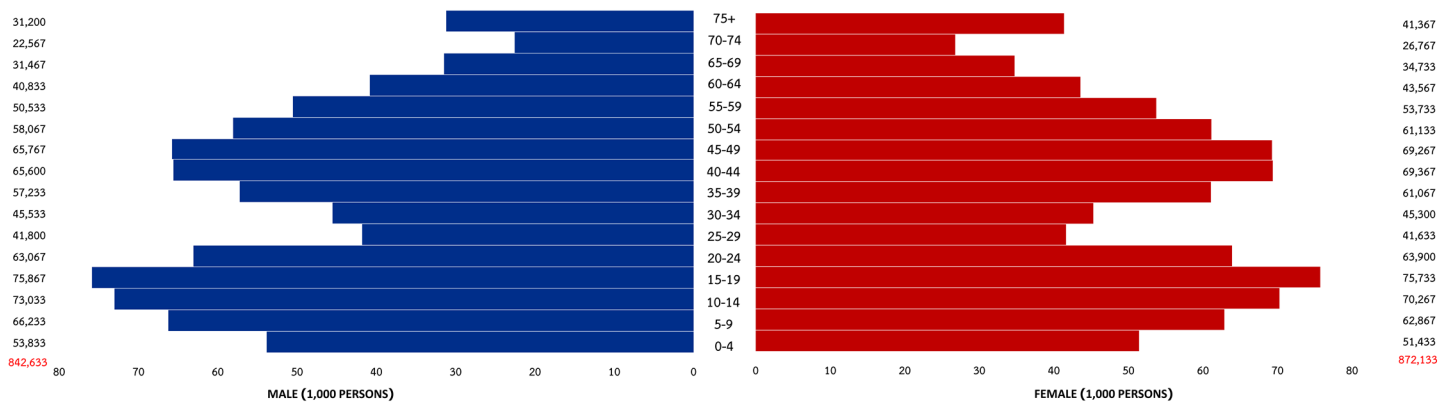
## Registration area

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 1,714,767 people in the year 2014. 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 2014 (average 2013-2015)



### **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**

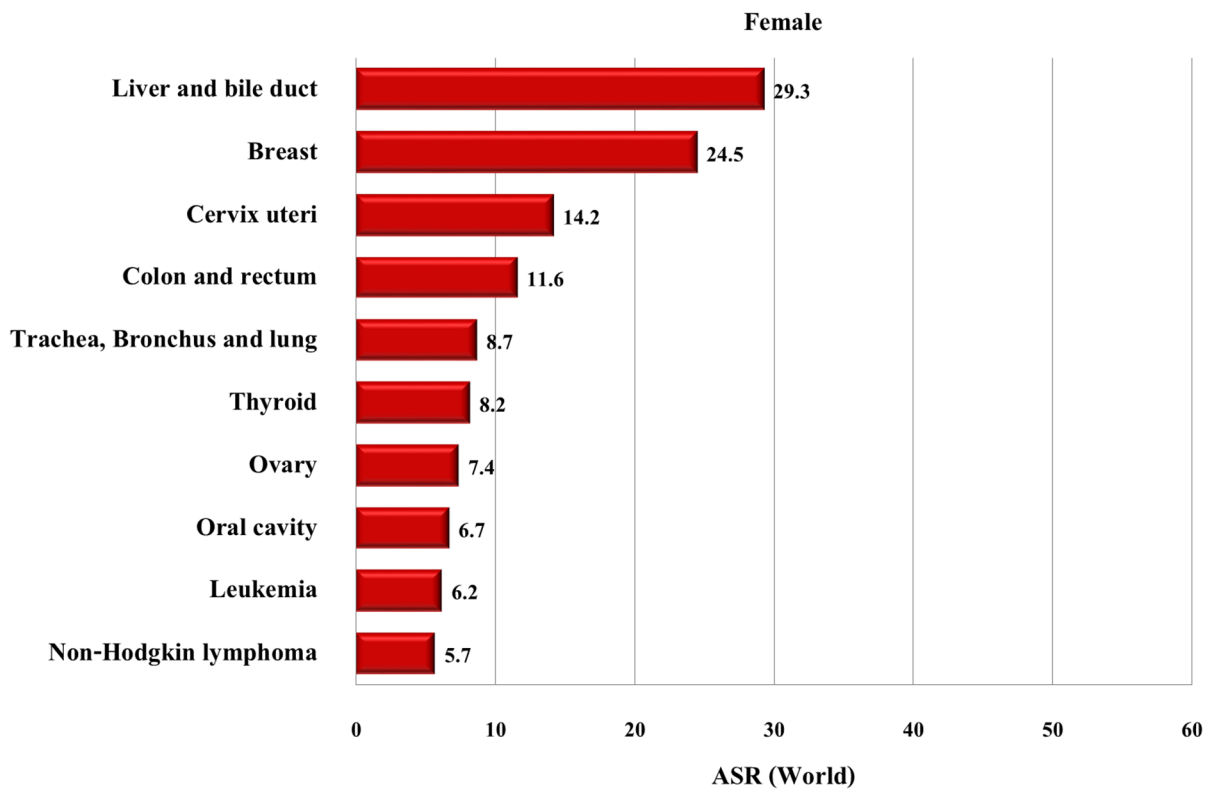
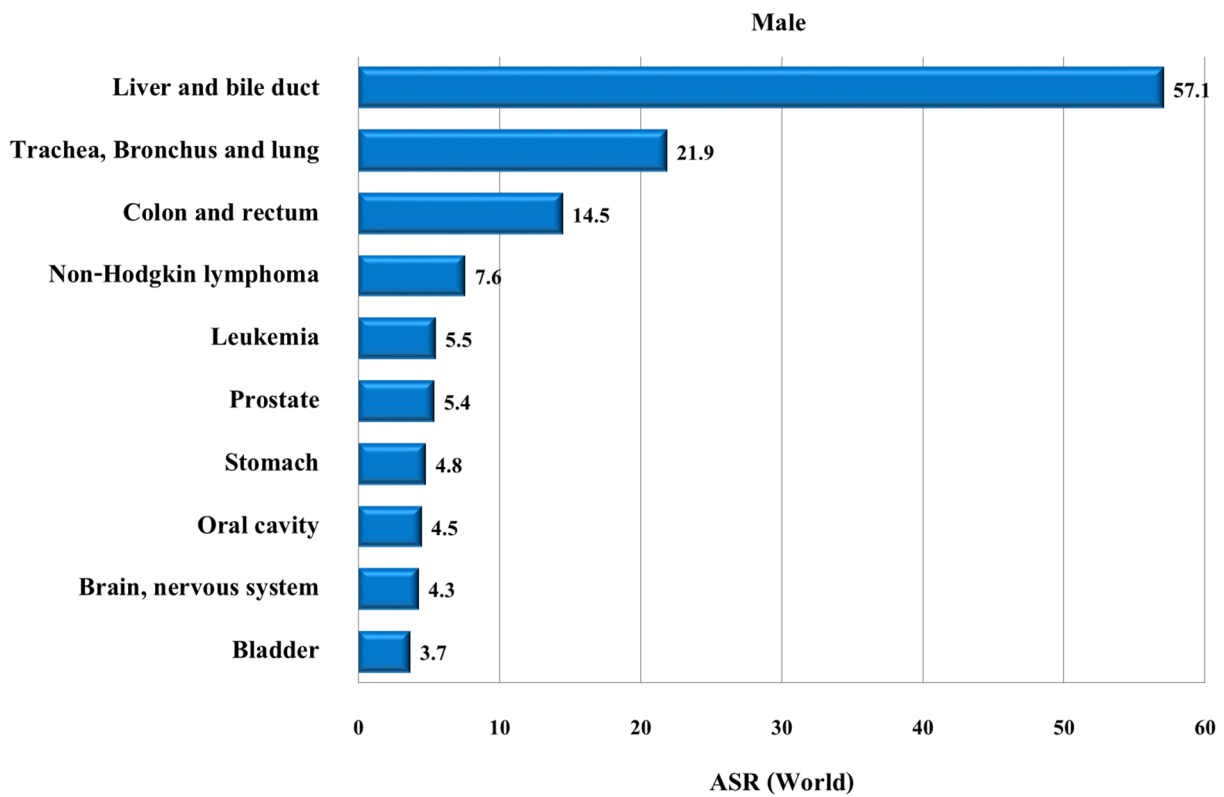
The population-based cancer registry of Ubon Ratchathani was set up at Ubon Ratchathani cancer hospitals. The sources of data are from all community hospitals, Sappasitthiprasong hospital, Ubon Ratchathani cancer hospitals, the military hospital and the 2 private hospitals.

### **Summary of results**

New cases registered in 2014, 1,923 were males and 1,974 were females, making 3,897 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 169.4 per 100,000, with liver and bile duct cancer ranking first (ASR = 57.1) followed by lung (ASR = 21.9) and colon and rectum (ASR = 14.5). The ASR of all cancer sites in females was 163.0 per 100,000, the three leading cancer sites in females being liver and bile duct (ASR = 29.3), breast (ASR = 24.5) and cervix (ASR = 14.2).



**Figure 3.6** Leading cancer in Ubon Ratchatani (mean annual ASR 2013-2015)



**Table 3.6.1** Ubon Ratchatani (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+ Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	6	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.1	0.7	0.0	5.3	1.5	7.5	0.5	C00	0.0	0.1
Tongue	14	0.0	0.0	0.0	0.0	0.5	0.0	0.7	1.7	3.0	1.5	4.0	4.6	3.3	5.3	0.0	6.4	1.3	C01-C02	0.1	0.1
Mouth	23	0.6	1.0	0.0	0.0	0.0	0.0	0.7	0.6	2.0	2.5	6.9	2.6	8.2	10.6	4.4	17.1	2.1	C03-C06	0.1	0.2
Salivary glands	6	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.5	0.5	2.3	0.0	0.8	4.2	7.4	2.1	0.6	C07-C08	0.0	0.1
Tonsil	7	1.2	0.0	0.0	0.4	0.0	0.0	0.0	0.6	0.0	1.0	1.7	1.3	3.3	2.1	1.5	2.1	0.8	C09	0.0	0.1
Other oropharynx	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	0.8	0.0	1.5	2.1	0.2	C10	0.0	0.0
Nasopharynx	27	0.0	0.0	0.4	0.5	2.4	1.5	2.9	1.5	7.1	4.6	7.9	7.3	7.4	11.8	4.3	7.5	3.2	C11	0.2	0.3
Hypopharynx	5	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.5	1.7	0.0	0.0	2.1	4.4	4.3	0.6	0.4	C12-C13	0.0	0.1
Pharynx unspecified	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	1.7	0.7	0.8	1.1	1.5	1.1	0.4	C14	0.0	0.0
Oesophagus	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.0	4.1	4.6	3.3	8.2	10.6	5.9	8.5	2.3	C15	0.1	0.2
Stomach	56	0.0	0.0	0.0	0.0	0.0	0.8	1.5	2.9	3.6	4.1	12.1	15.2	15.5	21.2	39.9	38.5	6.7	C16	0.3	0.6
Small intestine	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.7	0.0	2.1	5.9	4.3	0.6	C17	0.0	0.1
Colon	99	0.0	0.0	0.0	0.0	1.1	1.6	2.2	5.8	7.6	12.7	13.2	17.2	36.7	50.8	53.2	65.2	11.7	C18	0.5	1.0
Rectum	67	0.0	0.0	0.0	0.0	0.0	0.8	0.0	2.9	0.0	5.6	16.6	19.8	22.9	22.2	51.7	40.6	8.0	C19-C20	0.4	0.7
Liver and bile duct	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.3	1.6	1.1	0.0	3.2	0.4	C21	0.0	0.0
Anus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.3	1.6	1.1	0.0	3.2	0.4	C22	0.0	0.0
Gallbladder	666	0.6	0.0	0.0	0.4	1.6	2.4	11.0	23.9	41.7	76.5	116.5	168.2	253.1	285.0	364.8	446.6	79.1	C22.C24	3.5	6.7
Pancreas	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	5.2	7.3	4.9	7.4	19.2	15.0	2.5	C23	0.1	0.2
Nose, sinuses etc.	18	0.0	0.0	0.0	0.0	0.0	0.8	0.7	1.2	2.5	2.0	2.9	2.6	5.7	8.5	8.9	12.8	2.2	C25	0.1	0.2
Larynx	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.0	2.0	1.1	3.3	0.0	1.1	1.5	0.0	0.6	C30-C31	0.0	0.1
Trachea, Bronchus and lung	17	0.0	0.0	0.5	0.0	0.0	0.0	0.7	0.0	1.0	1.5	2.3	4.6	5.7	10.6	11.8	9.6	2.1	C32	0.1	0.2
Other thoracic organs	258	0.6	0.5	0.0	1.8	1.6	1.6	4.4	5.2	15.2	18.8	33.3	58.0	84.9	130.3	177.3	195.5	30.5	C33-C34	1.1	2.7
Bone	9	0.0	0.0	0.9	1.3	1.1	2.4	0.0	0.0	0.5	1.5	1.7	0.0	2.4	1.1	1.5	5.3	1.1	C37-C38	1.1	0.1
Melanoma of skin	30	0.0	2.0	1.8	5.7	0.5	3.2	0.7	1.2	3.0	3.5	0.6	7.9	7.3	9.5	7.4	12.8	3.6	C40-C41	0.2	0.3
Other skin	8	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	1.0	1.0	2.3	2.0	3.3	1.1	4.4	4.3	1.0	C43	0.1	0.1
Mesothelioma	33	0.0	0.0	0.0	0.0	0.5	1.6	0.7	0.0	2.0	3.5	6.9	7.3	13.1	10.6	13.3	25.6	3.8	C44	0.2	0.3
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Connective tissue	1	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	C46	0.0	0.0
Breast	17	1.2	1.0	1.4	0.9	0.5	0.8	0.7	2.3	1.5	2.5	2.9	4.6	2.4	4.2	4.4	4.3	2.0	C47-C49	0.1	0.2
Vulva	3	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.7	0.8	1.1	4.4	1.1	0.4	C50	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Penis	22	0.0	0.5	0.0	0.0	1.1	0.0	0.7	2.3	2.0	4.1	4.6	3.3	4.1	6.4	8.9	16.0	2.6	C60	0.1	0.2
Prostate	67	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.5	0.5	2.3	9.9	15.5	37.1	66.5	85.5	8.0	C61	0.1	0.7
Testis	5	0.0	0.0	0.0	0.0	1.1	1.6	0.7	1.2	1.5	0.5	0.6	0.0	0.8	0.0	0.0	2.1	0.6	C62	0.0	0.0
Other male genital organs	1	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.1	C63	0.0	0.0
Kidney	18	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.0	2.0	3.4	4.6	6.5	6.4	16.2	6.4	2.1	C64	0.1	0.2
Renal pelvis	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.6	2.1	1.5	0.0	0.2	C65	0.0	0.0
Ureter	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	4.4	1.1	0.2	C66	0.0	0.0
Bladder	46	0.0	0.0	0.0	0.0	0.5	0.0	0.7	0.6	2.5	2.5	6.3	7.9	9.0	19.1	36.9	47.0	5.3	C67	0.2	0.4
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	1.1	0.1	C68	0.0	0.0
Eye	3	1.2	0.0	0.0	0.0	0.0	3.2	1.5	4.1	3.0	8.1	6.3	9.2	13.1	14.8	17.7	15.0	5.1	C69	0.0	0.0
Brain, nervous system	43	1.9	1.0	1.8	0.9	1.6	3.2	1.5	4.1	3.0	8.1	6.3	9.2	13.1	14.8	17.7	15.0	5.1	C70-C72	0.3	0.4
Thyroid	17	0.6	0.0	0.0	0.0	1.6	1.6	1.5	3.5	1.5	2.0	2.3	8.6	1.6	4.2	5.9	4.3	2.1	C73	0.1	0.2
Adrenal gland	2	1.2	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.7	0.8	0.0	0.0	0.0	0.2	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.0	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	C75	0.0	0.0
Hodgkin disease	3	0.0	0.5	0.0	0.4	0.0	1.6	0.0	0.0	0.0	0.0	0.6	1.3	0.0	1.1	1.5	1.1	0.4	C81	0.0	0.0
Non-Hodgkin lymphoma	79	4.3	1.0	2.7	0.9	4.2	3.2	5.1	5.2	5.1	5.6	14.9	16.5	22.9	26.5	42.8	40.6	9.4	C82-C85	0.5	0.8
Multiple myeloma	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	1.1	4.0	5.7	9.5	17.7	4.3	4.3	1.7	C90	0.1	0.2
Lymphoid leukemia	13	5.0	2.5	4.6	1.3	0.0	0.0	1.5	0.0	0.5	1.0	0.6	1.3	1.6	2.1	0.0	2.1	1.6	C91	0.1	0.1
Myeloid leukemia	23	0.6	0.5	0.0	0.4	0.5	4.0	0.7	2.3	3.0	5.6	2.9	3.3	0.8	6.4	11.8	13.9	2.7	C92-C94	0.1	0.2
Leukemia unspecified	14	1.9	0.5	0.5	0.9	1.6	1.6	1.5	0.0	2.9	1.3	4.9	1.1	4.4	8.5	1.6	1.5	1.6	C95	0.1	0.1
Myelodysplastic disease	4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.0	4.3	0.4	D45-D47	0.0	0.0
Other and unspecified	112	1.2	1.5	0.0	1.8	1.1	6.4	3.7	3.5	5.6	18.8	17.2	26.4	30.2	43.4	53.2	79.1	13.3	O&U	0.6	1.1
All sites	1,923	22.9	12.6	15.5	19.8	22.2	43.9	45.4	78.0	124.0	208.3	316.9	442.6	613.1	797.7	1104.9	1276.7	227.8	ALL	9.8	19.3

**Table 3.6.2** Ubon Ratchatani (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+ Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74	
Lip	25	0.0	0.0	0.0	0.4	0.0	0.8	0.0	0.0	0.5	0.0	1.1	5.0	6.9	12.5	11.2	25.0	2.9	1.8	C00	0.1	0.2
Tongue	13	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.7	2.4	3.8	1.1	2.5	3.8	1.0	2.5	4.8	1.5	1.1	C01-C02	0.1	0.1
Mouth	44	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.9	3.3	6.2	10.7	18.2	19.9	46.7	5.0	3.0	C03-C06	0.1	0.3
Salivary glands	9	0.6	0.0	0.0	0.0	0.0	0.8	0.7	1.1	1.0	1.0	1.1	1.2	2.3	1.9	7.5	2.4	1.0	0.8	C07-C08	0.0	0.1
Tonsil	3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.6	1.5	0.0	0.0	0.8	0.3	0.3	C09	0.0	0.0
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.8	0.1	0.0	C10	0.0	0.0
Nasopharynx	11	0.0	0.0	0.0	0.9	0.0	0.0	1.5	1.1	1.9	1.4	2.7	3.1	2.3	2.9	2.5	2.4	1.3	1.0	C11	0.1	0.1
Hypopharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.6	1.5	0.0	1.2	0.0	0.2	0.2	C12-C13	0.0	0.0
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.0	1.2	0.0	0.1	0.1	C14	0.0	0.0
Oesophagus	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.1	1.9	2.5	2.4	0.5	0.3	C15	0.0	0.0
Stomach	37	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.3	2.9	6.3	7.1	7.4	8.4	11.5	17.4	17.7	4.2	2.9	C16	0.2	0.3
Small intestine	5	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	1.6	1.9	0.8	1.0	3.7	1.6	0.6	0.5	C17	0.0	0.1
Colon	96	0.0	0.0	0.0	0.4	0.0	1.6	1.5	6.0	7.7	9.1	8.2	18.6	30.6	25.9	53.5	66.1	11.0	7.2	C18	0.4	0.8
Rectum	55	0.0	0.0	0.0	0.0	0.0	1.6	2.2	1.1	6.7	4.3	8.2	14.9	14.5	19.2	22.4	30.2	6.3	4.2	C19-C20	0.3	0.5
Anus	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	0.8	1.0	3.7	0.8	0.3	0.2	C21	0.0	0.0
Liver and bile duct	392	1.3	0.0	0.0	0.0	1.6	1.6	5.2	10.9	23.5	25.5	52.3	80.0	133.9	158.3	196.8	254.6	44.9	29.3	C22-C24	1.7	3.5
Gallbladder	27	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.5	1.9	1.6	5.6	7.7	12.5	18.7	21.0	3.1	2.0	C23	0.1	0.2
Pancreas	18	0.0	0.0	0.0	0.4	0.0	0.8	0.7	1.1	1.0	2.9	1.6	5.6	8.4	1.9	7.5	8.1	2.1	1.5	C25	0.1	0.2
Nose, sinuses etc.	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.6	0.0	1.5	0.0	2.5	4.0	0.5	0.3	C30-C31	0.0	0.0
Larynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C32	0.0	0.0
Trachea, Bronchus and lung	114	0.0	0.0	0.5	0.4	1.0	1.6	2.2	2.7	5.8	13.5	19.1	21.1	26.8	51.8	61.0	64.5	13.0	8.7	C33-C34	0.5	1.0
Other thoracic organs	3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.8	1.9	2.5	0.0	0.3	0.3	C37-C38	0.0	0.0
Bone	25	0.6	0.5	0.5	2.2	2.1	3.2	0.0	2.4	2.9	0.5	3.1	7.7	8.6	12.5	8.9	2.8	2.3	2.3	C40-C41	0.1	0.2
Melanoma of skin	8	0.0	0.0	0.4	0.5	0.8	1.5	0.5	0.5	0.0	0.5	1.1	0.6	0.8	2.9	1.2	6.4	0.9	0.6	C43	0.0	0.1
Other skin	40	1.3	0.0	0.0	0.0	0.0	1.6	0.0	0.5	2.9	1.4	6.5	3.1	9.9	11.5	28.6	33.8	4.6	3.0	C44	0.1	0.3
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0
Connective tissue	12	0.0	0.0	0.9	0.9	0.0	2.4	0.7	1.1	1.0	2.4	1.6	4.3	0.8	3.8	3.7	0.0	1.3	1.1	C47-C49	0.1	0.1
Breast	283	0.0	0.0	0.0	0.0	3.1	9.6	25.0	39.3	57.7	78.4	71.4	73.8	54.3	42.2	32.4	40.3	32.4	24.5	C50	2.1	2.4
Vulva	8	0.0	0.0	0.0	0.0	0.0	1.6	1.5	0.0	1.0	0.5	1.6	1.2	1.5	1.9	2.5	4.8	0.9	0.7	C51	0.0	0.1
Vagina	2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.5	0.0	0.0	1.2	0.0	0.0	1.2	0.8	0.2	0.2	C52	0.0	0.0
Cervix uteri	162	0.0	0.0	0.0	0.4	4.7	5.6	17.7	27.8	42.3	38.5	32.7	32.9	26.8	25.9	18.7	29.0	18.6	14.2	C53	1.1	1.4
Corpus uteri	48	0.0	0.0	0.0	0.4	0.0	0.8	0.7	3.3	6.2	9.6	18.0	11.2	14.5	14.4	6.2	8.9	5.5	4.0	C54	0.3	0.4
Uterus unspecified	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	0.5	2.2	3.7	3.1	1.9	1.2	4.8	1.0	0.7	C55	0.1	0.1
Ovary	78	0.6	0.5	2.4	2.6	5.2	9.6	7.4	8.2	14.9	15.4	16.9	14.9	17.6	13.4	5.0	11.3	8.9	7.4	C56	0.6	0.7
Other female genital organs	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	1.0	1.6	0.0	0.0	0.0	1.2	0.8	0.3	0.2	C57	0.0	0.0
Palenta	4	0.0	0.0	0.0	0.9	0.5	0.8	2.2	0.0	0.0	0.5	1.6	0.0	0.0	0.0	0.0	0.0	0.4	0.4	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	10	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0	1.4	1.1	3.1	2.3	3.8	6.2	4.8	1.2	0.8	C64	0.0	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.2	0.0	0.1	0.1	C66	0.0	0.0
Bladder	13	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.5	1.4	2.2	3.7	2.3	3.8	8.7	6.4	1.5	1.0	C67	0.1	0.1
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.8	0.0	0.0	0.0	0.1	0.1	C68	0.0	0.0
Eye	5	1.9	0.0	0.0	0.0	1.0	0.0	0.7	0.0	0.5	0.0	0.5	1.2	1.5	1.9	1.2	0.8	0.6	0.6	C69	0.0	0.1
Brain, nervous system	55	1.9	1.6	1.4	0.9	1.0	2.4	5.9	4.9	10.1	13.0	9.8	8.1	8.4	14.4	14.9	12.9	6.3	5.0	C70-C72	0.3	0.5
Thyroid	86	0.0	0.0	0.5	2.6	4.2	13.6	11.8	12.0	16.3	16.8	14.7	14.3	15.3	19.2	13.7	14.5	9.9	8.2	C73	0.6	0.8
Adrenal gland	2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.6	0.0	1.0	0.0	0.8	0.2	0.2	C74	0.0	0.0
Other endocrine	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.0	0.0	0.0	0.1	0.1	C75	0.0	0.0
Hodgkin disease	2	0.0	0.5	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	1.5	0.0	0.0	0.8	0.3	0.2	C81	0.0	0.0
Non-Hodgkin lymphoma	65	1.9	0.0	0.0	0.9	3.1	3.2	5.2	9.3	3.4	7.7	4.9	17.4	16.8	20.2	34.9	21.0	7.5	5.7	C82-C85	0.4	0.6
Multiple myeloma	17	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.0	3.4	3.8	1.9	6.1	6.7	8.7	8.7	6.4	1.9	1.4	C90	0.1	0.2
Lymphoid leukemia	13	6.5	1.1	3.3	0.4	0.5	0.8	1.5	0.0	0.5	1.0	1.6	1.2	0.0	2.9	0.0	4.0	1.5	1.8	C91	0.1	0.1
Myeloid leukemia	29	0.6	1.1	0.5	0.4	2.1	2.4	3.7	3.8	2.9	4.3	4.9	6.2	5.4	6.7	6.2	8.1	3.3	2.7	C92-C94	0.2	0.3
Leukemia unspecified	18	1.3	0.5	0.0	0.9	0.5	0.8	3.7	0.5	1.4	3.4	2.2	6.2	3.8	2.9	5.0	4.0	2.1	1.7	C95	0.1	0.2
Myelodysplastic disease	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.8	0.1	0.0	D45-D47	0.0	0.0
Other and unspecified	106	3.2	1.6	1.4	0.9	1.0	0.8	5.2	5.5	7.2	10.1	10.4	27.3	28.3	42.2	44.8	54.8	12.1	8.6	O&U	0.5	0.9
All sites	1,974	25.3	7.4	11.4	17.6	34.4	72.1	111.8	151.7	229.7	289.7	325.0	416.3	498.9	578.7	698.6	844.5	226.0	163.0	ALL	11.0	17.3

**Table 3.6.3** Mean annual incidence, Ubon Ratchatani, 2013-2015

Site	Male							Female							ICD-10
	No.Cases	Freq.	Crude	ASR	Cum.	Rate.	No.Cases	Freq.	Crude	ASR	Cum.	Rate.			
	Year	(%)	rate	world	0-64	0-74	Year	(%)	rate	world	0-64	0-74			
			(per 100,000)		(percent)			(per 100,000)		(percent)					
Lip	6	0.3	0.8	0.5	0.0	0.1	25	1.3	2.9	1.8	0.1	0.2	C00		
Tongue	14	0.7	1.7	1.3	0.1	0.1	13	0.7	1.5	1.1	0.1	0.1	C01-02		
Mouth	23	1.2	2.7	2.1	0.1	0.2	44	2.2	5.0	3.0	0.1	0.3	C03-06		
Salivary glands	6	0.3	0.8	0.6	0.0	0.1	9	0.5	1.0	0.8	0.0	0.1	C07-08		
Tonsil	7	0.3	0.8	0.7	0.0	0.1	3	0.1	0.3	0.3	0.0	0.0	C09		
Other oropharynx	2	0.1	0.3	0.2	0.0	0.0	1	0.0	0.1	0.0	0.0	0.0	C10		
Nasopharynx	27	1.4	3.2	2.5	0.2	0.3	11	0.6	1.3	1.0	0.1	0.1	C11		
Hypopharynx	5	0.3	0.6	0.4	0.0	0.1	2	0.1	0.2	0.2	0.0	0.0	C12-13		
Pharynx unspecified	4	0.2	0.4	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C14		
Oesophagus	19	1.0	2.3	1.7	0.1	0.2	4	0.2	0.5	0.3	0.0	0.0	C15		
Stomach	56	2.9	6.7	4.8	0.3	0.6	37	1.9	4.2	2.9	0.2	0.3	C16		
Small intestine	5	0.3	0.6	0.4	0.0	0.1	5	0.3	0.6	0.5	0.0	0.1	C17		
Colon	99	5.1	11.7	8.6	0.5	1.0	96	4.9	11.0	7.2	0.4	0.8	C18		
Rectum	67	3.5	8.0	5.7	0.4	0.7	55	2.8	6.3	4.2	0.3	0.5	C19-20		
Anus	3	0.2	0.4	0.2	0.0	0.0	2	0.1	0.3	0.2	0.0	0.0	C21		
Liver and bile duct	666	34.7	79.1	57.1	3.5	6.7	392	19.9	44.9	29.3	1.7	3.5	C22,C24		
Gallbladder	21	1.1	2.5	1.7	0.1	0.2	27	1.4	3.1	2.0	0.1	0.2	C23		
Pancreas	18	1.0	2.2	1.6	0.1	0.2	18	0.9	2.1	1.5	0.1	0.2	C25		
Nose, sinuses etc.	5	0.3	0.6	0.5	0.0	0.1	5	0.2	0.5	0.3	0.0	0.0	C30-31		
Larynx	17	0.9	2.1	1.5	0.1	0.2	1	0.0	0.1	0.1	0.0	0.0	C32		
Trachea, Bronchus and lung	258	13.4	30.5	21.9	1.1	2.7	114	5.8	13.0	8.7	0.5	1.0	C33-34		
Other thoracic organs	9	0.5	1.1	1.0	0.1	0.1	3	0.1	0.3	0.3	0.0	0.0	C37-38		
Bone	30	1.6	3.6	3.0	0.2	0.3	25	1.2	2.8	2.3	0.1	0.2	C40-C41		
Melanoma of skin	8	0.4	1.0	0.7	0.1	0.1	8	0.4	0.9	0.6	0.0	0.1	C43		
Other skin	33	1.7	3.8	2.8	0.2	0.3	40	2.0	4.6	3.0	0.1	0.3	C44		
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C45		
Kaposi's sarcoma	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46		
Connective tissue	17	0.9	2.0	1.7	0.1	0.2	12	0.6	1.3	1.1	0.1	0.1	C47,C49		
Breast	3	0.2	0.4	0.3	0.0	0.0	283	14.3	32.4	24.5	2.1	2.4	C50		
Vulva							8	0.4	0.9	0.7	0.0	0.1	C51		
Vagina							2	0.1	0.2	0.2	0.0	0.0	C52		
Cervix uteri							162	8.2	18.6	14.2	1.1	1.4	C53		
Corpus uteri							48	2.4	5.5	4.0	0.3	0.4	C54		
Uterus unspecified							9	0.5	1.0	0.7	0.1	0.1	C55		
Ovary							78	3.9	8.9	7.4	0.6	0.7	C56		
Other female genital organs							3	0.2	0.3	0.2	0.0	0.0	C57		
Placenta							4	0.2	0.4	0.4	0.0	0.0	C58		
Penis	22	1.1	2.6	1.9	0.1	0.2							C60		
Prostate	67	3.5	8.0	5.4	0.1	0.7							C61		
Testis	5	0.3	0.6	0.6	0.0	0.0							C62		
Other male genital organs	1	0.0	0.1	0.1	0.0	0.0							C63		
Kidney	18	0.9	2.1	1.6	0.1	0.2	10	0.5	1.2	0.8	0.0	0.1	C64		
Renal pelvis	2	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C65		
Ureter	2	0.1	0.2	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C66		
Bladder	46	2.4	5.3	3.7	0.2	0.4	13	0.6	1.5	1.0	0.1	0.1	C67		
Other urinary organs	1	0.0	0.1	0.0	0.0	0.0	1	0.0	0.1	0.1	0.0	0.0	C68		
Eye	3	0.2	0.4	0.4	0.0	0.0	5	0.3	0.6	0.6	0.0	0.1	C69		
Brain, nervous system	43	2.3	5.1	4.3	0.3	0.4	55	2.8	6.3	5.0	0.3	0.5	C70-72		
Thyroid	17	0.9	2.1	1.7	0.1	0.2	86	4.4	9.9	8.2	0.6	0.8	C73		
Adrenal gland	2	0.1	0.2	0.3	0.0	0.0	2	0.1	0.2	0.2	0.0	0.0	C74		
Other endocrine	1	0.1	0.1	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C75		
Hodgkin disease	3	0.2	0.4	0.4	0.0	0.0	2	0.1	0.3	0.2	0.0	0.0	C81		
Non-Hodgkin lymphoma	79	4.1	9.4	7.6	0.5	0.8	65	3.3	7.5	5.7	0.4	0.6	C82-85,C96		
Multiple myeloma	14	0.7	1.7	1.2	0.1	0.2	17	0.9	1.9	1.4	0.1	0.2	C90		
Lymphoid leukemia	13	0.7	1.6	1.8	0.1	0.1	13	0.7	1.5	1.8	0.1	0.1	C91		
Myeloid leukemia	23	1.2	2.7	2.2	0.1	0.2	29	1.5	3.3	2.7	0.2	0.3	C92-94		
Leukemia unspecified	14	0.7	1.6	1.5	0.1	0.1	18	0.9	2.1	1.7	0.1	0.2	C95		
Myelodysplastic disease	4	0.2	0.4	0.3	0.0	0.0	1	0.0	0.1	0.0	0.0	0.0	D45-D47		
Other and unspecified	112	5.8	13.3	10.0	0.6	1.1	106	5.4	12.1	8.6	0.5	0.9	O&U		
<b>All sites</b>	<b>1,923</b>	<b>100.0</b>	<b>227.8</b>	<b>169.4</b>	<b>9.8</b>	<b>19.3</b>	<b>1,974</b>	<b>100.0</b>	<b>226.0</b>	<b>163.0</b>	<b>11.0</b>	<b>17.3</b>	<b>ALL</b>		

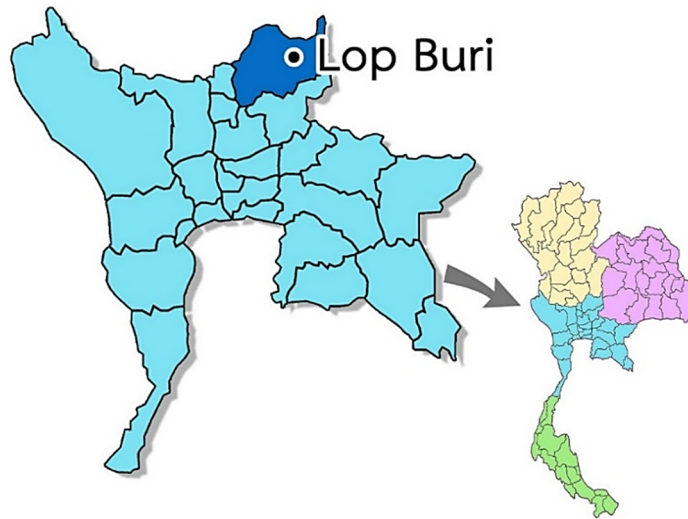
**Table 3.6.4** Percentage of morphologically verified and death certificate only cases, Ubon Ratchatani

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	150	89.3	0.7	272	92.3	0.4	C00-C08
Oropharynx	38	84.2	2.6	13	84.6	0.0	C09-C10,C14
Nasopharynx	80	97.5	1.3	34	97.1	0.0	C11
Hypopharynx	16	81.3	0.0	6	83.3	0.0	C12-C13
Esophagus	58	91.4	6.9	12	91.7	0.0	C15
Stomach	169	98.8	1.2	111	96.4	2.7	C16
Small intestine	15	73.3	0.0	15	86.7	0.0	C17
Colon and rectum	507	92.7	1.8	459	93.5	1.1	C18-C21
Liver and bile duct	1,999	11.0	6.2	1,176	9.1	5.3	C22,C24
Gallbladder	63	15.9	11.1	82	24.4	6.1	C23
pancrease	55	94.5	0.0	54	92.6	0.0	C25
Nose,sinuses etc	16	81.3	0.0	14	71.4	0.0	C30-C31
Larynx	52	67.3	1.9	2	50.0	0.0	C32
Trachea, brochus and lung	772	84.2	6.1	342	88.6	4.4	C33-C34
Other thoracic organs	27	48.1	0.0	8	50.0	0.0	C37-C38
Bone	90	22.2	1.1	74	16.2	5.4	C40-C41
Melanoma of skin	25	92.0	0.0	23	82.6	0.0	C43
Other skin	98	48.0	0.0	121	49.6	1.7	C44
Mesothelioma	1	100.0	0.0	0	0.0	0.0	C45
Kaposi sarcoma	3	66.7	0.0	1	100.0	0.0	C46
Connective and soft tissue	50	48.0	0.0	35	74.3	0.0	C47,C49
Breast	9	55.6	0.0	848	88.6	1.3	C50
Vulva				24	62.5	0.0	C51
Vagina				6	66.7	0.0	C52
Cervix uteri				486	58.0	1.9	C53
Corpus uteri				143	64.3	2.1	C54
Uterus unspecified				27	18.5	3.7	C55
Ovary				233	35.2	1.3	C56
Other female genital organs				9	55.6	11.1	C57
Placenta				11	45.5	0.0	C58
Penis	65	58.5	0.0				C60
Prostate	201	96.0	2.5				C61
Testis	15	53.3	0.0				C62
Other male genital organs	2	0.0	0.0				C63
Kidney	53	62.3	3.8	31	45.2	3.2	C64
Renal pelvis	6	66.7	0.0	0	0.0	0.0	C65
Ureter	5	40.0	0.0	3	0.0	0.0	C66
Bladder	136	64.7	2.2	38	65.8	2.6	C67
Other urinary organs	2	0.0	0.0	2	100.0	0.0	C68
Eye	9	11.1	0.0	16	12.5	0.0	C69
Brain, nervous system	130	26.9	5.4	166	34.9	4.8	C70-C72
Thyroid	52	100.0	0.0	258	99.2	0.8	C73
Adrenal gland	6	50.0	0.0	5	40.0	0.0	C74
Other endocrine	3	100.0	0.0	3	0.0	0.0	C75
Hodgkin disease	10	100.0	0.0	7	100.0	0.0	C81
Non-Hodgkin lymphoma	237	100.0	0.0	196	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	51	100.0	0.0	C90
Leukemia	150	92.0	0.0	181	91.7	0.0	C91-C95
Myelodysplastic	11	100.0	0.0	2	100.0	0.0	D45-D47
Other and unspecified	336	36.6	7.7	318	29.9	6.0	O&U
<b>All site</b>	<b>5,764</b>	<b>53.7</b>	<b>4.2</b>	<b>5,918</b>	<b>60.6</b>	<b>2.6</b>	<b>All</b>
<b>All site without liver</b>	<b>3,765</b>	<b>76.3</b>	<b>3.1</b>	<b>4,742</b>	<b>73.4</b>	<b>2.0</b>	<b>All</b>

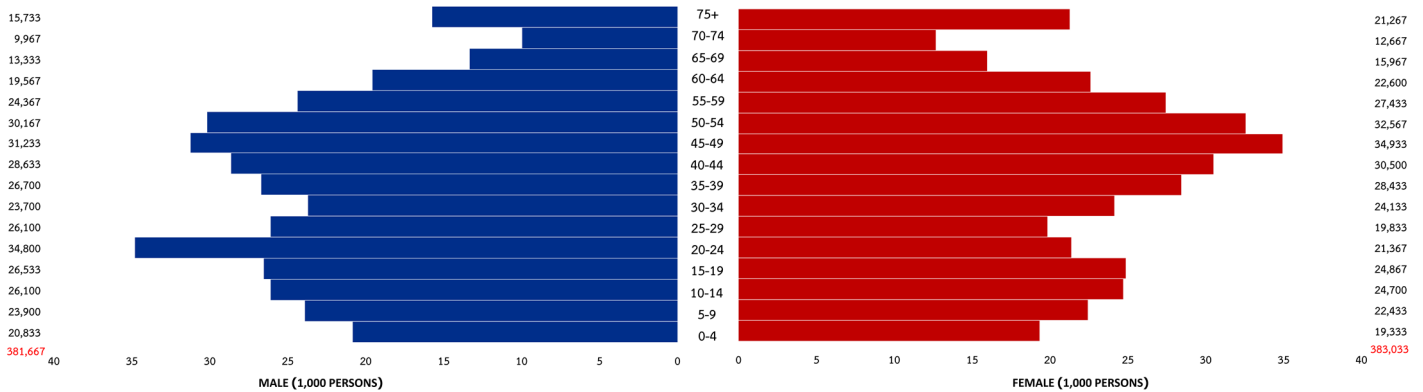
# Lop Buri Cancer Registry

## 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 2014 at 764,700. 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 2014 (average 2013-2015)



### **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**

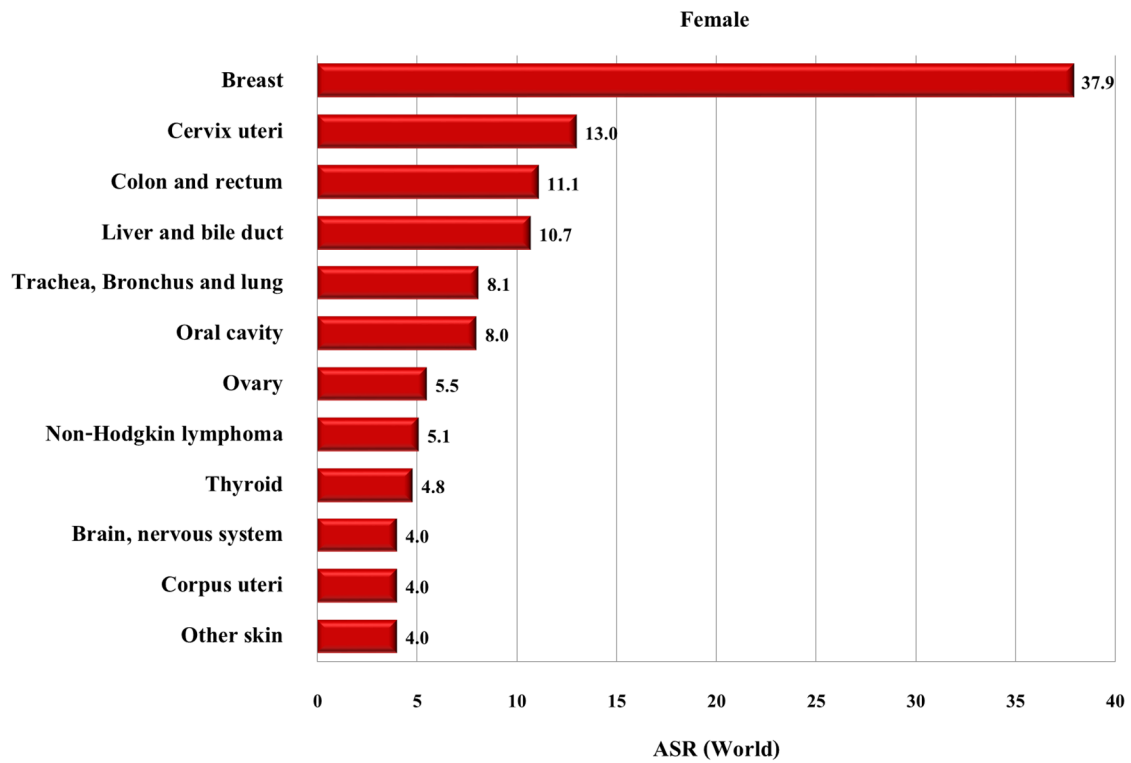
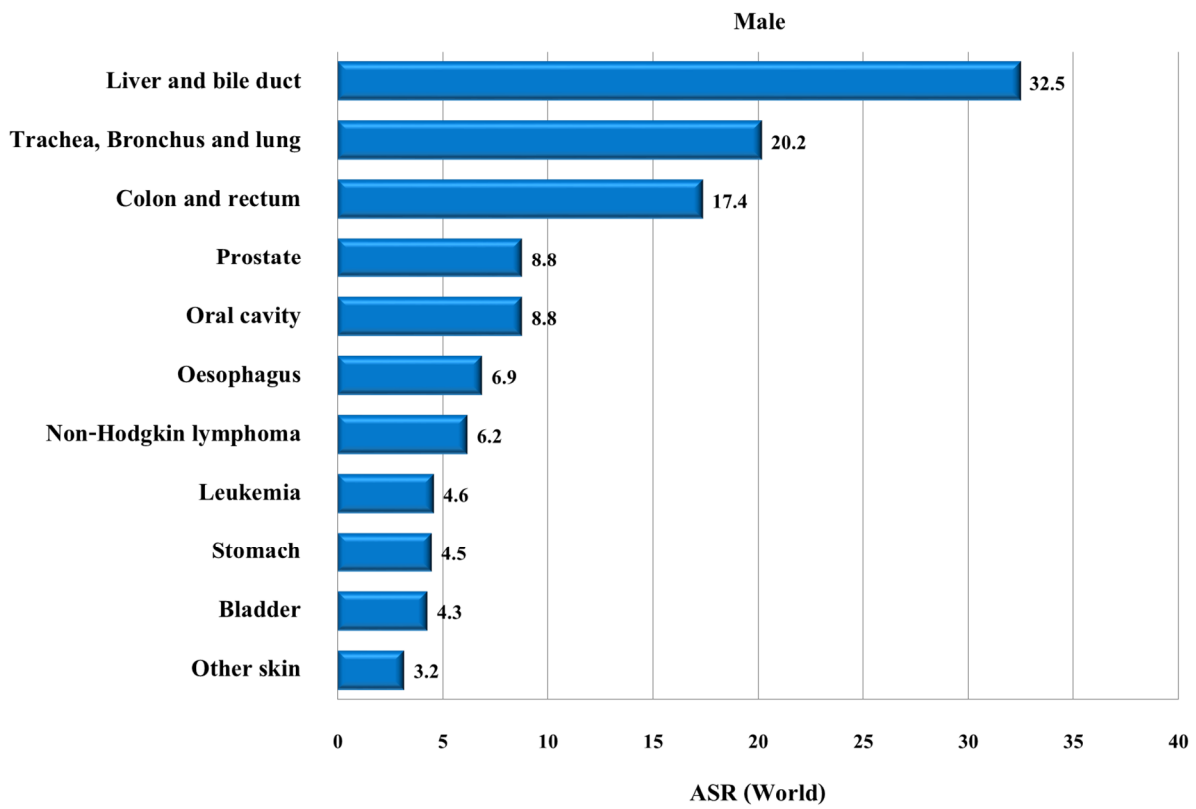
The registry is located within the Lopburi cancer center. The registry is staffed by one part - time medical doctor and a number of full - time registrars.

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 2014, 798 were males and 815 were females, making 1,613 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 147.2 per 100,000, with liver and bile duct cancer ranking first (ASR = 32.5) followed by lung (ASR = 20.2) and colon and rectum (ASR = 17.4). The ASR of all cancer sites in females was 141.5 per 100,000, the three leading cancer sites being breast (ASR = 37.9), cervix (ASR = 13.0) and colon and rectum (ASR = 11.1).

**Figure 3.7** Leading cancer in Lop Buri (mean annual ASR 2013-2015)





**Table 3.7.1** Lop Buri (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	3.3	0.0	0.2	0.1	C00	0.0	0.0
Tongue	22	0.0	0.0	0.0	0.0	1.0	0.0	0.0	3.7	7.0	8.5	6.6	13.7	20.4	20.0	23.4	12.7	5.9	4.3	C01-02	0.3	0.5
Mouth	19	1.6	2.8	0.0	0.0	1.0	1.3	2.8	1.2	2.3	5.3	11.0	12.3	10.2	17.5	6.7	19.1	5.1	3.8	C03-06	0.3	0.4
Salivary glands	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.4	3.4	2.5	10.0	0.0	0.8	0.6	C07-08	0.0	0.1
Tonsil	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.2	3.3	0.0	3.4	2.5	3.3	4.2	1.1	0.8	C09	0.1	0.1
Other oropharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	3.3	1.4	0.0	0.0	0.0	0.5	0.4	C10	0.0	0.0
Nasopharynx	8	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.5	0.0	1.1	3.3	6.8	8.5	0.0	6.7	8.5	2.1	1.5	C11	0.1	0.2
Hypopharynx	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	6.4	4.4	6.8	3.4	2.5	13.4	6.4	2.4	1.6	C12-13	0.1	0.2
Pharynx unspecified	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.2	2.7	0.0	0.0	0.0	0.0	0.4	0.3	C14	0.0	0.0
Oesophagus	38	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.5	5.8	9.6	24.3	31.5	25.6	25.0	46.8	25.4	9.9	6.9	C15	0.5	0.9
Stomach	23	0.0	0.0	0.0	0.0	0.0	0.0	4.2	2.5	9.3	4.3	4.4	10.9	20.4	30.0	20.1	23.3	6.1	4.5	C16	0.3	0.5
Small intestine	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.1	0.0	0.0	1.7	0.0	0.0	0.0	0.3	0.2	C17	0.0	0.0
Colon	56	0.0	0.0	0.0	0.0	0.0	1.3	7.0	3.7	11.6	10.7	26.5	20.5	44.3	47.5	70.2	74.2	14.8	10.3	C18	0.6	1.2
Rectum	38	0.0	0.0	0.0	0.0	0.0	1.3	2.8	0.0	4.7	10.7	13.3	15.0	27.3	40.0	40.1	63.6	10.0	6.8	C19-20	0.4	0.8
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.7	0.0	0.0	4.2	0.4	0.3	C21	0.0	0.0
Liver and bile duct	179	0.0	0.0	0.0	1.3	1.0	1.3	5.6	10.0	29.1	51.2	80.7	106.7	105.6	212.5	157.2	222.5	47.0	32.5	C22,C24	2.0	3.8
Gallbladder	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.4	1.7	0.0	0.0	4.2	0.4	0.3	C23	0.0	0.0
Pancreas	13	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	4.7	4.3	5.5	2.7	3.4	10.0	20.1	23.3	3.4	2.3	C25	0.1	0.3
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	0.0	1.1	0.0	3.4	5.0	3.3	8.5	1.0	0.7	C30-31	0.0	0.1
Larynx	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	3.2	13.3	8.2	10.2	7.5	13.4	10.6	3.8	2.6	C32	0.2	0.3
Trachea, Bronchus and lung	115	0.0	0.0	0.0	0.0	0.0	0.0	4.2	5.0	12.8	14.9	28.7	58.8	54.5	135.0	183.9	216.1	30.0	20.2	C33-34	0.9	2.5
Other thoracic organs	3	0.0	0.0	1.3	1.3	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.4	3.4	0.0	3.3	6.4	0.9	0.7	C37-38	0.0	0.1
Bone	10	0.0	0.0	3.8	0.0	1.9	0.0	1.4	0.0	1.2	3.2	3.3	6.8	6.8	7.5	3.3	8.5	2.6	2.0	C40-C41	0.1	0.2
Melanoma of skin	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.1	0.0	1.4	1.7	0.0	10.0	10.6	1.1	0.8	C43	0.0	0.1
Other skin	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	4.3	2.2	2.7	15.3	15.0	30.1	50.8	5.0	3.2	C44	0.1	0.4
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	0.1	0.1	C46	0.0	0.0
Connective tissue	7	3.2	0.0	1.3	0.0	0.0	0.0	0.0	2.5	1.2	2.1	1.1	4.1	0.0	7.5	10.0	4.2	1.7	1.6	C47,C49	0.1	0.2
Breast	2	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.2	1.1	0.0	0.0	1.7	2.5	6.7	0.0	0.6	0.5	C50	0.0	0.1
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.1	2.2	2.7	1.7	7.5	10.0	8.5	1.7	1.2	C60	0.1	0.1
Prostate	53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	9.6	40.9	47.5	100.3	161.0	13.8	8.8	C61	0.3	1.0
Testis	3	0.0	1.4	0.0	0.0	2.9	0.0	0.0	0.0	0.0	2.1	0.0	0.0	1.7	0.0	3.3	2.1	0.8	0.7	C62	0.0	0.1
Other male genital organs	1	0.0	0.0	0.0	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	0.2	0.2	C63	0.0	0.0
Kidney	5	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.2	1.2	1.1	0.0	4.1	6.8	2.5	3.3	2.1	1.2	0.9	C64	0.1	0.1
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C66	0.0	0.0
Bladder	25	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	2.3	1.1	7.7	8.2	18.7	30.0	20.1	63.6	6.6	4.3	C67	0.2	0.4
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.3	0.2	C69	0.0	0.0
Eye	1	0.0	0.0	0.0	0.0	0.0	0.0	4.2	1.2	1.2	4.3	1.1	6.8	13.6	2.5	6.7	14.8	3.4	2.8	C70-72	0.2	0.2
Brain, nervous system	13	1.6	2.8	1.3	1.3	0.0	1.3	0.0	1.4	2.5	1.2	1.1	9.6	1.7	5.0	0.0	0.0	1.7	1.3	C73	0.1	0.1
Thyroid	6	0.0	0.0	0.0	1.3	1.9	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	C74	0.0	0.0
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	0.1	0.1	C75	0.0	0.0
Other endocrine	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	0.0	0.2	0.2	C75	0.0	0.0
Hodgkin disease	0	0.0	0.0	0.0	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	0.1	0.1	C81	0.0	0.0
Non-Hodgkin lymphoma	31	3.2	0.0	2.6	2.5	2.9	3.8	1.4	3.7	3.5	6.4	11.0	8.2	11.9	27.5	40.1	46.6	8.1	6.2	C82-85,C96	0.3	0.6
Multiple myeloma	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	2.7	5.1	0.0	10.0	4.2	1.0	0.7	C90	0.1	0.1
Lymphoid leukemia	3	1.6	2.8	0.0	1.3	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	0.7	0.8	C91	0.0	0.0
Myeloid leukemia	8	1.6	2.8	0.0	0.0	0.0	0.0	2.8	1.2	1.2	2.1	1.1	4.1	3.4	7.5	10.0	4.2	2.0	1.8	C92-94	0.1	0.2
Leukemia unspecified	10	0.0	0.0	0.0	1.3	0.0	1.3	1.4	0.0	1.2	2.1	1.1	5.5	8.5	12.5	16.7	8.5	2.6	2.0	C95	0.1	0.3
Other and unspecified	26	0.0	0.0	0.0	1.3	1.9	0.0	2.8	3.7	5.8	4.3	11.0	12.3	17.0	20.0	30.1	29.7	6.7	4.8	O&U	0.3	0.6
All sites	798	12.8	12.6	10.2	17.6	15.3	19.2	47.8	53.7	123.4	179.3	279.6	392.6	511.1	757.5	939.8	1163.1	209.1	147.2	ALL	8.4	16.9

**Table 3.7.2** Lop Buri (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74	
Lip	6	1.7	0.0	1.3	1.3	0.0	1.7	0.0	0.0	1.1	1.9	1.0	0.0	0.0	2.1	2.6	11.0	1.5	1.1	C00	0.1	0.1	
Tongue	10	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.2	2.2	3.8	2.0	4.9	4.4	6.3	10.5	7.8	2.5	1.6	C01-C02	0.1	0.2	
Mouth	20	0.0	3.0	0.0	1.3	7.8	1.7	2.8	2.3	2.2	3.8	6.1	3.6	7.4	18.8	10.5	21.9	5.2	3.8	C03-C06	0.2	0.4	
Salivary glands	7	0.0	0.0	0.0	0.0	1.6	5.0	1.4	3.5	3.3	1.0	3.1	1.2	1.5	0.0	2.6	3.1	1.7	1.5	C07-C08	0.1	0.1	
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	1.5	0.0	0.0	0.3	0.2	C09	0.0	0.0	
Other oropharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C10	0.0	0.0	
Nasopharynx	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.1	1.0	1.0	2.4	4.4	2.1	2.6	3.1	1.2	0.8	C11	0.1	0.1	
Hypopharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.2	0.0	0.0	0.0	3.1	0.4	0.2	C12-C13	0.0	0.0	
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14	0.0	0.0	
Oesophagus	5	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	2.0	3.6	0.0	4.2	5.3	4.7	1.2	0.8	C15	0.0	0.1	
Stomach	23	0.0	0.0	0.0	0.0	3.1	0.0	2.8	2.3	3.3	1.0	19.4	10.9	10.3	20.9	18.4	9.4	5.9	3.8	C16	0.3	0.5	
Small intestine	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	2.9	2.1	0.0	1.6	0.4	0.3	C17	0.0	0.0	
Colon	44	0.0	0.0	0.0	1.3	0.0	0.0	2.8	1.2	9.8	14.3	15.4	13.4	26.5	37.6	39.5	43.9	11.6	7.0	C18	0.4	0.8	
Rectum	26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.2	7.6	6.1	10.9	17.7	31.3	23.7	21.9	6.7	4.0	C19-C20	0.2	0.5	
Anus	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	2.1	0.0	1.6	0.3	0.1	C21	0.0	0.0	
Liver and bile duct	69	0.0	1.5	0.0	0.0	0.0	0.0	6.9	1.2	7.7	14.3	26.6	27.9	44.2	58.5	68.4	69.0	17.9	10.7	C22-C24	0.7	1.3	
Gallbladder	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	2.4	2.9	10.4	5.3	11.0	1.8	1.0	C23	0.0	0.1	
Pancreas	9	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.2	0.0	1.9	1.0	6.1	8.8	4.2	5.3	9.4	2.3	1.4	C25	0.1	0.2	
Nose, sinuses etc.	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.1	0.0	0.0	1.2	1.5	0.0	0.0	1.6	0.4	0.3	C30-C31	0.0	0.0	
Larynx	1	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.3	0.3	C32	0.0	0.0	
Trachea, Bronchus and lung	54	0.0	0.0	0.0	0.0	0.0	0.0	4.1	3.5	3.3	8.6	14.3	21.9	23.6	50.1	84.2	61.1	14.0	8.1	C33-C34	0.4	1.1	
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	1.6	0.1	0.0	C37-C38	0.0	0.0	
Bone	13	0.0	0.0	0.0	2.7	1.6	6.7	1.4	0.0	2.2	4.8	8.2	4.9	2.9	2.1	10.5	9.4	3.5	2.6	C40-C41	0.2	0.2	
Melanoma of skin	6	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.3	0.0	1.0	3.1	1.2	4.4	2.1	5.3	7.8	1.7	1.0	C43	0.1	0.1	
Other skin	26	0.0	0.0	0.0	1.3	3.1	1.7	1.4	0.0	1.1	2.9	4.1	8.5	14.7	18.8	28.9	45.5	6.9	4.0	C44	0.2	0.4	
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C46	0.0	0.0	
Connective tissue	9	1.7	0.0	0.0	1.3	4.7	3.4	0.0	3.5	2.2	1.9	2.0	1.2	4.4	6.3	2.6	4.7	2.3	2.1	C47-C49	0.1	0.2	
Breast	213	0.0	0.0	0.0	0.0	6.2	18.5	48.3	55.1	80.9	103.1	114.6	98.4	106.2	85.6	57.9	51.7	55.7	37.9	C50	3.2	3.9	
Vulva	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.9	2.0	1.2	1.5	0.0	0.0	6.3	1.0	0.6	C51	0.0	0.0	
Vagina	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	1.5	2.1	2.6	0.0	0.4	0.3	C52	0.0	0.0	
Cervix uteri	73	0.0	0.0	0.0	0.0	1.6	11.8	12.4	15.2	28.4	46.8	32.8	25.5	19.2	37.6	34.2	26.6	19.1	13.0	C53	1.0	1.3	
Corpus uteri	25	0.0	0.0	0.0	0.0	0.0	0.0	2.8	3.5	3.3	9.5	17.4	17.0	13.3	6.3	18.4	9.4	6.4	4.0	C54	0.3	0.5	
Uterus unspecified	4	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	1.1	2.9	4.1	1.2	2.9	0.0	0.0	1.2	1.0	0.7	C55	0.1	0.1
Ovary	30	0.0	0.0	0.0	1.3	0.0	6.7	11.0	3.5	8.7	12.4	19.4	14.6	10.3	18.8	2.6	6.3	7.7	5.5	C56	0.4	0.5	
Placenta	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	C58	0.0	0.0	
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0	
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0	
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0	
Other male genital organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	1.2	0.0	0.0	7.9	0.0	0.6	0.4	C64	0.0	0.1	
Kidney	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C65	0.0	0.0	
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	C66	0.0	0.0	
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C67	0.0	0.0	
Bladder	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.9	2.0	2.4	1.5	4.2	7.9	9.4	1.8	1.0	C68	0.1	0.1	
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.6	0.2	0.1	C69	0.0	0.0	
Eye	3	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	1.1	1.0	2.0	1.2	0.0	0.0	0.0	3.1	0.8	0.6	C70-C72	0.3	0.4	
Brain, nervous system	20	1.7	1.5	1.3	0.0	1.6	5.0	5.5	4.7	1.1	5.7	11.3	8.5	11.8	10.4	5.3	9.4	5.3	4.0	C73	0.3	0.4	
Thyroid	22	0.0	0.0	1.3	2.7	7.8	8.4	6.9	7.0	2.2	11.5	9.2	7.3	4.4	12.5	5.3	3.1	5.7	4.8	C74	0.3	0.4	
Adrenal gland	1	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	C75	0.0	0.0	
Other endocrine	1	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.3	0.3	C76	0.0	0.0	
Hodgkin disease	1	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.2	0.2	C81	0.0	0.0	
Non-Hodgkin lymphoma	28	1.7	0.0	1.3	2.7	3.1	3.4	2.8	7.0	8.7	5.7	5.1	12.2	10.3	16.7	23.7	21.9	7.2	5.1	C82-C85	0.3	0.5	
Multiple myeloma	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	2.9	4.2	5.3	1.6	0.8	0.5	C90	0.0	0.1	
Lymphoid leukemia	2	0.0	3.0	1.3	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.5	0.0	2.6	0.0	0.5	0.6	C91	0.0	0.0	
Myeloid leukemia	5	0.0	0.0	0.0	1.3	0.0	3.4	1.4	0.0	0.0	0.0	1.0	0.0	4.4	2.1	10.5	3.1	1.3	1.0	C92-C94	0.1	0.1	
Leukemia unspecified	7	3.4	1.5	0.0	1.3	0.0	1.4	1.2	0.0	0.0	1.0	1.2	1.5	6.3	5.3	9.4	1.2	1.7	1.5	C95	0.1	0.1	
Other and unspecified	17	0.0	0.0	0.0	0.0	1.6	0.0	4.1	1.2	3.3	4.8	3.1	8.5	11.8	2.1	15.8	18.8	4.4	2.6	O&U	0.2	0.3	
All sites	815	10.3	10.4	9.4	20.1	53.0	80.7	121.5	131.3	186.9	283.4	349.0	331.7	392.3	490.6	531.6	536.1	212.7	141.5	ALL	9.9	15.0	

**Table 3.7.3** Mean annual incidence, Lop Buri, 2013-2015

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	
			(per 100,000)	(percent)				(per 100,000)		(percent)			
Lip	1	0.1	0.2	0.1	0.0	0.0	6	0.7	1.5	1.1	0.1	0.1	C00
Tongue	22	2.8	5.9	4.3	0.3	0.5	10	1.2	2.5	1.6	0.1	0.2	C01-02
Mouth	19	2.4	5.1	3.8	0.3	0.4	20	2.5	5.2	3.8	0.2	0.4	C03-06
Salivary glands	3	0.4	0.8	0.6	0.0	0.1	7	0.8	1.7	1.5	0.1	0.1	C07-08
Tonsil	4	0.5	1.1	0.8	0.1	0.1	1	0.1	0.3	0.2	0.0	0.0	C09
Other oropharynx	2	0.3	0.5	0.4	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C10
Nasopharynx	8	1.0	2.1	1.5	0.1	0.2	5	0.6	1.2	0.8	0.1	0.1	C11
Hypopharynx	9	1.1	2.4	1.6	0.1	0.2	2	0.2	0.4	0.2	0.0	0.0	C12-13
Pharynx unspecified	2	0.2	0.4	0.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	38	4.7	9.9	6.9	0.5	0.9	5	0.6	1.2	0.8	0.0	0.1	C15
Stomach	23	2.9	6.1	4.5	0.3	0.5	23	2.8	5.9	3.8	0.3	0.5	C16
Small intestine	1	0.1	0.3	0.2	0.0	0.0	2	0.2	0.4	0.3	0.0	0.0	C17
Colon	56	7.1	14.8	10.3	0.6	1.2	44	5.4	11.6	7.0	0.4	0.8	C18
Rectum	38	4.8	10.0	6.8	0.4	0.8	26	3.2	6.7	4.0	0.2	0.5	C19-20
Anus	2	0.2	0.4	0.3	0.0	0.0	1	0.1	0.3	0.1	0.0	0.0	C21
Liver and bile duct	179	22.5	47.0	32.5	2.0	3.8	69	8.4	17.9	10.7	0.7	1.3	C22,C24
Gallbladder	2	0.2	0.4	0.3	0.0	0.0	7	0.9	1.8	1.0	0.0	0.1	C23
Pancreas	13	1.6	3.4	2.3	0.1	0.3	9	1.1	2.3	1.4	0.1	0.2	C25
Nose, sinuses etc.	4	0.5	1.0	0.7	0.0	0.1	2	0.2	0.4	0.3	0.0	0.0	C30-31
Larynx	14	1.8	3.8	2.6	0.2	0.3	1	0.1	0.3	0.3	0.0	0.0	C32
Trachea, Bronchus and lung	115	14.4	30.0	20.2	0.9	2.5	54	6.6	14.0	8.1	0.4	1.1	C33-34
Other thoracic organs	3	0.4	0.9	0.7	0.0	0.1	0	0.0	0.1	0.0	0.0	0.0	C37-38
Bone	10	1.3	2.6	2.0	0.1	0.2	13	1.6	3.5	2.6	0.2	0.2	C40-C41
Melanoma of skin	4	0.5	1.1	0.8	0.0	0.1	6	0.8	1.7	1.0	0.1	0.1	C43
Other skin	19	2.4	5.0	3.2	0.1	0.4	26	3.2	6.9	4.0	0.2	0.4	C44
Kaposi's sarcoma	0	0.0	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	7	0.8	1.7	1.6	0.1	0.2	9	1.1	2.3	2.1	0.1	0.2	C47,C49
Breast	2	0.3	0.6	0.5	0.0	0.1	213	26.2	55.7	37.9	3.2	3.9	C50
Vulva							4	0.5	1.0	0.6	0.0	0.0	C51
Vagina							2	0.2	0.4	0.3	0.0	0.0	C52
Cervix uteri							73	9.0	19.1	13.0	1.0	1.3	C53
Corpus uteri							25	3.0	6.4	4.0	0.3	0.5	C54
Uterus unspecified							4	0.5	1.0	0.7	0.1	0.1	C55
Ovary							30	3.6	7.7	5.5	0.4	0.5	C56
Placenta							0	0.0	0.1	0.1	0.0	0.0	C57
Penis	6	0.8	1.7	1.2	0.1	0.1							C58
Prostate	53	6.6	13.8	8.8	0.3	1.0							C60
Testis	3	0.4	0.8	0.7	0.0	0.1							C61
Other male genital organs	1	0.1	0.2	0.2	0.0	0.0							C62
Kidney	5	0.6	1.2	0.9	0.1	0.1	2	0.3	0.6	0.4	0.0	0.1	C64
Renal pelvis	0	0.0	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C65
Ureter	1	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C66
Bladder	25	3.2	6.6	4.3	0.2	0.4	7	0.9	1.8	1.0	0.1	0.1	C67
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C68
Eye	1	0.2	0.3	0.2	0.0	0.0	3	0.4	0.8	0.6	0.0	0.0	C69
Brain, nervous system	13	1.6	3.4	2.8	0.2	0.2	20	2.5	5.3	4.0	0.3	0.4	C70-72
Thyroid	6	0.8	1.7	1.3	0.1	0.1	22	2.7	5.7	4.8	0.3	0.4	C73
Adrenal gland	0	0.0	0.1	0.1	0.0	0.0	1	0.1	0.2	0.2	0.0	0.0	C74
Other endocrine	1	0.1	0.2	0.2	0.0	0.0	1	0.1	0.3	0.3	0.0	0.0	C75
Hodgkin disease	0	0.0	0.1	0.1	0.0	0.0	1	0.1	0.2	0.2	0.0	0.0	C81
Non-Hodgkin lymphoma	31	3.9	8.1	6.2	0.3	0.6	28	3.4	7.2	5.1	0.3	0.5	C82-85,C96
Multiple myeloma	4	0.5	1.0	0.7	0.1	0.1	3	0.4	0.8	0.5	0.0	0.1	C90
Lymphoid leukemia	3	0.3	0.7	0.8	0.0	0.0	2	0.2	0.5	0.6	0.0	0.0	C91
Myeloid leukemia	8	1.0	2.0	1.8	0.1	0.2	5	0.6	1.3	1.0	0.1	0.1	C92-94
Leukemia unspecified	10	1.3	2.6	2.0	0.1	0.3	7	0.8	1.7	1.5	0.1	0.1	C95
Other and unspecified	26	3.2	6.7	4.8	0.3	0.6	17	2.0	4.4	2.6	0.2	0.3	D45-D47
<b>All sites</b>	<b>798</b>	<b>100.0</b>	<b>209.1</b>	<b>147.2</b>	<b>8.4</b>	<b>16.9</b>	<b>815</b>	<b>100.0</b>	<b>212.7</b>	<b>141.5</b>	<b>9.9</b>	<b>15.0</b>	<b>O&amp;U</b>

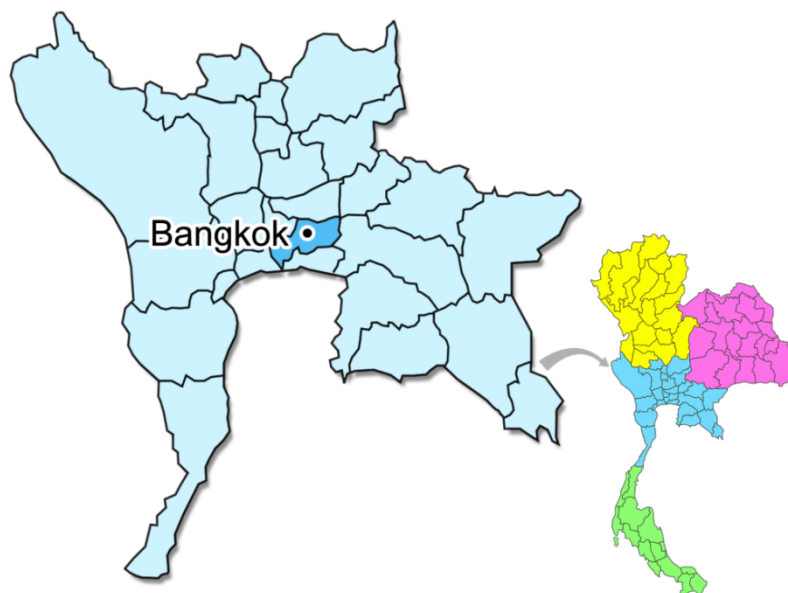
**Table 3.7.4** Percentage of morphologically verified and death certificate only cases, Lop Buri

Site	Male			Female			ICD-10
	Cases	%MV	%DCO	Cases	%MV	%DCO	
Oral cavity	136	91.2	0.0	126	91.3	0.8	C00-C08
Oropharynx	24	87.5	0.0	3	66.7	0.0	C09-C10,C14
Nasopharynx	24	87.5	8.3	14	92.9	0.0	C11
Hypopharynx	27	96.3	0.0	5	40.0	0.0	C12-C13
Esophagus	113	91.2	4.4	14	85.7	0.0	C15
Stomach	70	80.0	4.3	68	79.4	5.9	C16
Small intestine	3	33.3	66.7	5	40.0	0.0	C17
Colon and rectum	288	91.3	4.5	213	91.1	1.9	C18-C21
Liver and bile duct	538	13.8	12.5	206	19.9	9.7	C22,C24
Gallbladder	5	40.0	0.0	21	38.1	9.5	C23
pancrease	39	2.6	15.4	26	30.8	3.8	C25
Nose,sinuses etc	12	91.7	0.0	5	60.0	0.0	C30-C31
Larynx	43	88.4	2.3	3	66.7	0.0	C32
Trachea, brochus and lung	344	79.9	11.9	161	88.2	3.7	C33-C34
Other thoracic organs	10	30.0	0.0	1	0.0	0.0	C37-C38
Bone	30	13.3	6.7	40	15.0	0.0	C40-C41
Melanoma of skin	13	100.0	0.0	19	100.0	0.0	C43
Other skin	57	96.5	0.0	79	96.2	0.0	C44
Mesothelioma	0	0.0	0.0	0	0.0	0.0	C45
Kaposi sarcoma	1	100.0	0.0	0	0.0	0.0	C46
Connective and soft tissue	20	80.0	5.0	27	51.9	0.0	C47,C49
Breast	7	100.0	0.0	640	99.5	0.5	C50
Vulva				12	58.3	0.0	C51
Vagina				5	60.0	0.0	C52
Cervix uteri				219	99.5	0.5	C53
Corpus uteri				74	98.6	0.0	C54
Uterus unspecified				12	33.3	0.0	C55
Ovary				89	88.8	1.1	C56
Other female genital organs				0			C57
Placenta				1	0.0	0.0	C58
Penis	19	89.5	5.3				C60
Prostate	158	96.2	3.8				C61
Testis	9	66.7	0.0				C62
Other male genital organs	2	50.0	0.0				C63
Kidney	14	71.4	7.1	7	71.4	14.3	C64
Renal pelvis	1	0.0	0.0	0	0.0	0.0	C65
Ureter	2	50.0	0.0	0	0.0	0.0	C66
Bladder	76	86.8	2.6	21	90.5	4.8	C67
Other urinary organs	0	0.0	0.0	2	50.0	0.0	C68
Eye	4	75.0	0.0	9	22.2	0.0	C69
Brain, nervous system	39	30.8	10.3	61	34.4	8.2	C70-C72
Thyroid	19	100.0	0.0	66	100.0	0.0	C73
Adrenal gland	1	100.0	0.0	2	0.0	0.0	C74
Other endocrine	2	100.0	0.0	3	0.0	0.0	C75
Hodgkin disease	1	100.0	0.0	2	100.0	0.0	C81
Non-Hodgkin lymphoma	93	100.0	0.0	83	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	9	100.0	0.0	C90
Leukemia	61	100.0	0.0	41	100.0	0.0	C91-C95
Myelodysplastic	0	0.0	0.0	0	0.0	0.0	D45-D47
Other and unspecified	77	49.4	31.2	50	42.0	22.0	O&U
<b>All site</b>	<b>2,394</b>	<b>67.3</b>	<b>7.6</b>	<b>2,444</b>	<b>82.0</b>	<b>2.5</b>	<b>All</b>
<b>All site without liver</b>	<b>1,856</b>	<b>82.8</b>	<b>6.1</b>	<b>2,238</b>	<b>87.7</b>	<b>1.8</b>	<b>All</b>

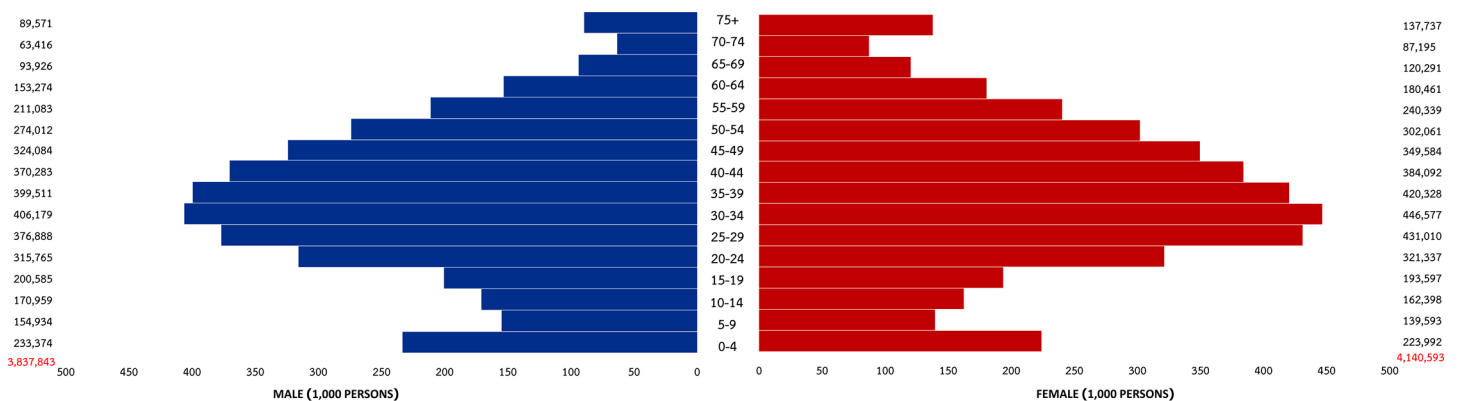
# Bangkok Cancer Registry

## 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 2014 (average 2013-2015)



### **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.

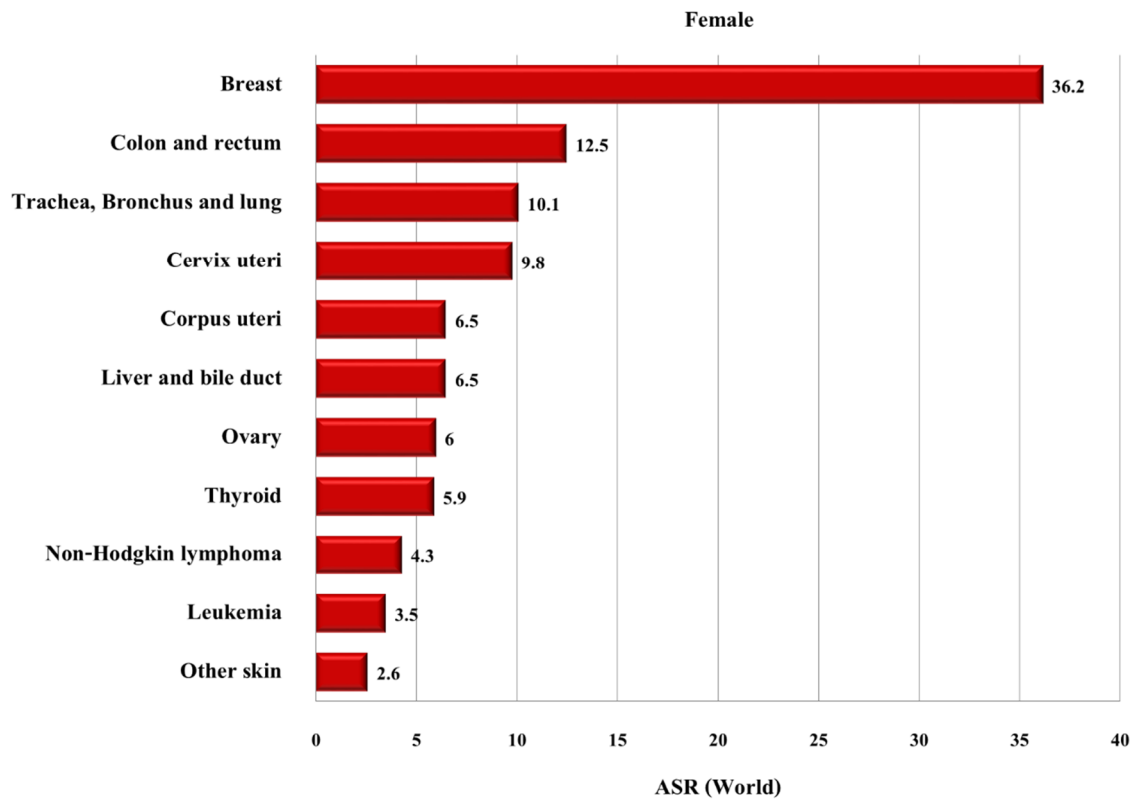
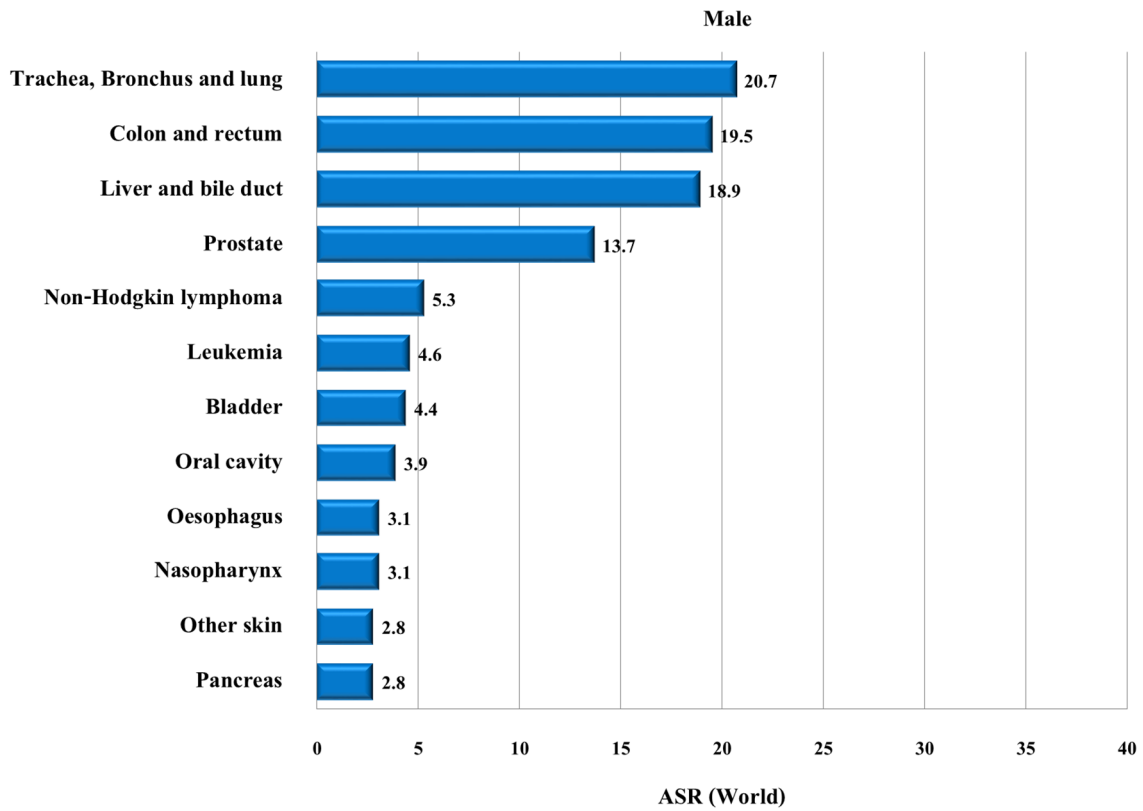
### **Registry procedures**

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 2014, 5,349 were males and 6,762 were females, making 12,111 for both sexes. The age - standardized incidence rate (ASR) of all sites in males was 128.9 per 100,000, with lung cancer ranking first (ASR = 20.7), followed by colon and rectum (ASR = 19.5) and liver and bile duct (ASR = 18.9). The ASR of all cancers in females was 125.6, the three leading sites being breast (ASR = 36.2), colon and rectum (ASR = 12.5) and lung (ASR = 10.1).

**Figure 3.8** Leading cancer in Bangkok (mean annual ASR 2013-2015)



**Table 3.8.1** Bangkok (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Male

Site	No. Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	4	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.5	0.4	0.1	0.1	C00	0.0	0.0
Tongue	87	0.0	0.0	0.0	0.0	0.1	0.3	0.8	0.8	1.5	2.7	4.5	6.8	9.6	11.0	9.5	10.4	2.3	1.9	C01-C02	0.1	0.2
Mouth	60	0.0	0.0	0.2	0.0	0.0	0.1	0.3	0.4	0.4	2.2	3.4	4.6	6.3	7.5	11.0	7.4	1.6	1.4	C03-C06	0.1	0.2
Salivary glands	22	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.2	0.1	0.3	1.0	2.1	2.4	3.9	1.6	6.0	0.6	0.5	C07-C08	0.0	0.1
Tonsil	32	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	1.1	1.1	2.1	3.2	4.1	3.9	1.6	3.0	0.8	0.7	C09	0.1	0.1
Other oropharynx	20	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.5	1.1	2.2	2.2	1.4	2.1	2.2	2.2	0.5	0.4	0.4	C10	0.0	0.1
Nasopharynx	147	0.0	0.0	0.2	0.3	0.4	0.4	0.8	2.5	4.0	8.6	8.0	11.8	11.5	11.0	14.2	4.1	3.8	3.1	C11	0.2	0.4
Hypopharynx	53	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.5	0.7	2.8	5.1	5.7	6.7	11.0	8.6	1.4	1.3	C12-C13	0.1	0.2
Pharynx unspecified	5	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.3	1.1	0.4	1.1	0.4	0.1	0.1	C14	0.0	0.0
Oesophagus	133	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.3	0.9	3.2	9.0	10.4	16.3	18.1	17.9	17.9	3.5	3.1	C15	0.2	0.4
Stomach	103	0.0	0.2	0.0	0.2	0.0	0.2	0.3	0.8	1.7	1.5	4.1	7.3	9.6	12.8	15.8	25.7	2.7	2.4	C16	0.1	0.3
Small intestine	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.3	0.2	0.8	1.5	1.8	2.1	4.5	0.4	0.3	C17	0.0	0.0
Colon	451	0.0	0.0	0.2	0.2	0.3	0.6	1.7	1.8	4.2	8.3	15.6	25.4	46.5	73.5	80.4	114.2	11.7	10.8	C18	0.5	1.3
Rectum	349	0.0	0.0	0.0	0.2	0.2	0.0	1.0	1.5	2.9	6.4	14.5	25.1	35.4	62.8	62.0	68.8	9.1	8.4	C19-C20	0.4	1.1
Anus	14	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.5	0.2	0.7	0.9	0.9	1.1	3.7	1.5	0.4	0.3	C21	0.0	0.0
Liver and bile duct	813	0.9	0.0	0.0	0.0	0.3	0.6	1.3	4.3	8.6	18.2	38.8	72.0	87.0	102.9	132.5	136.2	21.2	18.9	C22-C24	1.2	2.3
Gallbladder	12	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	1.6	0.9	1.8	2.1	2.6	0.3	0.3	C23	0.0	0.0
Pancreas	114	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	1.2	1.2	3.3	7.4	11.7	19.5	28.4	26.8	3.0	2.8	C25	0.1	0.4
Nose, sinuses etc.	26	0.0	0.0	0.0	0.2	0.0	0.2	0.3	0.8	0.9	1.1	0.9	2.6	2.8	3.2	3.2	3.7	0.7	0.6	C30-C31	0.0	0.1
Larynx	96	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.6	2.0	4.0	7.4	11.7	8.9	16.3	24.6	2.5	2.2	C32	0.1	0.3
Trachea, Bronchus and lung	856	0.0	0.0	0.0	0.3	0.3	0.8	1.1	2.1	5.9	12.8	29.9	54.2	89.8	127.8	177.7	233.3	22.3	20.7	C33-C34	1.0	2.5
Other thoracic organs	24	0.3	0.0	0.0	0.8	1.0	0.4	0.2	0.7	0.2	0.7	1.0	1.1	0.7	1.4	2.6	1.9	0.6	0.6	C37-C38	0.0	0.1
Bone	25	0.0	0.2	1.9	1.7	1.2	0.6	0.7	0.3	0.1	0.4	0.4	0.9	0.4	1.1	1.6	1.1	0.7	0.7	C40-C41	0.0	0.1
Melanoma of skin	10	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.4	0.4	0.2	0.4	0.7	2.1	3.0	0.3	0.2	C43	0.0	0.0
Other skin	117	0.0	0.0	0.0	0.2	0.2	0.3	0.3	0.8	0.8	0.8	3.6	5.2	8.5	15.3	22.6	47.6	3.1	2.8	C44	0.1	0.3
Mesothelioma	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	0.0	0.0	0.0	0.4	0.1	0.1	C45	0.0	0.0
Kaposi's sarcoma	6	0.0	0.0	0.0	0.0	0.1	0.4	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.4	0.1	0.1	C46	0.0	0.0
Connective tissue	66	0.6	0.9	0.4	1.2	0.5	0.6	1.3	0.8	1.2	1.7	1.5	3.2	4.6	7.5	5.8	10.8	1.7	1.6	C47-C49	0.1	0.2
Breast	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.9	1.6	1.7	1.8	1.1	1.9	0.4	0.3	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	20	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.7	1.5	2.8	1.5	2.8	2.1	3.0	0.5	0.4	C60	0.0	0.1
Prostate	523	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.5	0.5	4.5	18.9	48.1	96.9	180.8	209.1	13.6	13.7	C61	0.4	1.8
Testis	23	0.0	0.0	0.2	0.5	1.1	0.5	1.0	0.8	1.0	0.4	0.0	0.6	0.9	0.7	0.5	0.7	0.6	0.5	C62	0.0	0.0
Other male genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.5	0.4	0.0	0.0	C63	0.0	0.0
Kidney	91	0.0	0.9	0.0	0.0	0.0	0.0	0.2	0.8	2.3	1.7	4.5	5.5	7.6	13.1	15.2	14.9	2.4	2.1	C64	0.1	0.3
Renal pelvis	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	1.3	1.1	3.2	1.1	0.2	0.2	C65	0.0	0.0
Ureter	9	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	0.7	1.1	3.2	3.0	0.2	0.2	0.2	3.0	0.2	0.2	C66	0.0	0.0
Bladder	179	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.8	2.1	3.5	9.3	17.2	20.2	47.3	69.6	4.6	4.4	C67	0.2	0.5
Other urinary organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.4	0.5	0.7	0.1	0.1	C68	0.0	0.0
Eye	4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.3	0.0	0.7	0.0	0.0	0.1	0.1	C69	0.0	0.0
Brain, nervous system	72	2.3	1.5	2.3	1.2	1.0	0.8	1.1	0.8	0.9	1.7	2.3	3.5	4.3	6.0	4.2	6.7	1.9	2.0	C70-C72	0.1	0.2
Thyroid	76	0.0	0.2	0.4	0.0	0.5	1.0	1.2	1.9	2.3	2.3	4.4	2.5	4.1	6.7	6.3	7.8	2.0	1.6	C73	0.1	0.2
Adrenal gland	5	0.9	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.3	0.2	0.4	0.0	0.0	0.1	0.2	C74	0.0	0.0
Other endocrine	5	0.1	0.0	0.6	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.2	0.4	0.4	0.0	0.4	0.1	0.2	C75	0.0	0.0
Hodgkin disease	14	0.0	0.6	0.4	1.0	0.4	0.8	0.2	0.3	0.2	0.1	0.4	0.3	0.4	0.4	0.0	0.4	0.4	0.4	C81	0.0	0.0
Non-Hodgkin lymphoma	223	0.4	1.1	1.2	2.2	0.8	1.3	2.4	2.8	3.7	4.7	7.2	11.7	18.3	23.8	33.6	45.0	5.8	5.3	C82-C85	0.3	0.6
Multiple myeloma	45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.9	1.9	3.0	3.7	4.3	10.5	12.3	1.2	1.1	C90	0.1	0.1
Lymphoid leukemia	52	2.0	1.7	3.5	1.2	1.0	0.3	0.2	0.5	0.3	0.2	0.9	2.4	3.3	3.5	7.4	7.8	1.3	1.7	C91	0.1	0.1
Myeloid leukemia	80	0.9	0.6	1.4	1.0	1.1	1.1	1.0	1.3	0.9	1.9	2.4	2.8	5.2	6.7	7.4	17.1	2.1	2.0	C92-C94	0.1	0.2
Leukemia unspecified	33	0.4	1.1	0.6	1.5	0.2	0.3	0.4	0.8	0.2	0.3	1.3	1.1	1.3	2.5	5.8	4.8	0.9	0.9	C95	0.0	0.1
Myelodysplastic disease	30	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.3	0.4	0.5	1.1	1.6	2.0	4.3	6.3	11.2	0.8	0.7	D45-D47	0.0	0.1
Other and unspecified	175	0.1	0.2	0.0	0.5	0.3	0.4	0.4	1.2	1.4	3.0	6.9	9.2	16.7	29.1	31.5	42.8	4.6	4.2	O&U	0.2	0.5
All sites	5,349	9.9	9.5	13.5	14.5	12.1	12.3	19.7	31.9	53.5	97.3	195.5	338.4	510.8	731.1	996.6	1228.1	139.3	128.9	ALL	6.6	15.2



**Table 3.8.2** Bangkok (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+ Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	9	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.0	1.1	3.6	0.2	C00	0.0	0.0
Tongue	52	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.4	0.5	0.9	2.6	1.9	3.7	5.5	6.1	6.8	1.3	C01-C02	0.1	0.1
Mouth	41	0.0	0.0	0.0	0.0	0.4	0.2	0.4	0.6	0.5	0.7	1.2	1.9	3.0	1.7	4.2	8.2	1.0	C03-C06	0.0	0.1
Salivary glands	25	0.0	0.2	0.0	0.0	0.2	0.3	0.1	0.3	0.2	0.8	1.2	1.2	1.3	1.9	2.7	2.4	0.6	C07-C08	0.0	0.1
Tonsil	10	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.4	1.1	0.4	0.4	0.3	0.0	1.2	0.2	C09	0.0	0.0
Other oropharynx	3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.4	0.0	0.0	0.8	0.7	0.1	C10	0.0	0.0
Nasopharynx	50	0.0	0.0	0.0	0.2	0.5	0.5	0.7	0.8	1.0	2.3	2.5	3.1	2.6	1.9	2.3	2.7	1.2	C11	0.1	0.1
Hypopharynx	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.6	0.8	0.8	0.0	0.1	C12-C13	0.0	0.0
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0	0.2	0.0	C14	0.0	0.0
Oesophagus	21	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.6	0.4	0.8	2.0	1.9	1.5	4.8	0.5	C15	0.0	0.0
Stomach	116	0.0	0.0	0.0	0.0	0.2	0.3	0.7	1.1	1.6	2.4	3.0	7.1	7.9	13.3	18.0	14.3	2.8	C16	0.1	0.3
Small intestine	15	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.4	0.2	1.0	0.9	0.8	2.7	2.7	0.4	C17	0.0	0.0
Colon	421	0.0	0.0	0.2	0.0	0.4	0.2	1.5	1.9	4.3	7.4	14.0	20.4	32.7	41.0	49.7	85.4	10.2	C18	0.4	0.9
Rectum	243	0.0	0.0	0.0	0.0	0.2	0.2	0.8	1.0	2.4	4.2	7.9	14.6	21.6	26.3	32.9	37.3	5.9	C19-C20	0.3	0.6
Anus	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.6	0.1	1.7	1.4	1.1	2.4	0.3	C21	0.0	0.0
Liver and bile duct	351	0.1	0.2	0.0	0.0	0.2	0.2	0.5	1.4	2.9	4.2	9.5	17.3	25.5	39.9	48.2	78.7	8.5	C22-C24	0.3	0.8
Gallbladder	31	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.4	0.6	1.1	0.3	2.6	2.8	7.3	5.1	0.7	C23	0.0	0.1
Pancreas	105	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.4	0.7	1.2	2.5	6.2	7.0	11.6	16.8	22.3	2.5	C25	0.1	0.2
Nose, sinuses etc.	16	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.5	0.7	0.7	0.7	0.7	0.6	0.8	1.9	0.4	C30-C31	0.0	0.0
Larynx	11	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.6	0.1	0.3	0.4	1.9	0.8	1.9	0.3	C32	0.0	0.0
Trachea, Bronchus and lung	542	0.0	0.0	0.0	0.2	0.5	0.5	1.3	2.9	4.3	7.4	14.9	28.8	42.7	58.5	70.3	111.8	13.1	C33-C34	0.5	1.2
Other thoracic organs	16	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.4	0.2	0.3	0.7	1.4	1.3	1.9	1.1	0.7	0.4	C37-C38	0.0	0.0
Bone	24	0.1	0.2	1.0	0.5	0.6	0.2	0.4	0.2	0.5	0.5	0.6	1.4	0.6	1.1	2.7	1.0	0.6	C40-C41	0.0	0.1
Melanoma of skin	14	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.6	0.7	1.1	1.9	0.4	2.7	C43	0.0	0.0
Other skin	147	0.0	0.0	0.0	0.0	0.1	0.3	0.5	1.2	1.0	2.4	2.2	3.6	7.9	13.3	22.2	43.8	3.5	C44	0.1	0.3
Mesothelioma	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	0.3	0.0	0.0	0.0	C45	0.0	0.0
Kaposi's sarcoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	C46	0.0	0.0
Connective tissue	55	0.0	0.2	0.2	0.3	0.5	0.2	0.9	1.0	1.3	2.2	2.1	2.6	3.1	2.8	4.6	3.4	1.3	C47-C49	0.1	0.1
Breast	2016	0.0	0.0	0.0	0.0	0.3	3.2	10.4	25.2	58.9	87.0	104.3	125.0	141.9	135.8	129.6	123.7	48.7	C50	2.8	4.1
Vulva	12	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.4	0.8	0.9	1.4	2.7	1.7	0.3	C51	0.0	0.0
Vagina	9	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.3	0.3	0.6	0.9	0.6	1.1	0.7	0.2	C52	0.0	0.0
Cervix uteri	547	0.0	0.0	0.0	0.0	0.5	2.0	4.5	9.0	16.1	19.9	25.9	31.2	32.3	38.2	40.5	39.7	13.2	C53	0.7	1.1
Corpus uteri	343	0.0	0.0	0.2	0.0	0.2	0.5	1.3	2.1	4.1	9.6	17.1	25.5	32.9	40.5	27.1	22.7	8.3	C54	0.5	0.8
Uterus unspecified	11	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.4	0.6	0.7	1.3	1.1	0.4	0.5	0.3	C55	0.0	0.0
Ovary	324	0.0	0.2	0.8	1.9	2.4	2.0	2.1	3.6	7.8	12.0	16.2	20.7	23.1	20.5	16.1	19.4	7.8	C56	0.5	0.6
Other female genital organs	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6	0.2	0.3	0.8	0.5	0.1	C57	0.0	0.0
Placenta	7	0.0	0.0	0.2	0.3	0.2	0.3	0.2	0.1	0.3	0.2	0.2	0.0	0.0	0.0	0.4	0.0	0.2	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	45	0.6	0.5	0.0	0.2	0.1	0.1	0.2	0.3	0.4	0.6	1.7	1.9	2.8	4.2	5.4	8.2	1.1	C64	0.0	0.1
Renal pelvis	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.7	1.1	0.8	2.2	0.2	C65	0.0	0.0
Ureter	13	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.6	0.9	1.7	2.7	2.7	3.4	0.3	C66	0.0	0.0
Bladder	77	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.4	0.6	1.0	3.5	4.1	8.6	11.1	23.7	1.9	C67	0.1	0.1
Other urinary organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	5	0.4	0.2	0.0	0.0	0.2	0.0	0.0	0.1	0.3	0.2	0.1	0.3	0.2	0.0	0.4	0.5	0.1	C69	0.0	0.0
Brain, nervous system	62	1.0	1.9	1.0	1.2	0.5	0.2	0.5	0.8	1.4	1.9	1.9	2.9	3.7	3.9	5.4	3.1	1.5	C70-C72	0.1	0.1
Thyroid	327	0.0	0.0	0.8	2.8	5.0	4.4	8.3	8.7	8.4	9.6	11.6	13.9	19.0	10.5	14.9	12.6	7.9	C73	0.5	0.6
Adrenal gland	3	0.4	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.8	0.0	0.0	0.1	C74	0.0	0.0
Other endocrine	2	0.1	0.0	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	C75	0.0	0.0
Hodgkin disease	17	0.0	0.0	0.0	0.0	0.2	0.7	0.6	0.2	0.4	0.3	0.1	0.1	0.6	0.0	0.4	1.5	0.4	C81	0.0	0.0
Non-Hodgkin lymphoma	223	0.6	0.2	0.6	1.4	1.5	1.5	1.3	2.5	3.3	4.2	5.7	11.4	13.9	19.4	25.2	35.1	5.4	C82-C85	0.2	0.5
Multiple myeloma	52	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.4	0.9	1.5	1.4	4.1	9.4	8.0	9.2	1.3	C90	0.0	0.1
Lymphoid leukaemia	41	1.6	2.6	1.0	0.9	0.3	0.5	0.1	0.1	0.3	0.9	0.6	1.1	3.1	2.2	3.8	4.4	1.0	C91	0.1	0.1
Myeloid leukaemia	72	0.6	0.7	0.4	1.0	0.3	0.7	1.0	1.3	1.4	1.2	2.1	2.5	4.2	4.7	4.2	9.9	1.7	C92-C94	0.1	0.1
Leukemia unspecified	34	0.9	1.0	1.0	0.9	0.2	0.3	0.4	0.6	0.7	0.9	0.4	1.2	2.0	0.8	3.4	2.9	0.8	C95	0.1	0.1
Myelodysplastic disease	26	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.3	0.3	0.4	1.5	1.1	2.0	4.6	5.6	0.6	D45-D47	0.0	0.1
Other and unspecified	145	0.9	0.5	0.2	0.4	0.6	0.2	0.4	1.1	1.8	2.6	4.6	7.8	10.5	15.0	15.7	23.7	3.5	O&U	0.2	0.3
<b>All sites</b>	<b>6,762</b>	<b>7.7</b>	<b>8.8</b>	<b>8.4</b>	<b>13.3</b>	<b>18.0</b>	<b>21.0</b>	<b>40.5</b>	<b>72.3</b>	<b>130.5</b>	<b>193.8</b>	<b>267.9</b>	<b>371.7</b>	<b>476.2</b>	<b>557.3</b>	<b>623.9</b>	<b>800.8</b>	<b>163.3</b>	<b>125.6</b>	<b>8.2</b>	<b>14.1</b>

**Table 3.8.3** Mean annual incidence, Bangkok, 2013-2015

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate	ASR world	Cum. 0-64	Rate. 0-74	
	(per 100,000)			(percent)			(per 100,000)			(percent)			
Lip	4	0.1	0.1	0.1	0.0	0.0	9	0.1	0.2	0.1	0.0	0.0	C00
Tongue	87	1.6	2.3	1.9	0.1	0.2	52	0.8	1.3	1.0	0.1	0.1	C01-02
Mouth	60	1.1	1.6	1.4	0.1	0.2	41	0.6	1.0	0.7	0.0	0.1	C03-06
Salivary glands	22	0.4	0.6	0.5	0.0	0.1	25	0.4	0.6	0.5	0.0	0.1	C07-08
Tonsil	32	0.6	0.8	0.7	0.1	0.1	10	0.1	0.2	0.2	0.0	0.0	C09
Other oropharynx	20	0.4	0.5	0.4	0.0	0.1	3	0.0	0.1	0.1	0.0	0.0	C10
Nasopharynx	147	2.8	3.8	3.1	0.2	0.4	50	0.7	1.2	0.9	0.1	0.1	C11
Hypopharynx	53	1.0	1.4	1.3	0.1	0.2	4	0.1	0.1	0.1	0.0	0.0	C12-13
Pharynx unspecified	5	0.1	0.1	0.1	0.0	0.0	1	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	133	2.5	3.5	3.1	0.2	0.4	21	0.3	0.5	0.4	0.0	0.0	C15
Stomach	103	1.9	2.7	2.4	0.1	0.3	116	1.7	2.8	2.2	0.1	0.3	C16
Small intestine	14	0.3	0.4	0.3	0.0	0.0	15	0.2	0.4	0.3	0.0	0.0	C17
Colon	451	8.4	11.7	10.8	0.5	1.3	421	6.2	10.2	7.7	0.4	0.9	C18
Rectum	349	6.5	9.1	8.4	0.4	1.1	243	3.6	5.9	4.6	0.3	0.6	C19-20
Anus	14	0.3	0.4	0.3	0.0	0.0	12	0.2	0.3	0.2	0.0	0.0	C21
Liver and bile duct	813	15.2	21.2	18.9	1.2	2.3	351	5.2	8.5	6.5	0.3	0.8	C22,C24
Gallbladder	12	0.2	0.3	0.3	0.0	0.0	31	0.5	0.7	0.6	0.0	0.1	C23
Pancreas	114	2.1	3.0	2.8	0.1	0.4	105	1.5	2.5	1.9	0.1	0.2	C25
Nose, sinuses etc.	26	0.5	0.7	0.6	0.0	0.1	16	0.2	0.4	0.3	0.0	0.0	C30-31
Larynx	96	1.8	2.5	2.2	0.1	0.3	11	0.2	0.3	0.2	0.0	0.0	C32
Trachea, Bronchus and lung	856	16.0	22.3	20.7	1.0	2.5	542	8.0	13.1	10.1	0.5	1.2	C33-34
Other thoracic organs	24	0.4	0.6	0.6	0.0	0.1	16	0.2	0.4	0.3	0.0	0.0	C37-38
Bone	25	0.5	0.7	0.7	0.0	0.1	24	0.4	0.6	0.6	0.0	0.1	C40-C41
Melanoma of skin	10	0.2	0.3	0.2	0.0	0.0	14	0.2	0.3	0.3	0.0	0.0	C43
Other skin	117	2.2	3.1	2.8	0.1	0.3	147	2.2	3.5	2.6	0.1	0.3	C44
Mesothelioma	3	0.1	0.1	0.1	0.0	0.0	1	0.0	0.0	0.0	0.0	0.0	C45
Kaposi's sarcoma	6	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C46
Connective tissue	66	1.2	1.7	1.6	0.1	0.2	55	0.8	1.3	1.0	0.1	0.1	C47,C49
Breast	15	0.3	0.4	0.3	0.0	0.0	2,016	29.8	48.7	36.2	2.8	4.1	C50
Vulva							12	0.2	0.3	0.2	0.0	0.0	C51
Vagina							9	0.1	0.2	0.2	0.0	0.0	C52
Cervix uteri							547	8.1	13.2	9.8	0.7	1.1	C53
Corpus uteri							343	5.1	8.3	6.5	0.5	0.8	C54
Uterus unspecified							11	0.2	0.3	0.2	0.0	0.0	C55
Ovary							324	4.8	7.8	6.0	0.5	0.6	C56
Other female genital organs							5	0.1	0.1	0.1	0.0	0.0	C57
Placenta							7	0.1	0.2	0.2	0.0	0.0	C58
Penis	20	0.4	0.5	0.4	0.0	0.1							C60
Prostate	523	9.8	13.6	13.7	0.4	1.8							C61
Testis	23	0.4	0.6	0.5	0.0	0.0							C62
Other male genital organs	1	0.0	0.0	0.0	0.0	0.0							C63
Kidney	91	1.7	2.4	2.1	0.1	0.3	45	0.7	1.1	0.9	0.0	0.1	C64
Renal pelvis	7	0.1	0.2	0.2	0.0	0.0	7	0.1	0.2	0.1	0.0	0.0	C65
Ureter	9	0.2	0.2	0.2	0.0	0.0	13	0.2	0.3	0.2	0.0	0.0	C66
Bladder	179	3.3	4.6	4.4	0.2	0.5	77	1.1	1.9	1.4	0.1	0.1	C67
Other urinary organs	2	0.0	0.1	0.1	0.0	0.0	1	0.0	0.0	0.0	0.0	0.0	C68
Eye	4	0.1	0.1	0.1	0.0	0.0	5	0.1	0.1	0.1	0.0	0.0	C69
Brain, nervous system	72	1.3	1.9	2.0	0.1	0.2	62	0.9	1.5	1.5	0.1	0.1	C70-72
Thyroid	76	1.4	2.0	1.6	0.1	0.2	327	4.8	7.9	5.9	0.5	0.6	C73
Adrenal gland	5	0.1	0.1	0.2	0.0	0.0	3	0.0	0.1	0.1	0.0	0.0	C74
Other endocrine	5	0.1	0.1	0.2	0.0	0.0	2	0.0	0.0	0.1	0.0	0.0	C75
Hodgkin disease	14	0.3	0.4	0.4	0.0	0.0	17	0.2	0.4	0.4	0.0	0.0	C81
Non-Hodgkin lymphoma	223	4.2	5.8	5.3	0.3	0.6	223	3.3	5.4	4.3	0.2	0.5	C82-85,C96
Multiple myeloma	45	0.8	1.2	1.1	0.1	0.1	52	0.8	1.3	1.0	0.0	0.1	C90
Lymphoid leukemia	52	1.0	1.3	1.7	0.1	0.1	41	0.6	1.0	1.2	0.1	0.1	C91
Myeloid leukemia	80	1.5	2.1	2.0	0.1	0.2	72	1.1	1.7	1.4	0.1	0.1	C92-94
Leukemia unspecified	33	0.6	0.9	0.9	0.0	0.1	34	0.5	0.8	0.9	0.1	0.1	C95
Myelodysplastic disease	30	0.6	0.8	0.7	0.0	0.1	26	0.4	0.6	0.5	0.0	0.1	D45-D47
Other and unspecified	175	3.3	4.6	4.2	0.2	0.5	145	2.1	3.5	2.8	0.2	0.3	O&U
<b>All sites</b>	<b>5,349</b>	<b>100.0</b>	<b>139.3</b>	<b>128.9</b>	<b>6.6</b>	<b>15.2</b>	<b>6,762</b>	<b>100.0</b>	<b>163.3</b>	<b>125.6</b>	<b>8.2</b>	<b>14.1</b>	<b>ALL</b>

**Table 3.8.4** 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	519	84.4	0.0	382	86.9	0.3	C00-C08
Oropharynx	169	84.6	1.2	44	84.1	2.3	C09-C10,C14
Nasopharynx	442	88.7	0.2	149	83.9	0.0	C11
Hypopharynx	160	88.1	0.0	12	91.7	0.0	C12-C13
Esophagus	398	82.7	0.5	63	71.4	6.3	C15
Stomach	310	83.9	1.6	347	81.8	0.3	C16
Small intestine	41	92.7	2.4	44	90.9	0.0	C17
Colon and rectum	2,443	85.9	0.6	2,027	84.0	0.2	C18-C21
Liver and bile duct	2,440	41.2	12.6	1,052	43.5	16.8	C22,C24
Gallbladder	36	38.9	13.9	92	64.1	6.5	C23
pancreas	342	55.3	17.3	314	56.1	16.6	C25
Nose,sinuses etc	78	88.5	3.8	47	89.4	0.0	C30-C31
Larynx	289	86.9	1.4	33	72.7	12.1	C32
Trachea, brochus and lung	2,568	70.3	13.7	1,625	69.2	14.6	C33-C34
Other thoracic organs	72	87.5	0.0	48	77.1	10.4	C37-C38
Bone	76	85.5	1.3	71	74.6	14.1	C40-C41
Melanoma of skin	30	90.0	0.0	42	97.6	0.0	C43
Other skin	352	93.5	0.0	440	95.7	0.7	C44
Mesothelioma	10	80.0	0.0	4	100.0	0.0	C45
Kaposi sarcoma	17	100.0	0.0	1	100.0	0.0	C46
Connective and soft tissue	199	86.9	1.0	165	86.1	0.6	C47,C49
Breast	44	90.9	2.3	6,047	87.8	0.5	C50
Vulva				37	89.2	0.0	C51
Vagina				28	75.0	7.1	C52
Cervix uteri				1,641	85.2	1.2	C53
Corpus uteri				1,030	90.9	0.6	C54
Uterus unspecified				34	79.4	2.9	C55
Ovary				972	78.0	2.3	C56
Other female genital organs				15	73.3	6.7	C57
Placenta				22	72.7	0.0	C58
Penis	60	88.3	3.3				C60
Prostate	1,570	86.5	0.9				C61
Testis	69	87.0	7.2				C62
Other male genital organs	4	75.0	25.0				C63
Kidney	272	89.3	2.2	134	86.6	3.0	C64
Renal pelvis	22	77.3	0.0	21	95.2	0.0	C65
Ureter	27	85.2	3.7	39	87.2	5.1	C66
Bladder	536	83.0	0.7	231	81.8	3.5	C67
Other urinary organs	6	83.3	0.0	2	100.0	0.0	C68
Eye	12	83.3	0.0	14	92.9	0.0	C69
Brain, nervous system	215	83.7	4.2	187	80.7	7.0	C70-C72
Thyroid	227	93.0	0.4	981	90.4	0.4	C73
Adrenal gland	16	93.8	6.3	10	100.0	0.0	C74
Other endocrine	16	75.0	12.5	6	83.3	0.0	C75
Hodgkin disease	43	100.0	0.0	50	94.0	0.0	C81
Non-Hodgkin lymphoma	668	97.8	0.1	670	97.5	0.6	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	135	99.3	0.0	156	98.7	0.0	C90
Leukemia	495	98.2	0.4	441	99.1	0.2	C91-C95
Myelodysplastic	90	100.0	0.0	79	100.0	0.0	D45-D47
Other and unspecified	525	48.8	28.4	434	52.1	22.1	O&U
<b>All site</b>	<b>16,043</b>	<b>76.0</b>	<b>6.0</b>	<b>20,283</b>	<b>82.3</b>	<b>3.5</b>	<b>All</b>
<b>All site without liver</b>	<b>13,603</b>	<b>82.2</b>	<b>4.8</b>	<b>19,231</b>	<b>84.4</b>	<b>2.8</b>	<b>All</b>

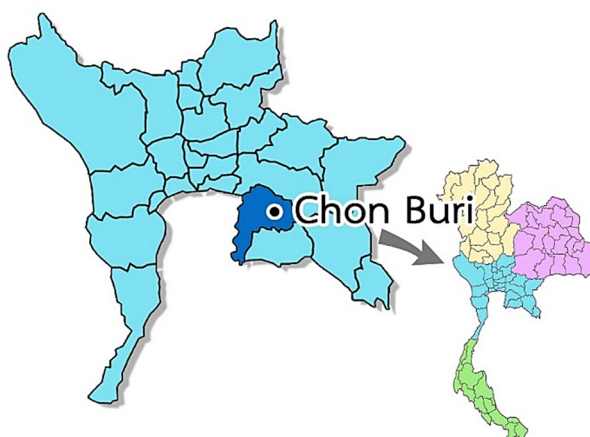
## Chon Buri Cancer Registry

### 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.

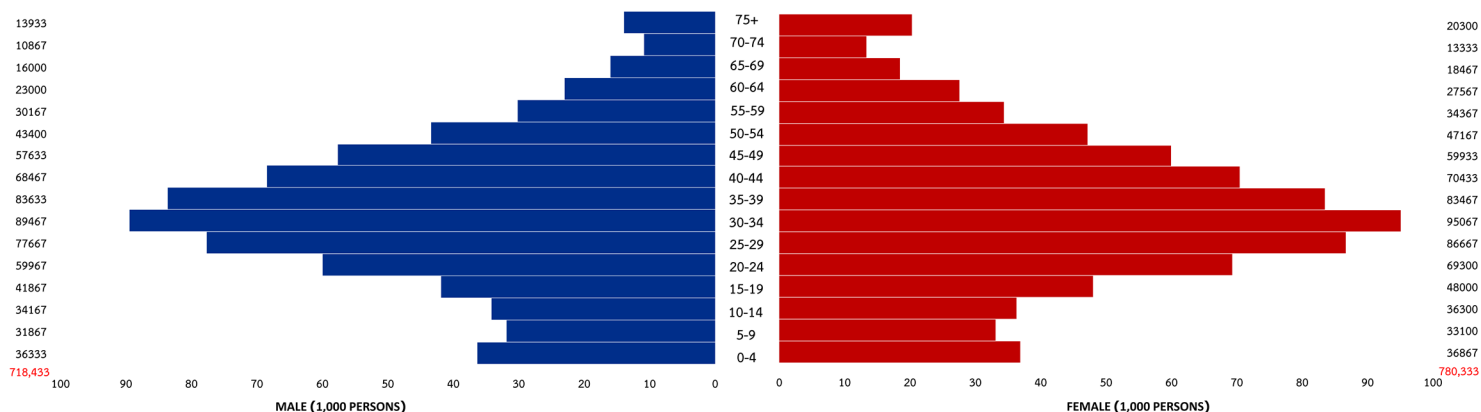
The central part of the province is predominantly mountainous stretching from north-west to south-east, about 200 meters above the sea level. The climate is hot and dry the highest temperature about 42 °C in summer from March to May, in winter from November to February, rainy season started from June 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 2014 (average 2013-2015)



### **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.

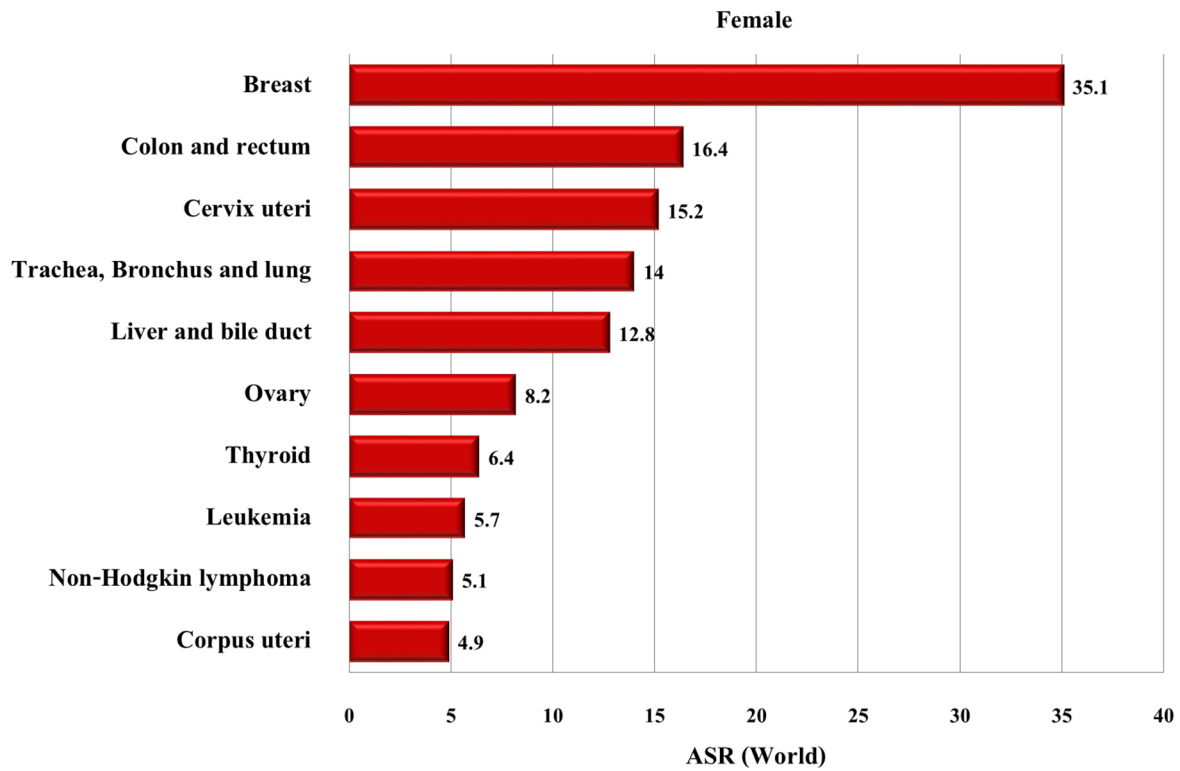
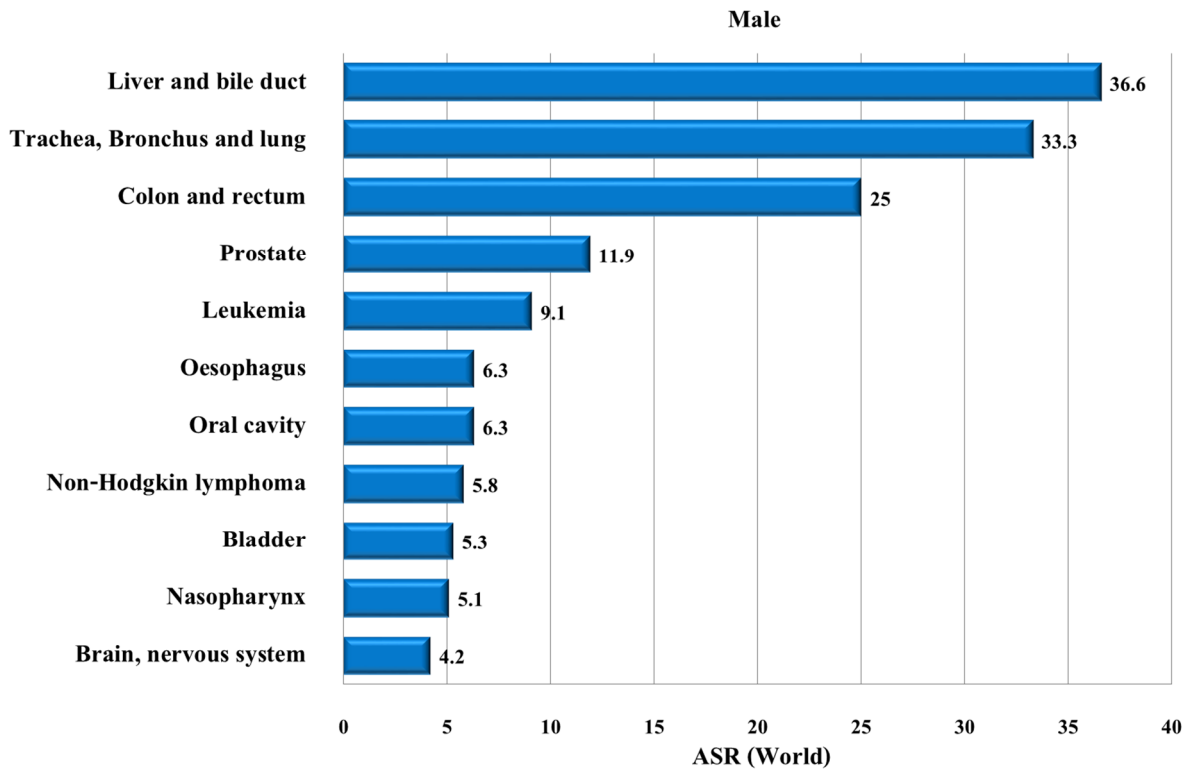
### **Registry procedures**

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 2014, 1,348 were males and 1,389 were females, making 2,737 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 196.2 per 100,000, with liver and bile duct cancer ranks first (ASR = 36.6) followed by lung (ASR =33.3) and colon and rectum (ASR =25). The ASR of all cancer sites in females was 160.9 per 100,000, three leading cancer sites being breast (ASR = 35.1), colon and rectum (ASR =16.4) and cervix (ASR =15.2).

**Figure 3.9** Leading cancer in Chon Buri (mean annual ASR 2013-2015)



**Table 3.9.1** Chon Buri (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Male

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	1	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	2.4	0.2	C00	0.0	0.0
Tongue	21	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.0	4.6	8.4	14.4	10.1	12.5	24.5	16.7	2.9	C01-C02	0.2	0.4
Mouth	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.5	1.2	8.4	8.8	14.5	8.3	12.3	16.7	2.3	C03-C06	0.2	0.3
Salivary glands	5	0.9	0.0	0.0	0.8	0.0	0.4	0.0	1.2	1.0	0.6	1.5	0.0	2.9	2.1	3.1	2.4	0.7	C07-C08	0.0	0.1
Tonsil	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	4.0	4.6	4.4	15.9	8.3	9.2	2.4	1.8	C09	0.2	0.2
Other oropharynx	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.2	0.8	1.1	1.4	0.0	3.1	4.8	0.4	C10	0.0	0.0
Nasopharynx	42	0.0	0.0	0.0	0.0	1.7	1.3	4.1	2.0	9.3	9.3	11.5	21.0	17.4	22.9	24.5	7.2	5.8	C11	0.4	0.6
Hypopharynx	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	7.7	17.7	8.7	22.9	9.2	4.8	2.7	C12-C13	0.2	0.4
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	1.4	0.0	0.0	0.0	0.0	0.1	C14	0.0	0.0
Oesophagus	44	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.5	8.7	16.1	38.7	23.2	33.3	30.7	38.3	6.2	C15	0.4	0.8
Stomach	29	0.0	0.0	0.0	0.0	1.1	0.9	0.4	0.4	3.4	5.2	6.9	21.0	8.7	16.7	36.8	23.9	4.0	C16	0.2	0.5
Small intestine	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.5	1.2	0.0	2.2	1.4	2.1	3.1	4.8	0.6	C17	0.0	0.1
Colon	111	0.0	0.0	1.0	0.0	0.0	0.9	1.9	2.4	9.3	11.6	29.2	33.1	75.4	91.7	144.2	165.1	15.5	C18	0.8	2.0
Rectum	56	0.0	0.0	0.0	0.0	0.6	0.4	1.1	1.2	4.9	5.8	16.1	22.1	33.3	47.9	55.2	83.7	7.8	C19-C20	0.4	0.9
Anus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	5.8	2.1	0.0	7.2	0.5	C21	0.0	0.0
Liver and bile duct	262	3.7	0.0	1.0	0.0	1.1	1.7	3.0	11.6	20.4	52.1	99.1	143.6	181.2	183.3	193.3	167.5	36.4	C22,C24	2.6	4.5
Gallbladder	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	2.3	2.2	1.4	4.2	3.1	7.2	0.6	C23	0.0	0.1
Pancreas	21	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.6	1.0	1.2	3.1	9.9	14.5	20.8	24.5	26.3	2.9	C25	0.2	0.4
Nose, sinuses etc.	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5	0.0	1.5	2.2	1.4	2.1	0.0	2.4	0.5	C30-C31	0.0	0.0
Larynx	26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.3	6.9	14.4	15.9	14.6	36.8	35.9	3.6	C32	0.2	0.5
Trachea, Bronchus and lung	224	0.0	0.0	0.0	0.0	0.6	0.9	3.4	2.8	12.2	28.9	43.8	88.4	131.9	187.5	312.9	375.6	31.1	C33-C34	1.6	4.1
Other thoracic organs	7	0.9	1.0	0.0	2.4	2.8	0.4	0.7	0.0	0.5	0.0	2.3	2.2	1.4	0.0	1.0	2.4	1.0	C37-C38	0.1	0.1
Bone	11	0.0	1.0	2.0	1.6	2.2	0.0	1.9	0.4	1.9	1.7	1.5	1.1	2.9	6.2	3.1	4.8	1.5	C40-C41	0.1	0.1
Melanoma of skin	2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.6	1.5	1.1	0.0	2.1	3.1	0.0	0.3	C43	0.0	0.0
Other skin	20	0.0	0.0	0.0	0.0	0.0	0.4	0.7	0.4	1.0	1.7	4.6	4.4	4.3	10.4	33.7	50.2	2.7	C44	0.1	0.3
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	0.0	0.0	3.1	0.0	0.1	C45	0.0	0.0
Kaposi's sarcoma	4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	1.1	1.4	2.1	3.1	7.2	0.5	C46	0.0	0.0
Connective tissue	16	0.0	1.0	1.0	0.8	0.6	0.4	0.7	1.6	1.9	4.6	3.1	5.5	4.3	8.3	15.3	9.6	2.2	C47,C49	0.1	0.2
Breast	3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.6	0.0	0.0	4.3	2.1	6.1	2.4	0.4	C50	0.0	0.1
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	7	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	2.4	1.2	0.8	1.1	2.9	2.1	9.2	9.6	0.9	C60	0.0	0.1
Prostate	74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.1	12.2	34.8	79.2	150.3	224.9	10.3	C61	0.3	1.4
Testis	2	0.9	0.0	0.0	0.8	0.0	0.4	0.0	0.4	0.0	0.6	0.0	0.0	0.0	2.1	0.0	2.4	0.3	C62	0.0	0.0
Other male genital organs	1	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	3.1	0.0	0.1	C63	0.0	0.0
Kidney	9	0.9	0.0	0.0	0.0	0.0	0.0	0.4	1.5	3.5	3.5	1.5	2.2	5.8	2.1	3.1	16.7	1.3	C64	0.1	0.1
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	3.1	0.0	0.1	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	3.1	2.4	0.1	C66	0.0	0.0
Bladder	34	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.0	2.9	3.8	8.8	17.4	58.3	27.6	76.6	4.7	C67	0.2	0.6
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	1.1	0.0	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	3	3.7	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.5	0.0	0.8	2.2	0.0	0.0	0.0	2.4	0.5	C69	0.0	0.0
Brain, nervous system	29	0.9	3.1	3.9	1.6	1.1	3.4	2.2	4.4	4.9	4.0	7.7	7.7	5.8	20.8	15.3	19.1	4.1	C70-C72	0.2	0.4
Thyroid	15	0.0	0.0	0.0	0.0	0.6	1.7	2.6	2.4	2.4	1.2	2.3	4.4	2.9	10.4	9.2	7.2	2.1	C73	0.1	0.2
Adrenal gland	2	1.8	0.0	1.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.8	0.0	1.4	0.0	0.0	2.4	0.3	C74	0.0	0.0
Other endocrine	1	0.0	1.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.2	C75	0.0	0.0
Hodgkin disease	4	0.0	1.0	2.0	0.0	0.6	0.0	0.4	0.8	1.0	0.6	0.0	0.0	2.9	2.1	0.0	0.0	0.6	C81	0.0	0.1
Non-Hodgkin lymphoma	41	1.8	0.0	2.9	0.8	2.8	2.1	2.6	2.0	3.9	6.9	10.0	12.2	23.2	8.3	58.3	31.1	5.8	C82-C85,C96	0.4	0.7
Multiple myeloma	7	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	0.0	0.0	1.5	5.5	4.3	8.3	0.0	14.4	1.0	C90	0.1	0.1
Lymphoid leukemia	15	9.2	5.2	5.9	1.6	0.6	0.4	0.0	1.2	0.5	0.0	0.8	4.4	1.4	6.2	6.1	9.6	2.0	C91	0.2	0.2
Myeloid leukemia	21	2.8	3.1	0.0	2.4	1.1	0.9	1.9	1.2	1.5	2.9	4.6	2.2	15.9	12.5	9.2	12.0	2.9	C92-C94	0.2	0.3
Leukemia unspecified	18	0.9	3.1	2.9	0.0	1.1	1.7	1.5	2.0	1.0	1.7	3.1	3.3	7.2	6.2	18.4	14.4	2.5	C95	0.1	0.3
Myelodysplastic disease	5	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	1.7	0.8	1.1	1.4	2.1	9.2	7.2	0.7	D45-D47	0.0	0.1
Other and unspecified	84	1.8	1.0	1.0	0.0	2.2	0.9	3.0	3.6	5.8	14.5	20.0	24.3	24.6	72.9	85.9	141.1	11.6	O&U	0.5	1.3
All sites	1,348	30.3	22.0	24.4	13.5	21.1	21.5	37.3	43.0	102.7	196.1	345.6	555.8	739.1	1010.4	1404.9	1665.1	187.6	196.2	10.8	22.8

**Table 3.9.2** Chon Buri (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Female

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	3	0.9	0.0	0.9	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	0.4	0.5	C00	0.0	0.0
Tongue	12	0.0	0.0	0.0	0.7	0.0	0.0	0.4	0.4	1.4	1.1	4.2	4.8	10.9	7.2	2.5	6.6	1.6	1.5	C01-02	0.1	0.2
Mouth	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.7	1.9	0.7	3.6	2.5	13.1	0.7	0.6	C03-06	0.0	0.0	
Salivary glands	4	0.0	0.0	0.9	0.0	0.5	0.4	0.4	0.8	0.9	0.6	0.0	2.9	0.0	0.0	1.6	0.6	0.5	C07-08	0.0	0.0	
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.0	0.0	1.8	0.0	0.0	0.1	C09	0.0	0.0	
Other oropharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C10	0.0	0.0	
Nasopharynx	16	0.9	0.0	0.9	0.7	0.0	0.0	1.8	2.4	2.8	3.9	7.1	2.9	1.2	1.8	0.0	9.9	2.1	1.7	C11	0.1	0.1
Hypopharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.7	1.0	0.0	1.8	2.5	3.3	0.3	C12-13	0.0	0.0	
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C14	0.0	0.0	
Oesophagus	9	0.9	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.6	2.1	6.8	4.8	1.8	10.0	8.2	1.2	C15	0.1	0.1	
Stomach	23	0.0	0.0	0.0	0.0	0.5	0.8	1.8	1.2	1.4	1.1	4.2	9.7	12.1	10.8	22.5	21.3	3.0	C16	0.2	0.3	
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	2.4	1.8	0.0	0.0	0.1	C17	0.0	0.0	
Colon	95	0.9	0.0	0.9	0.0	1.0	0.4	0.0	5.6	5.2	13.9	20.5	20.4	56.8	61.4	62.5	123.2	12.2	11.4	C18	0.6	1.2
Rectum	41	0.0	0.0	0.0	0.0	1.0	0.4	0.7	1.2	4.3	4.4	9.2	14.5	21.8	30.7	22.5	41.1	5.2	4.8	C19-20	0.3	0.6
Anus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.9	0.0	1.8	0.0	1.6	0.3	C21	0.0	0.0	
Liver and bile duct	104	0.9	0.0	0.0	0.5	0.8	0.4	2.0	4.3	10.0	21.2	31.0	55.6	70.4	115.0	134.6	13.3	12.8	C22,C24	0.6	1.6	
Gallbladder	7	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.7	1.9	2.4	5.4	12.5	13.1	0.9	C23	0.0	0.1	
Pancreas	17	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.4	1.4	1.1	1.4	4.8	10.9	16.2	20.0	16.4	2.2	C25	0.1	0.3	
Nose, sinuses etc.	4	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	2.9	0.0	0.0	0.0	0.0	0.2	C30-31	0.0	0.1	
Larynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.0	2.4	1.8	2.5	3.3	0.5	C32	0.0	0.0	
Trachea, Bronchus and lung	116	0.0	0.0	0.0	0.7	0.0	0.4	0.7	3.2	9.5	10.6	26.1	39.8	62.9	83.0	87.5	142.9	14.9	14.0	C33-34	0.8	1.6
Other thoracic organs	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	2.9	0.0	0.0	0.0	0.0	0.2	C37-38	0.0	0.0	
Bone	10	0.0	0.0	0.0	1.4	0.5	0.8	0.7	2.0	0.5	1.1	0.7	2.9	1.2	3.6	2.5	9.9	1.2	C40-C41	0.1	0.1	
Melanoma of skin	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.7	1.0	0.0	0.0	1.8	2.5	0.0	C51	0.0	0.1	
Other skin	24	0.9	0.0	0.0	0.7	0.0	0.0	0.4	1.2	0.9	2.2	2.8	6.8	6.0	9.0	17.5	50.9	3.0	2.7	C44	0.1	0.2
Mesothelioma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	C45	0.0	0.0	
Kaposi's sarcoma	4	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	7.5	11.5	0.5	C46	0.0	0.0	
Connective tissue	9	1.8	0.0	0.9	0.7	0.0	1.5	0.8	0.0	2.2	0.7	2.9	2.9	3.6	0.0	5.0	4.9	1.1	C47,C49	0.1	0.1	
Breast	321	0.9	0.0	0.0	0.0	0.0	2.7	11.6	31.2	65.8	85.7	103.2	130.0	134.2	117.3	112.5	83.7	41.2	35.1	C50	2.8	4.0
Vulva	6	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.6	2.4	0.6	2.1	1.0	0.0	1.8	2.5	0.0	0.7	C51	0.0	0.1	
Vagina	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.7	1.0	0.0	0.0	0.0	0.0	0.1	C52	0.0	0.0	
Cervix uteri	141	0.0	0.0	0.0	0.5	2.3	8.4	14.8	14.8	22.7	37.8	48.1	54.3	48.4	54.2	42.5	47.6	18.1	15.2	C53	1.2	1.7
Corpus uteri	42	0.0	0.0	0.0	0.5	0.0	0.7	4.4	3.3	6.7	14.8	19.4	19.3	21.3	25.0	18.1	5.4	4.9	C54	0.3	0.6	
Uterus unspecified	5	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	1.1	0.0	1.9	2.4	7.2	2.5	4.9	0.6	C55	0.0	0.1	
Ovary	73	0.9	0.0	0.9	1.4	3.4	3.5	1.8	6.0	8.0	22.8	23.3	24.2	25.4	25.3	27.5	26.3	9.3	8.2	C56	0.6	0.9
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	1.0	0.0	0.0	2.5	0.0	0.1	C57	0.0	0.0	
Placenta	2	0.0	0.0	0.0	1.4	0.5	0.0	0.0	0.0	0.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.3	C58	0.0	0.0	
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0	
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0	
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0	
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0	
Kidney	7	2.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.9	1.1	1.4	2.9	2.4	3.6	0.0	8.2	0.9	1.1	C64	0.1	0.1
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	1.6	0.1	C65	0.0	0.0	
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.8	0.0	0.0	0.1	C66	0.0	0.0	
Bladder	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.4	1.9	4.8	5.4	12.5	19.7	1.3	1.2	C67	0.0	0.1
Other urinary organs	2	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	1.0	0.0	0.0	0.0	0.0	0.2	C68	0.0	0.0	
Eye	25	1.8	4.0	1.8	0.0	1.4	0.4	1.8	2.0	2.4	2.2	7.8	4.8	6.0	12.6	7.5	21.3	3.2	3.2	C70-72	0.2	0.3
Brain, nervous system	64	0.0	0.0	0.0	2.1	6.3	5.8	8.8	7.6	13.3	16.1	9.9	12.6	14.5	7.2	15.0	18.1	8.2	6.4	C73	0.5	0.6
Adrenal gland	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	0.0	0.0	0.0	0.0	C74	0.0	0.0	
Other endocrine	1	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.1	C75	0.0	0.0	
Hodgkin disease	5	0.0	0.0	0.9	1.4	1.9	0.4	0.4	0.8	0.9	0.0	0.0	1.0	0.0	0.0	0.0	3.3	0.7	0.6	C81	0.0	0.0
Non-Hodgkin lymphoma	43	1.8	0.0	1.8	0.0	1.0	2.3	2.5	2.8	6.2	7.2	8.5	8.7	13.3	30.7	27.5	27.9	5.5	5.1	C82-85,C96	0.3	0.6
Multiple myeloma	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.1	2.9	7.3	5.4	7.5	6.6	1.0	1.0	C90	0.1	0.1
Lymphoid leukemia	9	4.5	4.0	2.8	0.7	0.0	0.0	0.7	0.4	0.0	0.0	0.7	1.9	1.2	3.6	2.5	4.9	1.1	1.7	C91	0.1	0.1
Myeloid leukemia	19	0.0	1.0	0.0	1.4	1.9	1.2	1.1	1.6	3.3	5.6	6.4	1.9	3.6	9.0	0.0	8.2	2.5	2.1	C92-94	0.1	0.2
Leukemia unspecified	15	0.9	2.0	0.9	0.7	1.0	0.4	0.4	0.8	1.4	1.1	2.8	5.8	3.6	7.2	5.0	14.8	1.9	1.9	C95	0.1	0.2
Myelodysplastic disease	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	2.4	5.4	7.5	3.3	0.5	0.5	D45-D47	0.0	0.1	
Other and unspecified	68	0.9	0.0	0.0	1.0	0.8	1.4	0.8	5.7	6.7	10.6	18.4	18.4	26.6	50.5	57.5	100.2	8.7	8.1	O&U	0.4	0.9
All sites	1,389	24.4	11.1	15.6	14.6	24.5	25.8	47.3	96.6	172.3	253.3	350.5	461.7	574.4	691.3	757.5	1050.9	178.0	160.9	ALL	10.4	17.6



**Table 3.9.3** Mean annual incidence, Chon Buri, 2013-2015

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate  (per 100,000)	ASR world	Cum. 0-64  (percent)	Rate. 0-74	No.Cases Year	Freq. (%)	Crude rate  (per 100,000)	ASR world	Cum. 0-64  (percent)	Rate. 0-74	
Lip	1	0.1	0.2	0.2	0.0	0.0	3	0.2	0.4	0.5	0.0	0.0	C00
Tongue	21	1.6	2.9	3.0	0.2	0.4	12	0.9	1.6	1.5	0.1	0.2	C01-02
Mouth	17	1.2	2.3	2.4	0.2	0.3	5	0.4	0.7	0.6	0.0	0.0	C03-06
Salivary glands	5	0.4	0.7	0.7	0.0	0.1	4	0.3	0.6	0.5	0.0	0.0	C07-08
Tonsil	13	1.0	1.8	1.9	0.2	0.2	1	0.1	0.1	0.1	0.0	0.0	C09
Other oropharynx	3	0.2	0.4	0.4	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C10
Nasopharynx	42	3.1	5.8	5.1	0.4	0.6	16	1.2	2.1	1.7	0.1	0.1	C11
Hypopharynx	20	1.5	2.7	2.8	0.2	0.4	2	0.2	0.3	0.3	0.0	0.0	C12-13
Pharynx unspecified	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C14
Oesophagus	44	3.3	6.2	6.3	0.4	0.8	9	0.6	1.2	1.2	0.1	0.1	C15
Stomach	29	2.1	4.0	4.0	0.2	0.5	23	1.7	3.0	2.7	0.2	0.3	C16
Small intestine	4	0.3	0.6	0.5	0.0	0.1	1	0.1	0.1	0.2	0.0	0.0	C17
Colon	111	8.2	15.5	16.4	0.8	2.0	95	6.9	12.2	11.4	0.6	1.2	C18
Rectum	56	4.2	7.8	8.1	0.4	0.9	41	2.9	5.2	4.8	0.3	0.6	C19-20
Anus	3	0.2	0.5	0.5	0.0	0.0	2	0.1	0.3	0.2	0.0	0.0	C21
Liver and bile duct	262	19.4	36.4	36.6	2.6	4.5	104	7.5	13.3	12.8	0.6	1.6	C22,C24
Gallbladder	4	0.3	0.6	0.6	0.0	0.1	7	0.5	0.9	0.9	0.0	0.1	C23
Pancreas	21	1.5	2.9	3.0	0.2	0.4	17	1.2	2.2	2.2	0.1	0.3	C25
Nose, sinuses etc.	3	0.2	0.5	0.4	0.0	0.0	4	0.3	0.5	0.5	0.0	0.1	C30-31
Larynx	26	1.9	3.6	3.8	0.2	0.5	1	0.1	0.2	0.2	0.0	0.0	C32
Trachea, Bronchus and lung	224	16.6	31.1	33.3	1.6	4.1	116	8.4	14.9	14.0	0.8	1.6	C33-34
Other thoracic organs	7	0.5	1.0	1.1	0.1	0.1	2	0.1	0.2	0.2	0.0	0.0	C37-38
Bone	11	0.8	1.5	1.5	0.1	0.1	10	0.7	1.2	1.0	0.1	0.1	C40-C41
Melanoma of skin	2	0.2	0.3	0.3	0.0	0.0	1	0.1	0.2	0.1	0.0	0.0	C43
Other skin	20	1.5	2.7	2.8	0.1	0.3	24	1.7	3.0	2.7	0.1	0.2	C44
Mesothelioma	1	0.0	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C45
Kaposi's sarcoma	4	0.3	0.5	0.5	0.0	0.0	4	0.3	0.5	0.5	0.0	0.0	C46
Connective tissue	16	1.2	2.2	2.2	0.1	0.2	9	0.6	1.1	1.2	0.1	0.1	C47,C49
Breast	3	0.2	0.4	0.5	0.0	0.1	321	23.1	41.2	35.1	2.8	4.0	C50
Vulva							6	0.4	0.7	0.5	0.0	0.1	C51
Vagina							1	0.1	0.1	0.1	0.0	0.0	C52
Cervix uteri							141	10.2	18.1	15.2	1.2	1.7	C53
Corpus uteri							42	3.0	5.4	4.9	0.3	0.6	C54
Uterus unspecified							5	0.4	0.6	0.6	0.0	0.1	C55
Ovary							73	5.2	9.3	8.2	0.6	0.9	C56
Other female genital organs							1	0.1	0.1	0.1	0.0	0.0	C57
Placenta							2	0.1	0.3	0.3	0.0	0.0	C58
Penis	7	0.5	0.9	0.9	0.0	0.1							C60
Prostate	74	5.5	10.3	11.9	0.3	1.4							C61
Testis	2	0.2	0.3	0.4	0.0	0.0							C62
Other male genital organs	1	0.1	0.1	0.2	0.0	0.0							C63
Kidney	9	0.7	1.3	1.3	0.1	0.1	7	0.5	0.9	1.1	0.1	0.1	C64
Renal pelvis	1	0.0	0.1	0.1	0.0	0.0	1	0.0	0.1	0.1	0.0	0.0	C65
Ureter	1	0.1	0.1	0.2	0.0	0.0	1	0.0	0.1	0.1	0.0	0.0	C66
Bladder	34	2.5	4.7	5.3	0.2	0.6	10	0.7	1.3	1.2	0.0	0.1	C67
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C68
Eye	3	0.2	0.5	0.7	0.0	0.0	2	0.1	0.2	0.3	0.0	0.0	C69
Brain, nervous system	29	2.2	4.1	4.2	0.2	0.4	25	1.8	3.2	3.2	0.2	0.3	C70-72
Thyroid	15	1.1	2.1	1.7	0.1	0.2	64	4.6	8.2	6.4	0.5	0.6	C73
Adrenal gland	2	0.2	0.3	0.5	0.0	0.0	0	0.0	0.0	0.1	0.0	0.0	C74
Other endocrine	1	0.1	0.2	0.2	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C75
Hodgkin disease	4	0.3	0.6	0.7	0.0	0.1	5	0.4	0.7	0.6	0.0	0.0	C81
Non-Hodgkin lymphoma	41	3.1	5.8	5.8	0.4	0.7	43	3.1	5.5	5.1	0.3	0.6	C82-85,C96
Multiple myeloma	7	0.5	1.0	1.1	0.1	0.1	8	0.6	1.0	1.0	0.1	0.1	C90
Lymphoid leukemia	15	1.1	2.0	3.2	0.2	0.2	9	0.6	1.1	1.7	0.1	0.1	C91
Myeloid leukemia	21	1.5	2.9	3.2	0.2	0.3	19	1.4	2.5	2.1	0.1	0.2	C92-94
Leukemia unspecified	18	1.3	2.5	2.7	0.1	0.3	15	1.1	1.9	1.9	0.1	0.2	C95
Myelodysplastic disease	5	0.4	0.7	0.7	0.0	0.1	4	0.3	0.5	0.5	0.0	0.1	D45-D47
Other and unspecified	84	6.2	11.6	12.0	0.5	1.3	68	4.9	8.7	8.1	0.4	0.9	O&U
<b>All sites</b>	<b>1,348</b>	<b>100.0</b>	<b>187.6</b>	<b>196.2</b>	<b>10.8</b>	<b>22.8</b>	<b>1,389</b>	<b>100.0</b>	<b>178.0</b>	<b>160.9</b>	<b>10.4</b>	<b>17.6</b>	<b>ALL</b>

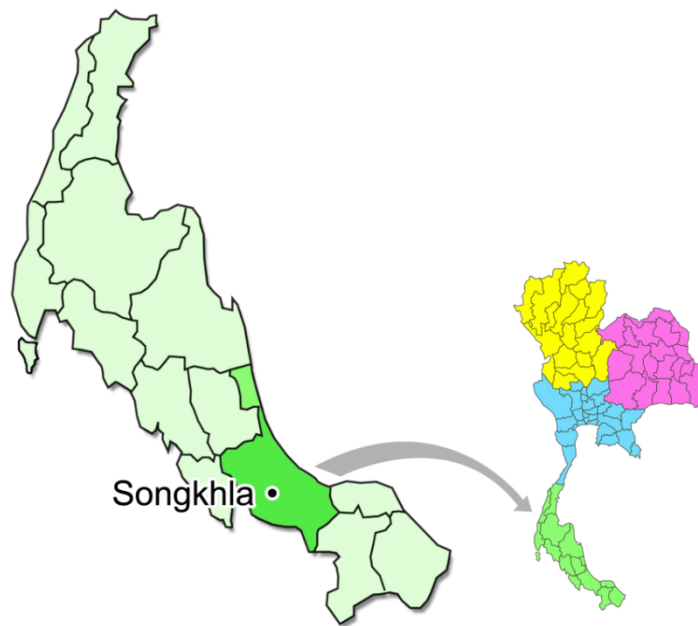
**Table 3.9.4** Percentage of morphologically verified and death certificate only cases, Chon Buri

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	133	84.2	1.5	76	76.3	2.6	C00-C08
Oropharynx	51	86.3	0.0	4	75.0	0.0	C09-C10,C14
Nasopharynx	125	80.0	0.8	48	62.5	0.0	C11
Hypopharynx	59	89.8	0.0	7	71.4	0.0	C12-C13
Esophagus	133	58.6	6.8	27	63.0	0.0	C15
Stomach	86	60.5	5.8	70	52.9	4.3	C16
Small intestine	12	50.0	16.7	3	33.3	0.0	C17
Colon and rectum	511	66.7	3.7	414	63.5	1.4	C18-C21
Liver and bile duct	785	14.6	7.5	312	12.8	7.4	C22,C24
Gallbladder	13	46.2	0.0	22	27.3	4.5	C23
pancrease	62	24.2	9.7	51	27.5	3.9	C25
Nose,sinuses etc	10	100.0	0.0	11	72.7	0.0	C30-C31
Larynx	77	76.6	0.0	4	75.0	25.0	C32
Trachea, brochus and lung	671	51.6	5.2	349	50.7	4.3	C33-C34
Other thoracic organs	21	90.5	0.0	5	80.0	0.0	C37-C38
Bone	33	60.6	3.0	29	55.2	0.0	C40-C41
Melanoma of skin	7	100.0	0.0	4	100.0	0.0	C43
Other skin	59	84.7	3.4	71	71.8	0.0	C44
Mesothelioma	2	100.0	0.0	1	100.0	0.0	C45
Kaposi sarcoma	11	100.0	0.0	12	91.7	0.0	C46
Connective and soft tissue	48	89.6	0.0	26	88.5	0.0	C47,C49
Breast	9	100.0	0.0	964	92.4	0.8	C50
Vulva				17	58.8	0.0	C51
Vagina				3	100.0	0.0	C52
Cervix uteri				424	83.5	0.9	C53
Corpus uteri				126	86.5	0.8	C54
Uterus unspecified				15	40.0	0.0	C55
Ovary				218	54.6	1.8	C56
Other female genital organs				3	100.0	0.0	C57
Placenta				6	100.0	0.0	C58
Penis	20	65.0	0.0				C60
Prostate	221	55.7	2.7				C61
Testis	7	71.4	0.0				C62
Other male genital organs	3	33.3	0.0				C63
Kidney	28	53.6	3.6	22	63.6	4.5	C64
Renal pelvis	2	50.0	0.0	2	50.0	0.0	C65
Ureter	3	66.7	33.3	2	50.0	0.0	C66
Bladder	102	55.9	3.9	31	51.6	0.0	C67
Other urinary organs	1	0.0	0.0	1	100.0	0.0	C68
Eye	10	70.0	0.0	5	100.0	0.0	C69
Brain, nervous system	88	39.8	2.3	75	32.0	6.7	C70-C72
Thyroid	45	77.8	0.0	192	71.9	0.5	C73
Adrenal gland	7	14.3	0.0	1	100.0	0.0	C74
Other endocrine	4	50.0	0.0	3	66.7	0.0	C75
Hodgkin disease	13	100.0	0.0	16	100.0	0.0	C81
Non-Hodgkin lymphoma	124	91.1	0.8	129	96.1	0.8	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	22	86.4	4.5	23	100.0	0.0	C90
Leukemia	160	86.3	1.9	128	82.8	6.3	C91-C95
Myelodysplastic	15	100.0	0.0	12	91.7	8.3	D45-D47
Other and unspecified	251	23.9	6.0	203	23.6	6.4	O&U
<b>All site</b>	<b>4,044</b>	<b>53.2</b>	<b>4.3</b>	<b>4,167</b>	<b>67.3</b>	<b>2.4</b>	<b>All</b>
<b>All site without liver</b>	<b>3,259</b>	<b>62.5</b>	<b>3.6</b>	<b>3,855</b>	<b>71.7</b>	<b>2.0</b>	<b>All</b>

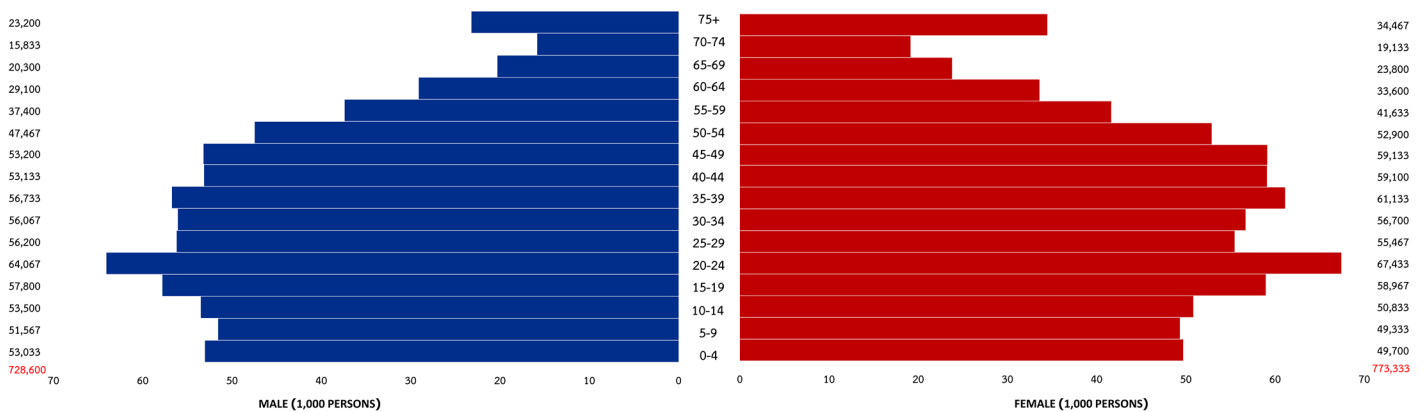
# Songkhla Cancer Registry

## Registration area

Songkhla is one of 14 provinces located in the southern part of Thailand at latitude 07:12 N and longitude 100:36 E. The land area is 7,394 square kilometres and Songkhla registry covers 16 districts with a population estimated in the year 2008 of 1,308,007. About 80% of the population is Buddhist, and nearly 20% are Moslems. Christians and others account of less than 1% of the population. People with Chinese blood live in Songkhla town and Hat Yai city, which are the economic centres of the south of Thailand.



Population pyramid, Songkhla  
estimated population in 2014 (average 2013-2015)



## **Cancer care facilities**

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

## **Registry procedures**

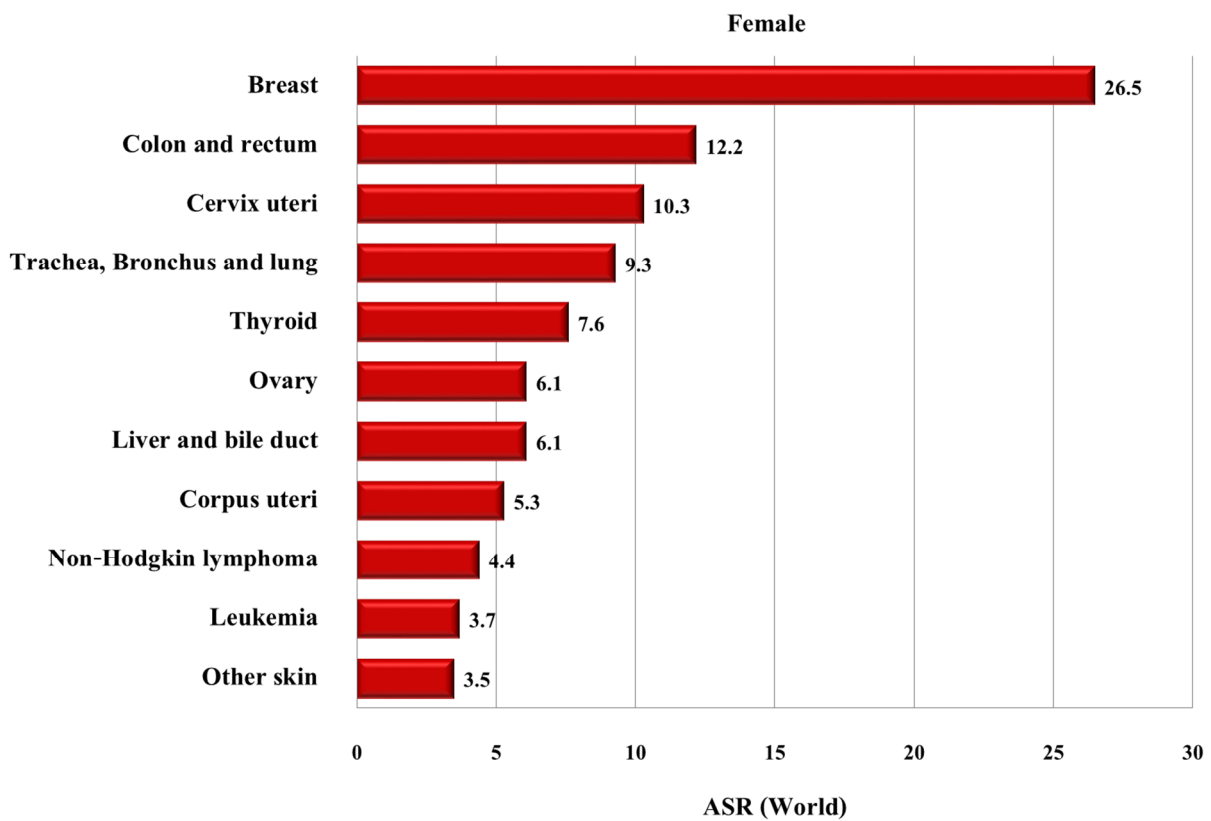
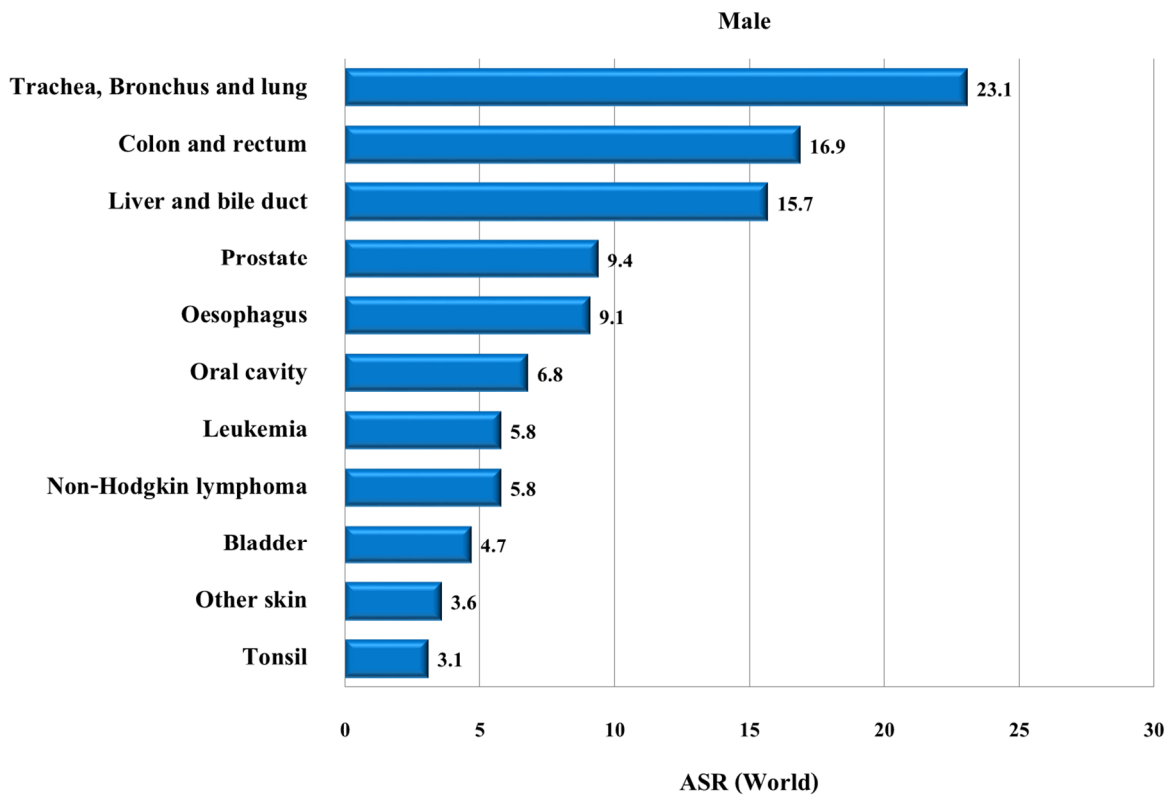
The registry is located within the Faculty of Medicine, Prince of Songkla University. The registry is staffed by three part-time medical doctors, a full-time nurse as a registrar and four full-time workers. The Songkhla registry undertakes active case finding from 23 sources of data consisting of Songklanagarind hospital, Hat Yai hospital, Songkhla hospital, community hospitals, private hospitals, special hospitals, provincial health office, and the population registration office of the province. The completeness of death registration is acceptable but the cause of death is not so accurate, being mostly cardiopulmonary arrest and senility. After the national health care reform started in 2000, the validity of the death certificates has been improving. The hospital-based registry of the Songklanagarind hospital is also run by the registry staff and the data are shared with the registry of Songkhla. Hat Yai hospital has its own system of cancer case reporting but not a full scale hospital-based cancer registry and provides the cases residing in Songkhla to the registry. The registry staff visit Hat Yai, Songkhla, and private hospitals and consult the medical records and pathology records. Assigned staff in community hospitals send the record forms of cancer cases to the registry once a year. They are regularly visited by registry staff to review procedures. Some cases are sent to the registry by the network of cancer registries in Thailand, especially the registry of Bangkok.

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

## **Summary of results**

New cases registered in 2014, 1,182 were males and 1,151 were females, making 2,333 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 136.1 per 100,000 in with lung cancer ranking first (ASR = 23.1) followed by colon and rectum (ASR = 16.9) and liver and bile duct (ASR = 15.7). The ASR of all cancer in females was 114.0 the three leading sites being breast (ASR = 26.5), colon and rectum (ASR = 12.2) and cervix uteri (ASR = 10.3).

**Figure 3.10** Leading cancer in Songkhla (mean annual ASR 2013-2015)



**Table 3.10.1** Songkhla (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Male

Site	No. Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	2.1	0.2	C00	0.0	0.0
Tongue	30	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.9	7.5	5.6	13.4	11.5	19.7	25.3	21.6	4.1	C01-C02	0.2	0.4
Mouth	26	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	3.1	3.1	8.4	11.6	9.2	9.9	16.8	27.3	3.5	C03-C06	0.2	0.3
Salivary glands	4	0.0	0.0	0.6	0.0	0.5	0.0	0.6	0.0	0.0	0.6	2.8	1.8	2.3	0.0	0.0	1.4	0.6	C07-C08	0.0	0.0
Tonsil	13	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	1.3	3.1	2.8	3.6	3.4	9.9	6.3	15.8	1.8	C09	0.1	0.2
Other oropharynx	12	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.9	4.2	7.1	3.4	3.3	6.3	14.4	1.6	C10	0.1	0.1
Nasopharynx	22	0.0	0.0	0.0	0.5	1.2	0.6	2.4	4.4	6.3	7.0	10.7	10.3	6.6	6.6	6.3	2.9	3.0	C11	0.2	0.3
Hypopharynx	21	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.6	2.5	6.3	8.9	12.6	16.4	8.4	14.4	2.8	2.4	C12-C13	0.2	0.3
Pharynx unspecified	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.9	0.0	3.3	2.1	2.9	0.4	0.3	C14	0.0	0.0
Oesophagus	78	0.0	0.0	0.0	0.0	0.0	0.6	2.4	4.4	8.1	21.1	32.1	37.8	57.5	63.2	66.1	10.8	9.1	C15	0.5	1.1
Stomach	16	0.0	0.0	0.0	0.0	0.6	0.6	1.2	1.3	2.5	3.5	6.2	8.0	2.3	0.0	2.9	0.4	0.3	C17	0.0	0.0
Small intestine	3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.3	1.4	0.0	2.3	0.0	0.0	0.0	2.9	0.4	C18	0.0	0.0
Colon	88	0.0	0.0	0.0	0.6	1.0	0.6	0.6	3.5	2.5	9.4	19.0	23.2	33.2	57.5	75.8	117.8	12.1	C19-C20	0.5	1.1
Rectum	59	0.0	0.0	0.0	0.0	0.0	0.6	1.8	2.4	6.3	4.4	11.2	22.3	26.3	36.1	42.1	64.7	8.1	C21	0.0	0.4
Anus	3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.7	0.0	0.0	0.0	4.2	7.2	0.4	C22	0.0	0.0
Liver and bile duct	137	1.3	0.6	0.0	0.0	0.0	0.0	6.5	7.6	9.4	28.2	40.7	63.3	72.2	60.8	63.2	92.0	18.8	C23	1.1	1.8
Gallbladder	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.3	0.0	0.0	1.4	0.2	C24	0.0	0.0
Pancreas	17	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	3.8	2.8	4.5	5.7	11.5	12.6	21.6	2.3	C25	0.1	0.2
Nose, sinuses etc.	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	4.2	0.9	2.3	3.3	3.3	0.0	7.2	0.0	C30-C31	0.0	0.1
Larynx	26	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.5	0.6	0.6	7.0	9.8	13.7	19.7	18.9	24.4	3.6	C32	0.2	0.4
Trachea, Bronchus and lung	202	0.0	0.0	0.0	0.6	0.0	0.6	4.8	3.5	11.9	16.9	37.9	69.5	95.1	128.1	189.5	232.8	27.8	C33-C34	1.2	2.8
Other thoracic organs	2	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.8	0.0	0.0	2.1	0.0	0.0	0.2	C37-C38	0.0	0.0
Bone	6	0.0	0.6	1.2	1.7	0.5	1.2	0.0	0.0	0.6	0.7	0.9	1.1	1.6	6.3	1.4	0.8	0.8	C40-C41	0.0	0.1
Melanoma of skin	5	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.0	1.1	6.6	0.0	10.1	0.7	C43	0.0	0.0
Other skin	33	0.0	0.0	0.0	0.0	1.0	0.6	0.6	1.2	2.5	3.1	4.2	7.1	11.5	23.0	12.6	56.0	4.5	C44	0.2	0.3
Connective tissue	6	0.0	0.0	0.0	1.2	0.0	1.8	2.4	0.0	0.6	0.0	0.0	0.9	3.4	3.3	0.0	2.9	0.8	C47-C49	0.1	0.1
Breast	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	2.1	0.0	0.1	C50	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C52	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C53	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C54	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	11	0.0	0.0	0.0	0.0	0.5	0.0	0.6	1.8	1.3	1.3	1.4	1.8	4.6	4.9	8.4	11.5	1.5	C60	0.1	0.1
Prostate	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.7	11.6	26.3	70.6	117.9	162.4	11.5	9.4	C61	0.2	1.1
Testis	4	0.6	0.0	0.0	0.0	0.5	0.6	1.2	0.0	1.3	1.3	0.7	0.9	1.1	0.0	0.0	0.0	0.5	C62	0.0	0.0
Other male genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.1	C63	0.0	0.0
Kidney	13	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.6	1.3	2.8	3.6	6.9	8.2	10.5	10.1	1.7	C64	0.1	0.2
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	1.4	0.1	C66	0.0	0.0
Bladder	41	0.6	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.9	1.9	6.3	13.4	14.9	39.4	27.4	58.9	5.6	C67	0.2	0.5
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	1	0.0	0.6	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.2	C69	0.0	0.0
Brain, nervous system	23	2.5	2.6	1.9	1.7	1.0	3.6	1.8	2.9	1.9	2.5	6.3	3.6	3.4	6.6	14.7	5.7	3.1	C70-C72	0.2	0.3
Thyroid	16	0.0	0.0	0.6	0.6	0.0	1.2	2.4	2.4	0.6	1.3	4.2	6.2	6.9	4.9	10.5	8.6	2.2	C73	0.1	0.2
Adrenal gland	1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	C74	0.0	0.0
Other endocrine	0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C75	0.0	0.0
Hodgkin disease	7	0.0	0.6	1.2	1.7	1.6	1.2	0.6	2.4	0.0	0.6	0.7	0.0	0.0	0.0	0.0	2.9	0.9	C81	0.1	0.1
Non-Hodgkin lymphoma	51	0.0	0.0	0.0	0.6	2.1	3.0	2.4	4.1	10.0	7.5	9.1	11.6	19.5	21.3	29.5	50.3	7.0	C82-C85	0.3	0.6
Multiple myeloma	16	0.0	0.0	0.0	0.0	0.0	0.6	1.2	0.6	2.5	4.2	4.5	8.0	8.2	12.6	14.4	2.2	1.8	C90	0.1	0.2
Lymphoid leukemia	16	3.8	5.2	0.6	1.2	0.5	2.4	0.0	0.0	0.6	1.3	3.5	0.0	4.6	3.3	8.4	10.1	2.2	C91	0.1	0.2
Myeloid leukemia	23	1.3	0.6	1.2	2.9	1.0	0.6	1.2	1.2	3.1	3.8	4.2	6.2	4.6	4.9	14.7	20.1	3.2	C92-C94	0.2	0.3
Leukemia unspecified	5	1.3	0.0	0.6	0.0	0.0	1.2	0.6	0.0	0.0	0.6	0.0	1.8	0.0	1.6	4.2	5.7	0.7	C95	0.0	0.1
Myelodysplastic disease	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	0.0	1.4	0.1	D45-D47	0.0	0.0
Other and unspecified	47	0.6	0.6	0.6	0.0	0.5	0.6	0.0	1.8	6.3	7.5	11.9	13.4	24.1	23.0	27.4	44.5	6.5	O&U	0.3	0.6
All sites	1,182	13.2	11.6	10.0	12.7	12.5	19.6	36.3	50.5	82.8	142.9	251.4	381.5	496.0	681.4	865.3	1231.3	162.1	ALL	7.6	15.3

**Table 3.10.2** Songkhla (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Female

Site	No. Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.9	0.1	C00	0.0	0.0
Tongue	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.1	2.8	2.5	1.6	3.0	5.6	1.7	6.8	1.2	C01-C02	0.1	0.1
Mouth	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.6	0.6	0.0	2.0	2.8	1.7	9.7	0.8	C03-C06	0.0	0.0
Salivary glands	4	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.5	0.6	0.0	0.6	1.6	2.0	1.4	0.0	1.0	0.5	C07-C08	0.0	0.0
Tonsil	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.6	1.0	1.4	0.0	1.0	0.3	C09	0.0	0.0
Other oropharynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	1.0	0.1	C10	0.0	0.0
Nasopharynx	2	0.0	0.0	0.7	0.0	0.0	0.0	1.2	1.1	1.7	1.1	1.3	1.6	3.0	0.0	1.7	1.0	0.8	C11	0.1	0.1
Hypopharynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.8	0.0	0.0	0.0	3.9	0.3	C12-C13	0.0	0.0
Pharynx unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.1	C14	0.0	0.0
Oesophagus	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.9	0.8	3.0	7.0	5.2	4.8	1.0	C15	0.0	0.1
Stomach	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	3.4	2.8	2.5	2.4	6.0	2.8	8.7	10.6	2.0	C16	0.1	0.2
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	0.8	0.0	0.0	1.7	1.0	0.1	C17	0.0	0.0
Colon	77	0.0	0.0	0.0	0.0	1.8	4.9	6.8	10.1	16.4	26.4	21.8	33.6	43.6	31.4	56.1	59.9	7.2	C18	0.2	0.8
Rectum	47	0.0	0.0	0.0	0.6	0.0	0.6	0.0	2.7	4.5	6.8	7.6	8.8	17.9	30.8	31.4	30.9	6.0	C19-C20	0.4	0.6
Anus	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.1	0.0	0.8	0.0	2.8	5.2	1.9	0.5	C21	0.0	0.1
Liver and bile duct	64	2.0	0.0	0.7	0.0	0.5	0.6	1.2	1.6	3.4	6.8	8.2	16.8	23.8	30.8	38.3	60.0	8.3	C22-C24	0.3	0.7
Gallbladder	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.3	0.0	3.0	1.4	0.0	5.8	0.6	C23	0.0	0.0
Pancreas	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.7	3.2	8.8	6.9	7.0	1.7	12.6	2.0	C25	0.1	0.1
Nose, sinuses etc.	4	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	1.1	1.9	0.8	3.0	1.4	0.0	1.9	0.6	C30-C31	0.0	0.0
Larynx	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.8	0.0	0.0	1.7	1.9	0.2	C32	0.0	0.0
Trachea, Bronchus and lung	101	0.0	0.0	0.0	0.0	0.0	0.6	2.9	3.3	7.9	9.0	15.8	24.8	38.7	47.6	66.2	89.0	13.0	C33-C34	0.5	1.1
Other thoracic organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	C37-C38	0.0	0.0
Bone	5	0.0	0.0	0.7	0.6	0.5	0.6	0.0	0.5	1.1	0.0	0.6	2.4	1.0	1.4	0.0	1.0	0.6	C40-C41	0.0	0.0
Melanoma of skin	6	0.7	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.6	0.6	1.9	1.6	3.0	2.8	1.7	1.0	0.7	C43	0.0	0.1
Other skin	44	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.6	1.7	2.8	3.2	4.0	6.9	14.0	34.8	68.7	5.6	C44	0.1	0.4
Connective tissue	11	0.0	0.7	0.0	1.1	1.0	1.2	3.5	0.5	1.1	0.6	1.9	4.8	0.0	0.0	5.2	2.9	1.4	C47-C49	0.1	1.1
Breast	263	0.0	0.0	0.0	0.0	0.5	4.2	14.7	22.9	58.1	69.9	88.8	80.9	82.3	84.0	83.6	52.2	34.0	C50	2.1	2.9
Vulva	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.6	0.6	2.4	0.0	1.4	5.2	1.0	0.5	C51	0.0	0.1
Vagina	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.6	0.6	0.6	1.6	1.0	0.0	0.0	0.0	0.3	C52	0.0	0.0
Cervix uteri	101	0.0	0.0	0.0	0.0	2.0	2.4	8.8	8.7	23.7	25.9	30.2	29.6	25.8	32.2	41.8	17.4	13.1	C53	0.8	1.2
Corpus uteri	51	0.0	0.0	0.0	0.0	0.0	0.6	1.8	2.2	6.2	3.9	13.9	21.6	34.7	26.6	20.9	11.6	6.6	C54	0.4	0.7
Uterus unspecified	5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.1	1.1	1.1	0.6	1.6	2.0	1.4	1.7	1.9	0.6	C55	0.0	0.1
Ovary	59	1.3	0.0	0.7	0.0	2.5	3.0	4.1	4.9	8.5	16.9	17.6	12.0	24.8	15.4	13.9	14.5	7.6	C56	0.5	0.6
Other female genital organs	2	0.7	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.0	0.0	1.7	0.0	0.2	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	8	0.0	0.0	0.0	0.6	0.5	0.0	1.2	0.0	0.0	1.7	1.3	0.8	2.0	2.8	0.0	8.7	1.0	C64	0.0	0.1
Renal pelvis	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.7	0.0	0.1	C65	0.0	0.0
Ureter	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.1	C66	0.0	0.0
Bladder	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	1.6	2.0	1.4	3.5	10.6	0.9	C67	0.0	0.0
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	0.0	C68	0.0	0.0
Eye	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	1.4	0.0	1.0	0.2	C69	0.0	0.0
Brain, nervous system	13	1.3	0.7	0.7	1.1	0.0	0.6	2.4	0.5	1.1	4.5	1.3	1.6	2.0	2.8	10.5	3.9	1.7	C70-C72	0.1	0.2
Thyroid	72	0.0	0.0	1.3	3.4	5.9	9.6	12.9	14.7	15.8	12.4	12.6	16.8	8.9	15.4	13.9	10.6	9.3	C73	0.6	0.7
Adrenal gland	2	0.7	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.0	0.0	0.0	0.8	1.0	0.0	0.0	0.0	0.2	C74	0.0	0.0
Other endocrine	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	C75	0.0	0.0
Hodgkin disease	4	0.0	0.0	0.0	0.6	1.5	1.2	0.0	0.5	0.0	0.0	0.0	1.6	2.0	1.4	1.7	0.0	0.6	C81	0.0	0.1
Non-Hodgkin lymphoma	44	0.7	0.0	0.0	1.1	3.5	3.6	2.4	1.6	3.9	2.3	9.5	12.8	14.9	18.2	12.2	31.9	5.7	C82-C85	0.3	0.4
Multiple myeloma	12	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.5	0.6	0.6	2.5	3.2	3.0	4.2	15.7	7.7	1.5	C90	0.1	0.2
Lymphoid leukemia	8	5.4	2.7	0.7	0.0	0.0	0.6	0.0	0.5	0.0	0.0	0.0	0.8	2.0	1.4	3.5	1.9	1.0	C91	0.1	0.1
Myeloid leukemia	18	2.0	0.7	0.7	1.8	1.0	1.8	1.2	1.1	3.4	1.1	2.5	6.4	1.0	11.2	8.7	5.8	2.3	C92-C94	0.1	0.2
Leukemia unspecified	5	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	1.1	1.9	0.0	0.0	0.0	3.5	6.8	0.6	C95	0.0	0.0
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	D45-D47	0.0	0.0
Other and unspecified	28	0.0	0.7	0.0	0.0	0.0	0.6	1.2	0.5	1.7	1.7	3.8	9.6	4.0	14.0	19.2	29.0	3.6	O&U	0.1	0.3
All sites	1,151	16.1	5.4	5.9	9.6	19.3	35.5	63.5	85.1	160.7	193.9	264.0	318.7	361.1	432.8	517.4	593.8	148.7	ALL	7.7	12.4

**Table 3.10.3** Mean annual incidence, Songkhla, 2013-2015

Site	Male						Female						ICD-10
	No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. 0-64 (percent)	Rate. 0-74 (percent)	No.Cases Year	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. 0-64 (percent)	Rate. 0-74 (percent)	
	Lip	1	0.1	0.2	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	
Tongue	30	2.5	4.1	3.4	0.2	0.4	10	0.8	1.2	0.9	0.1	0.1	C01-02
Mouth	26	2.2	3.5	2.8	0.2	0.3	6	0.5	0.8	0.5	0.0	0.0	C03-06
Salivary glands	4	0.4	0.6	0.5	0.0	0.0	4	0.3	0.5	0.4	0.0	0.0	C07-08
Tonsil	13	1.1	1.8	1.5	0.1	0.2	2	0.2	0.3	0.2	0.0	0.0	C09
Other oropharynx	12	1.0	1.6	1.3	0.1	0.1	1	0.1	0.1	0.1	0.0	0.0	C10
Nasopharynx	22	1.8	3.0	2.5	0.2	0.3	6	0.6	0.8	0.7	0.1	0.1	C11
Hypopharynx	21	1.7	2.8	2.4	0.2	0.3	2	0.2	0.3	0.2	0.0	0.0	C12-13
Pharynx unspecified	3	0.2	0.4	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C14
Oesophagus	78	6.6	10.8	9.1	0.5	1.1	8	0.7	1.0	0.8	0.0	0.1	C15
Stomach	16	1.4	2.2	1.9	0.1	0.2	16	1.4	2.0	1.5	0.1	0.2	C16
Small intestine	3	0.3	0.4	0.3	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C17
Colon	88	7.5	12.1	9.9	0.5	1.1	77	6.7	9.9	7.2	0.4	0.8	C18
Rectum	59	5.0	8.1	6.7	0.4	0.8	47	4.1	6.0	4.6	0.2	0.6	C19-20
Anus	3	0.3	0.4	0.3	0.0	0.0	4	0.3	0.5	0.4	0.0	0.1	C21
Liver and bile duct	137	11.6	18.8	15.7	1.1	1.8	64	5.6	8.3	6.1	0.3	0.7	C22,C24
Gallbladder	1	0.1	0.2	0.2	0.0	0.0	4	0.4	0.6	0.4	0.0	0.0	C23
Pancreas	17	1.4	2.3	1.9	0.1	0.2	15	1.3	2.0	1.4	0.1	0.1	C25
Nose, sinuses etc.	6	0.5	0.8	0.7	0.0	0.1	4	0.4	0.6	0.4	0.0	0.0	C30-31
Larynx	26	2.2	3.6	3.0	0.2	0.4	2	0.1	0.2	0.1	0.0	0.0	C32
Trachea, Bronchus and lung	202	17.1	27.8	23.1	1.2	2.8	101	8.8	13.0	9.3	0.5	1.1	C33-34
Other thoracic organs	2	0.1	0.2	0.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C37-38
Bone	6	0.5	0.8	0.8	0.0	0.1	5	0.4	0.6	0.5	0.0	0.0	C40-C41
Melanoma of skin	5	0.4	0.7	0.6	0.0	0.0	6	0.5	0.7	0.6	0.0	0.1	C43
Other skin	33	2.8	4.5	3.6	0.2	0.3	44	3.9	5.6	3.5	0.1	0.4	C44
Connective tissue	6	0.5	0.8	0.7	0.1	0.1	11	0.9	1.4	1.1	0.1	0.1	C47,C49
Breast	1	0.1	0.1	0.1	0.0	0.0	263	22.8	34.0	26.5	2.1	2.9	C50
Vulva							4	0.3	0.5	0.4	0.0	0.1	C51
Vagina							3	0.2	0.3	0.3	0.0	0.0	C52
Cervix uteri							101	8.8	13.1	10.3	0.8	1.2	C53
Corpus uteri							51	4.4	6.6	5.3	0.4	0.7	C54
Uterus unspecified							5	0.4	0.6	0.5	0.0	0.1	C55
Ovary							59	5.1	7.6	6.1	0.5	0.6	C56
Other female genital organs							2	0.1	0.2	0.2	0.0	0.0	C57
Placenta							0	0.0	0.0	0.0	0.0	0.0	C58
Penis	11	0.9	1.5	1.2	0.1	0.1							C60
Prostate	84	7.1	11.5	9.4	0.2	1.1							C61
Testis	4	0.3	0.5	0.5	0.0	0.0							C62
Other male genital organs	1	0.1	0.1	0.1	0.0	0.0							C63
Kidney	13	1.1	1.7	1.5	0.1	0.2	8	0.7	1.0	0.7	0.0	0.1	C64
Renal pelvis	0	0.0	0.0	0.0	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C65
Ureter	1	0.1	0.1	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C66
Bladder	41	3.5	5.6	4.7	0.2	0.5	7	0.6	0.9	0.5	0.0	0.0	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	C68
Eye	1	0.1	0.2	0.2	0.0	0.0	1	0.1	0.2	0.2	0.0	0.0	C69
Brain, nervous system	23	1.9	3.1	3.0	0.2	0.3	13	1.2	1.7	1.5	0.1	0.2	C70-72
Thyroid	16	1.4	2.2	1.9	0.1	0.2	72	6.2	9.3	7.6	0.6	0.7	C73
Adrenal gland	1	0.1	0.1	0.2	0.0	0.0	2	0.1	0.2	0.2	0.0	0.0	C74
Other endocrine	0	0.0	0.0	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C75
Hodgkin disease	7	0.6	0.9	0.9	0.1	0.1	4	0.4	0.6	0.5	0.0	0.1	C81
Non-Hodgkin lymphoma	51	4.3	7.0	5.8	0.3	0.6	44	3.9	5.7	4.4	0.3	0.4	C82-85,C96
Multiple myeloma	16	1.3	2.2	1.8	0.1	0.2	12	1.0	1.5	1.1	0.1	0.2	C90
Lymphoid leukemia	16	1.3	2.2	2.3	0.1	0.2	8	0.7	1.0	1.3	0.1	0.1	C91
Myeloid leukemia	23	1.9	3.2	2.8	0.2	0.3	18	1.6	2.3	2.0	0.1	0.2	C92-94
Leukemia unspecified	5	0.5	0.7	0.7	0.0	0.1	5	0.4	0.6	0.4	0.0	0.0	C95
Myelodysplastic disease	1	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	D45-D47
Other and unspecified	47	4.0	6.5	5.4	0.3	0.6	28	2.4	3.6	2.5	0.1	0.3	O&U
<b>All sites</b>	<b>1,182</b>	<b>100.0</b>	<b>162.1</b>	<b>136.1</b>	<b>7.6</b>	<b>15.3</b>	<b>1,151</b>	<b>100.0</b>	<b>148.7</b>	<b>114.0</b>	<b>7.7</b>	<b>12.4</b>	<b>ALL</b>



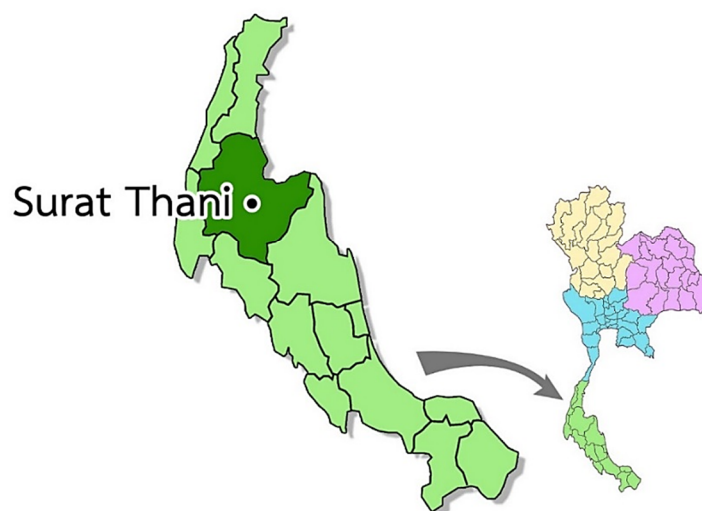
**Table 3.10.4** Percentage of morphologically verified and death certificate only cases, Songkhla

Site	Male			Female			ICD-10
	Cases 3 Year	%MV	%DCO	Cases 3 Year	%MV	%DCO	
Oral cavity	184	97.8	0.5	62	93.5	0.0	C00-C08
Oropharynx	83	94.0	3.6	10	100.0	0.0	C09-C10,C14
Nasopharynx	65	93.8	1.5	19	89.5	0.0	C11
Hypopharynx	62	98.4	0.0	7	100.0	0.0	C12-C13
Esophagus	235	90.2	1.3	24	79.2	4.2	C15
Stomach	49	93.9	0.0	47	80.9	8.5	C16
Small intestine	9	88.9	0.0	3	100.0	0.0	C17
Colon and rectum	450	92.7	2.0	381	90.6	2.4	C18-C21
Liver and bile duct	410	20.5	5.4	193	25.9	6.2	C22,C24
Gallbladder	4	75.0	0.0	13	53.8	0.0	C23
pancrease	51	51.0	2.0	46	65.2	6.5	C25
Nose,sinuses etc	18	100.0	0.0	13	92.3	0.0	C30-C31
Larynx	78	97.4	0.0	5	80.0	0.0	C32
Trachea, brochus and lung	607	73.0	3.8	302	73.2	4.0	C33-C34
Other thoracic organs	5	60.0	0.0	1	0.0	0.0	C37-C38
Bone	18	50.0	5.6	14	35.7	0.0	C40-C41
Melanoma of skin	15	100.0	0.0	17	100.0	0.0	C43
Other skin	98	100.0	0.0	132	96.2	0.8	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	18	94.4	0.0	32	90.6	0.0	C47,C49
Breast	3	66.7	0.0	789	96.5	1.0	C50
Vulva				11	100.0	0.0	C51
Vagina				8	100.0	0.0	C52
Cervix uteri				303	98.3	0.0	C53
Corpus uteri				153	98.0	0.0	C54
Uterus unspecified				14	92.9	0.0	C55
Ovary				176	88.6	0.6	C56
Other female genital organs				5	100.0	0.0	C57
Placenta				1	100.0	0.0	C58
Penis	32	93.8	0.0				C60
Prostate	251	86.9	1.2				C61
Testis	12	83.3	0.0				C62
Other male genital organs	2	100.0	0.0				C63
Kidney	38	76.3	7.9	23	52.2	0.0	C64
Renal pelvis	1	100.0	0.0	2	100.0	0.0	C65
Ureter	2	100.0	0.0	2	100.0	0.0	C66
Bladder	124	83.9	0.0	20	70.0	5.0	C67
Other urinary organs	1	100.0	0.0	1	100.0	0.0	C68
Eye	4	75.0	0.0	4	100.0	0.0	C69
Brain, nervous system	68	70.6	2.9	40	65.0	10.0	C70-C72
Thyroid	48	95.8	0.0	215	98.6	0.0	C73
Adrenal gland	3	100.0	0.0	5	80.0	0.0	C74
Other endocrine	1	100.0	0.0	2	100.0	0.0	C75
Hodgkin disease	20	100.0	0.0	13	100.0	0.0	C81
Non-Hodgkin lymphoma	154	100.0	0.0	133	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	47	100.0	0.0	35	100.0	0.0	C90
Leukemia	132	100.0	0.0	92	98.9	1.1	C91-C95
Myelodysplastic	2	100.0	0.0	0	0.0	0.0	D45-D47
Other and unspecified	141	48.2	15.6	84	48.8	17.9	O&U
<b>All site</b>	<b>3,545</b>	<b>78.4</b>	<b>2.7</b>	<b>3,452</b>	<b>86.7</b>	<b>2.1</b>	<b>All</b>
<b>All site without liver</b>	<b>3,135</b>	<b>85.9</b>	<b>2.3</b>	<b>3,259</b>	<b>90.3</b>	<b>1.8</b>	<b>All</b>

## Surat Thani Cancer Registry

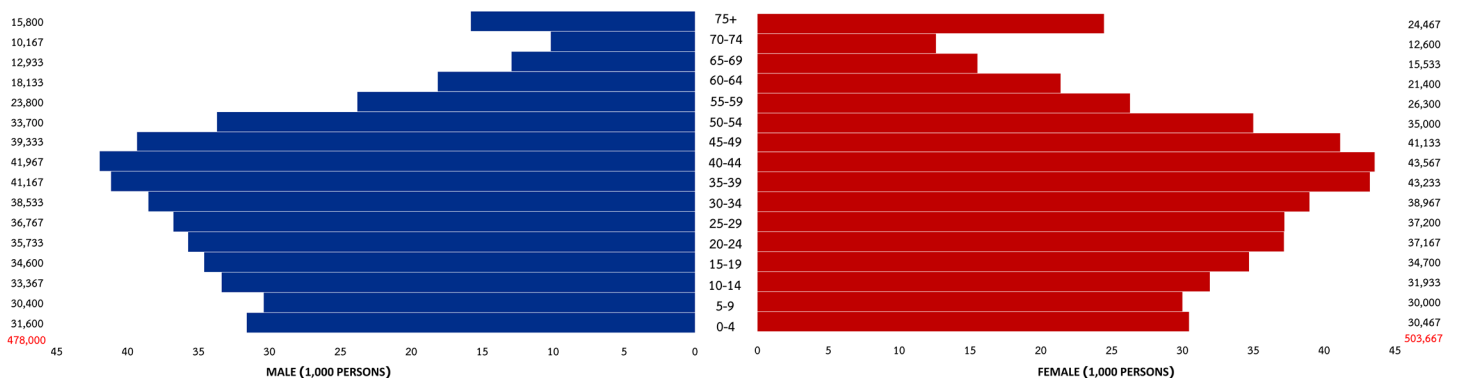
### Registration area

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 2014 (average 2013-2015)



### **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**

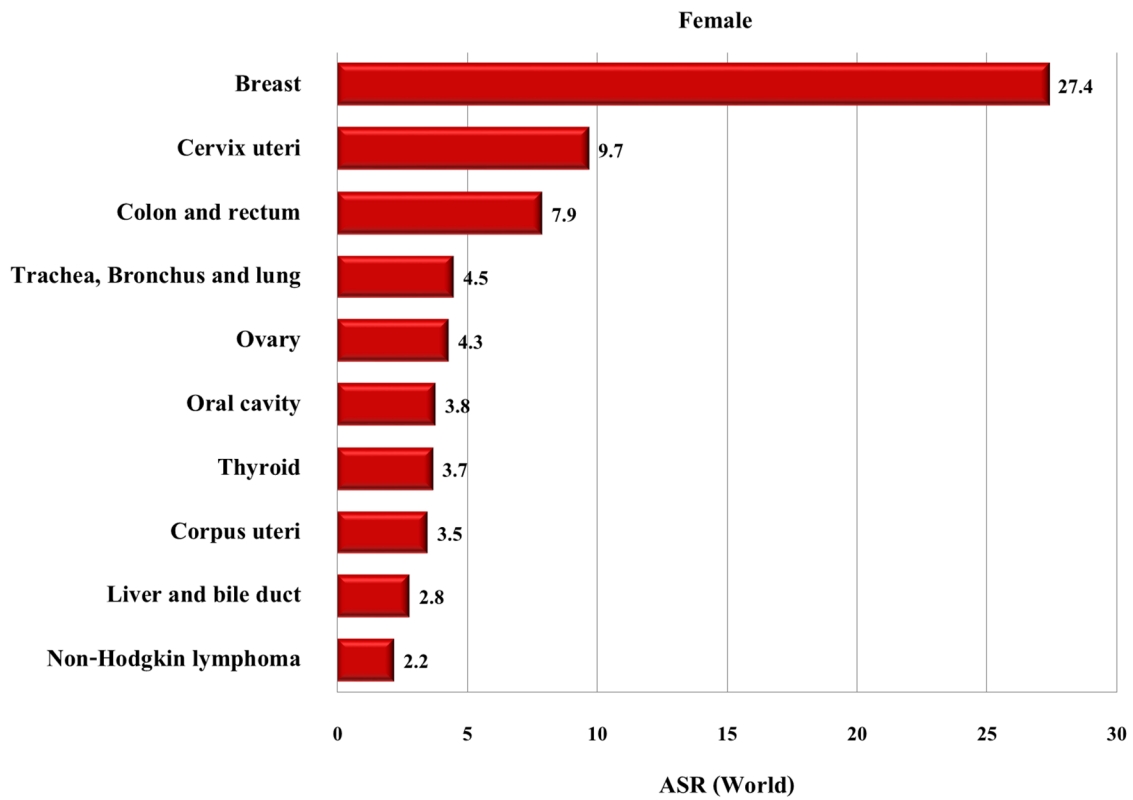
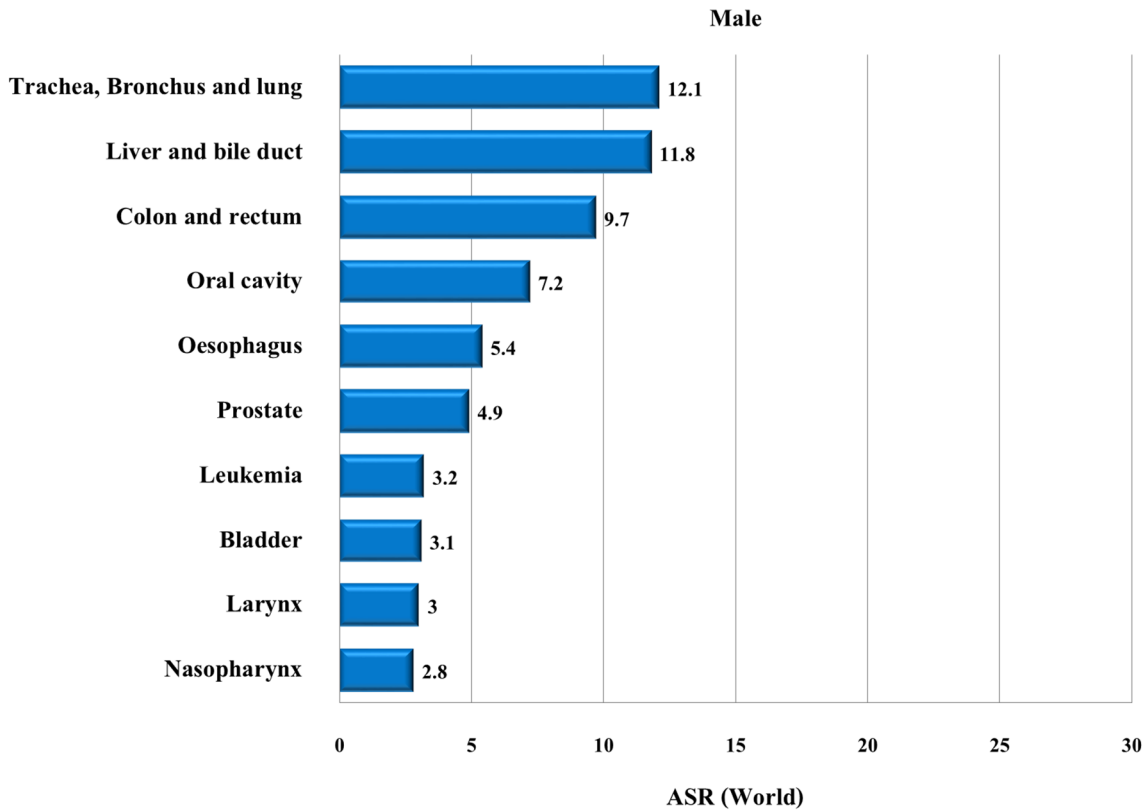
All data on cancer patients are collected by a mixture of passive and active methods involving notification by the staff of Suratthani cancer center, Suratthani provincial hospital, one Suratthani provincial hospital, 19 community hospitals, pathological laboratory in Suratthani hospital, cancer registration 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 2014, 476 were males and 534 were females, making 1,010 for both sexes. The age - standardized incidence rate (ASR) of all cancer sites in males was 84.9 per 100,000, with lung cancer ranks first (ASR = 12.1) followed by liver and bile duct (ASR = 11.8) and colon and rectum (ASR = 9.7). The ASR of all cancer sites in females was 81.5 per 100,000, the three leading cancer sites being breast (ASR = 27.4), cervix uteri (ASR = 9.7) and colon and rectum (ASR = 7.9).

**Figure 3.11** Leading cancer in Surat Thani (mean annual ASR 2013-2015)



**Table 3.11.1 Surat Thani (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Male**

Site	No.Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.1	0.1	C00	0.0	0.0
Tongue	23	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.8	2.4	8.5	4.0	15.4	11.0	18.0	32.8	31.6	4.7	3.9	C01-02	0.2	0.5
Mouth	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.8	8.9	12.6	3.7	15.5	26.2	29.5	3.8	3.0	C03-06	0.2	0.4
Salivary glands	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	2.6	3.3	0.0	0.2	0.2	C07-08	0.0	0.0
Tonsil	13	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	2.4	3.4	5.9	5.6	7.4	7.7	6.6	21.1	2.6	2.0	C09	0.1	0.2
Other oropharynx	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6	0.0	1.0	1.4	0.0	5.2	3.3	10.5	0.8	0.6	C10	0.0	0.1
Nasopharynx	17	0.0	0.0	0.0	0.0	0.0	2.6	3.2	5.6	8.5	8.5	6.9	12.6	7.4	12.9	3.3	2.1	3.6	2.8	C11	0.2	0.3
Hypopharynx	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.8	4.2	4.0	7.0	11.0	12.9	16.4	23.2	3.1	2.5	C12-13	0.1	0.3
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	3.3	0.0	0.1	0.1	C14	0.0	0.0
Oesophagus	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	4.2	9.9	28.0	12.9	51.5	42.6	21.1	6.2	5.4	C15	0.3	0.8
Stomach	9	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	0.8	1.7	3.0	7.0	9.2	7.7	9.8	8.4	2.0	1.6	C16	0.1	0.2
Small intestine	31	0.0	0.0	0.0	0.0	0.0	0.9	1.7	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	2.1	0.2	0.2	C17	0.0	0.0
Colon	24	0.0	0.0	0.0	0.0	0.0	0.9	1.7	0.0	1.6	2.5	15.8	19.6	22.1	23.2	39.3	44.3	6.4	5.3	C18	0.3	0.6
Rectum	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C19-20	0.2	0.5
Anus	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8	0.0	0.0	0.0	2.6	0.0	0.0	0.2	0.2	C21	0.0	0.0
Liver and bile duct	68	0.0	0.0	0.0	0.0	0.0	0.0	3.5	5.7	7.9	19.5	21.8	50.4	42.3	77.3	68.9	57.0	14.2	11.8	C22,C24	0.8	1.5
Gallbladder	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	2.1	0.1	0.1	C23	0.0	0.0
Pancreas	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.0	2.8	1.8	2.6	0.0	6.3	0.7	0.5	C25	0.0	0.1
Nose, sinuses etc.	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.0	5.6	1.8	2.6	3.3	2.1	1.0	0.8	C30-31	0.1	0.1
Larynx	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	3.4	7.9	11.2	7.4	18.0	29.5	21.1	3.6	3.0	C32	0.2	0.4
Trachea, Bronchus and lung	70	0.0	0.0	0.0	0.0	0.9	0.9	2.4	2.4	6.4	9.3	22.7	39.2	55.1	72.2	78.7	109.7	14.6	12.1	C33-34	0.7	1.4
Other thoracic organs	1	0.0	0.0	0.0	1.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	C37-38	0.0	0.0
Bone	5	1.1	0.0	2.0	4.8	2.8	0.0	0.0	1.6	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1	C40-C41	0.1	0.1
Melanoma of skin	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C51	0.0	0.0
Other skin	5	0.0	0.0	1.0	1.0	0.0	1.8	0.0	0.0	0.8	0.0	0.0	4.2	0.0	2.6	0.0	2.1	0.2	0.2	C52	0.0	0.0
Connective tissue	5	0.0	1.1	0.0	0.0	0.9	0.0	0.0	0.0	2.4	0.8	1.0	7.0	0.0	2.6	3.3	4.2	1.1	0.9	C53	0.0	0.0
Breast	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.0	0.0	3.7	2.6	3.3	4.2	0.6	0.5	C54	0.0	0.0
Vulva	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C55	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C56	0.0	0.0
Cervix uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C57	0.0	0.0
Corpus uteri	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C58	0.0	0.0
Uterus unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C59	0.0	0.0
Ovary	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Other female genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.1	0.1
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	C62	0.0	0.0
Penis	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8	1.0	2.8	3.7	2.6	3.3	2.1	0.7	0.6	C63	0.0	0.0
Prostate	27	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	14.7	56.7	59.0	50.6	5.6	4.9	C64	0.1	0.7
Testis	1	1.1	0.0	0.0	0.0	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	C65	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.1	0.1	C66	0.0	0.0
Kidney	4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.8	1.0	2.8	3.7	5.2	0.0	2.1	0.9	0.9	C67	0.1	0.1
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	C68	0.0	0.0
Bladder	17	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	2.5	3.0	7.0	9.2	25.8	32.8	31.6	3.6	3.1	C69	0.1	0.4
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C70-72	0.0	0.0
Eye	0	0.0	0.0	0.0	0.0	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	0.0	C73	0.1	0.1
Brain, nervous system	8	1.1	1.1	1.0	0.0	0.0	0.9	0.0	2.4	0.8	1.7	3.0	4.2	5.5	5.2	9.8	2.1	1.7	1.6	C74	0.1	0.1
Thyroid	6	0.0	0.0	0.0	0.0	0.0	0.0	3.5	1.6	2.4	0.0	2.0	2.8	1.8	5.2	3.3	2.1	1.3	1.0	C75	0.1	0.1
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	C76	0.0	0.0
Hodgkin disease	2	0.0	1.1	0.0	1.0	0.9	0.0	0.9	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.3	0.4	C82-85,C96	0.0	0.0
Non-Hodgkin lymphoma	13	1.1	1.1	1.0	0.0	0.0	0.9	0.9	2.4	1.6	3.4	5.9	7.0	5.5	10.3	6.6	12.7	2.8	2.4	C90	0.2	0.2
Multiple myeloma	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.0	2.8	3.7	5.2	3.3	4.2	0.8	0.7	C91	0.0	0.1
Lymphoid leukemia	6	4.2	4.4	2.0	0.0	0.9	1.8	0.9	0.0	0.8	0.0	1.0	0.0	0.0	2.6	0.0	0.0	1.2	1.6	C92-94	0.0	0.1
Myeloid leukemia	3	2.1	3.3	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	1.0	0.0	0.0	2.6	0.0	2.1	0.7	0.9	C95	0.0	0.1
Leukemia unspecified	3	2.1	2.2	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	2.6	0.0	2.1	0.6	0.7	C95	0.0	0.0
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	0.0	0.0
Other and unspecified	8	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	3.2	0.8	1.0	7.0	5.5	5.2	9.8	4.2	1.6	1.3	O&U	0.1	0.2
All sites	476	15.8	14.3	7.0	8.7	7.5	9.1	20.8	28.3	53.2	88.1	143.4	303.9	270.2	512.9	531.1	563.3	99.7	84.9	ALL	4.9	10.1

**Table 3.11.2** Surat Thani (2014), Mean annual ASR per 100,000 (2013-2015) by Age Group – Female

Site	No. Cases Year	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	Crude Rate	ASR World	ICD-10	Cum. 0-64	Rate. 0-74
Lip	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.6	2.1	0.0	6.8	0.5	0.3	C00	0.0	0.0
Tongue	9	0.0	0.0	0.0	0.0	0.9	0.0	0.9	3.9	0.8	3.2	1.9	1.3	3.1	8.6	10.6	4.1	1.9	1.4	C01-C02	0.1	0.2
Mouth	14	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.4	2.9	5.1	3.1	4.3	21.2	24.5	2.8	1.8	C03-C06	0.1	0.2
Salivary glands	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.5	0.0	1.0	1.3	0.0	0.0	0.0	0.0	0.4	0.3	C07-C08	0.0	0.0
Tonsil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.8	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.2	0.2	C09	0.0	0.0
Other oropharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C10	0.0	0.0
Nasopharynx	6	0.0	0.0	0.0	0.0	0.9	1.8	0.9	1.5	2.3	1.6	2.9	0.0	4.7	0.0	0.0	1.4	1.2	1.0	C11	0.1	0.1
Hypopharynx	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C12-C13	0.0	0.0
Pharynx unspecified	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.1	0.1	C14	0.0	0.0
Oesophagus	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.5	0.0	6.4	7.9	4.1	0.9	0.6	C15	0.0	0.1
Stomach	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	2.9	2.5	3.1	2.1	5.3	2.7	0.9	0.7	C16	0.1	0.1
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	2.1	2.6	0.0	0.1	0.1	C17	0.0	0.0
Colon	40	0.0	0.0	0.0	0.0	0.0	0.9	1.7	3.1	4.6	8.1	12.4	20.3	21.8	23.6	31.7	42.2	7.9	5.6	C18	0.4	0.6
Rectum	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.3	2.4	3.8	7.6	10.9	10.7	18.5	16.3	3.2	2.3	C19-C20	0.1	0.3
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	1.4	0.1	0.0	C21	0.0	0.0
Liver and bile duct	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	2.4	3.8	10.1	12.5	17.2	18.5	24.5	3.9	2.8	C22,C24	0.2	0.3
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	5.3	0.0	0.1	0.1	C23	0.0	0.0
Pancreas	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.3	0.0	3.1	6.4	2.6	0.0	0.5	C25	0.0	0.1
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	2.1	2.6	1.4	0.3	0.2	C30-C31	0.0	0.0
Larynx	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.1	0.0	0.0	0.1	0.1	C32	0.0	0.0
Trachea, Bronchus and lung	30	0.0	0.0	0.0	0.0	0.0	1.8	3.4	1.5	3.8	6.5	5.7	15.2	15.6	25.8	34.4	21.8	6.0	4.5	C33-C34	0.3	0.6
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	1.4	0.1	0.0	C37-C38	0.0	0.0
Bone	2	0.0	2.2	0.0	0.0	0.9	0.0	0.9	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	C40-C41	0.0	0.0
Melanoma of skin	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.3	0.0	2.1	5.3	0.0	0.4	0.3	C43	0.0	0.1
Other skin	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	2.5	3.1	6.4	7.9	4.1	0.9	0.7	C44	0.0	0.1
Connective tissue	5	0.0	0.0	1.0	1.0	1.8	0.0	0.0	3.1	0.8	0.0	1.0	2.5	0.0	4.3	2.6	1.4	1.1	0.9	C47,C49	0.1	0.1
Breast	181	0.0	0.0	1.0	0.0	0.0	10.8	19.7	40.1	56.6	94.8	73.3	76.0	76.3	73.0	63.5	25.9	35.9	27.4	C50	2.2	2.9
Vulva	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	2.1	0.0	1.4	0.2	0.1	C51	0.0	0.0
Vagina	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.1	0.1	C52	0.0	0.0
Cervix uteri	66	0.0	0.0	0.0	0.0	1.8	2.7	10.3	12.3	18.4	25.9	27.6	22.8	34.3	25.8	13.2	31.3	13.1	9.7	C53	0.8	1.0
Corpus uteri	23	0.0	0.0	0.0	0.0	0.0	2.6	2.6	2.3	2.3	3.2	9.5	21.5	23.4	10.7	10.6	5.4	4.5	3.5	C54	0.3	0.4
Uterus unspecified	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.0	0.0	1.6	0.0	0.0	1.4	0.3	0.2	C55	0.0	0.0
Ovary	26	1.1	0.0	2.1	1.0	1.8	2.7	2.6	2.3	6.1	8.1	12.4	7.6	20.2	15.0	5.3	5.4	5.2	4.3	C56	0.3	0.4
Other female genital organs	1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.8	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.2	0.2	C57	0.0	0.0
Placenta	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C58	0.0	0.0
Penis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C60	0.0	0.0
Prostate	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C61	0.0	0.0
Testis	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C62	0.0	0.0
Other male genital organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C63	0.0	0.0
Kidney	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	3.8	0.0	2.1	0.0	0.0	0.4	0.3	C64	0.0	0.0
Ureter	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.1	0.1	C66	0.0	0.0
Bladder	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6	0.0	1.3	0.0	0.0	2.6	1.4	0.4	0.3	C67	0.0	0.0
Other urinary organs	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C68	0.0	0.0
Eye	1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	2.6	0.0	0.2	0.2	C69	0.0	0.0
Brain, nervous system	5	0.0	1.1	3.1	0.0	0.0	0.0	1.7	1.5	0.0	0.8	2.9	0.0	1.6	0.0	2.6	1.4	1.0	0.9	C70-C72	0.1	0.1
Thyroid	22	0.0	0.0	0.0	1.9	5.4	9.9	1.7	11.6	2.3	5.7	4.8	3.8	7.8	4.3	5.3	5.4	4.4	3.7	C73	0.3	0.3
Adrenal gland	0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C74	0.0	0.0
Hodgkin disease	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	0.0	0.0	0.0	0.1	0.1	C81	0.0	0.0
Non-Hodgkin lymphoma	13	0.0	0.0	0.0	1.0	0.0	2.7	0.9	0.8	1.5	0.8	5.7	2.5	14.0	10.7	10.6	6.8	2.6	2.2	C82-85,C96	0.1	0.3
Multiple myeloma	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.5	0.0	0.0	7.9	1.4	0.5	0.4	C90	0.0	0.1
Lymphoid leukemia	2	1.1	3.3	2.1	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	0.5	0.7	C91	0.0	0.0
Myeloid leukemia	3	2.2	0.0	1.0	0.0	0.9	0.9	0.9	0.8	0.0	0.0	1.0	1.3	0.0	0.0	0.0	0.0	0.6	0.7	C92-C94	0.0	0.0
Leukemia unspecified	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	C95	0.0	0.0
Melodysplastic disease	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.0	1.3	0.0	0.0	0.0	1.4	0.3	0.2	D45-D47	0.0	0.0
Other and unspecified	7	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.8	0.8	3.2	0.0	1.3	4.7	10.7	2.6	5.4	1.4	1.1	O&U	0.1	0.1
All sites	534	6.6	7.8	10.4	5.8	17.0	34.9	50.5	89.4	111.7	178.3	183.8	221.8	269.5	285.4	304.2	252.0	106.0	81.5	ALL	5.9	8.9

**Table 3.11.3** Mean annual incidence, Surat Thani, 2013-2015

Site	Male						Female						ICD-10
	No.Cases	Freq.	Crude	ASR	Cum.	Rate.	No.Cases	Freq.	Crude	ASR	Cum.	Rate.	
	Year	(%)	rate	world	0-64	0-74	Year	(%)	rate	world	0-64	0-74	
			(per 100,000)		(percent)			(per 100,000)		(percent)			
Lip	0	0.1	0.1	0.1	0.0	0.0	3	0.5	0.5	0.3	0.0	0.0	C00
Tongue	23	4.8	4.7	3.9	0.2	0.5	9	1.7	1.9	1.4	0.1	0.2	C01-02
Mouth	18	3.9	3.8	3.0	0.2	0.4	14	2.6	2.8	1.8	0.1	0.2	C03-06
Salivary glands	1	0.2	0.2	0.2	0.0	0.0	2	0.4	0.4	0.3	0.0	0.0	C07-08
Tonsil	13	2.7	2.6	2.0	0.1	0.2	1	0.2	0.2	0.2	0.0	0.0	C09
Other oropharynx	4	0.8	0.8	0.6	0.0	0.1	0	0.1	0.1	0.0	0.0	0.0	C10
Nasopharynx	17	3.6	3.6	2.8	0.2	0.3	6	1.1	1.2	1.0	0.1	0.1	C11
Hypopharynx	15	3.2	3.1	2.5	0.1	0.3	0	0.1	0.1	0.0	0.0	0.0	C12-13
Pharynx unspecified	0	0.1	0.1	0.1	0.0	0.0	0	0.1	0.1	0.1	0.0	0.0	C14
Oesophagus	30	6.2	6.2	5.4	0.3	0.8	4	0.8	0.9	0.6	0.0	0.1	C15
Stomach	9	2.0	2.0	1.6	0.1	0.2	5	0.9	0.9	0.7	0.1	0.1	C16
Small intestine	1	0.2	0.2	0.2	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C17
Colon	31	6.4	6.4	5.3	0.3	0.6	40	7.5	7.9	5.6	0.4	0.6	C18
Rectum	24	5.0	5.0	4.2	0.2	0.5	16	3.0	3.2	2.3	0.1	0.3	C19-20
Anus	1	0.2	0.2	0.2	0.0	0.0	0	0.1	0.1	0.0	0.0	0.0	C21
Liver and bile duct	68	14.2	14.2	11.8	0.8	1.5	20	3.7	3.9	2.8	0.2	0.3	C22,C24
Gallbladder	1	0.1	0.1	0.1	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C23
Pancreas	3	0.7	0.7	0.5	0.0	0.1	2	0.4	0.5	0.4	0.0	0.1	C25
Nose, sinuses etc.	5	1.0	1.0	0.8	0.1	0.1	1	0.2	0.3	0.2	0.0	0.0	C30-31
Larynx	17	3.6	3.6	3.0	0.2	0.4	1	0.1	0.1	0.1	0.0	0.0	C32
Trachea, Bronchus and lung	70	14.6	14.6	12.1	0.7	1.4	30	5.6	6.0	4.5	0.3	0.6	C33-34
Other thoracic organs	1	0.1	0.1	0.2	0.0	0.0	0	0.1	0.1	0.0	0.0	0.0	C37-38
Bone	5	1.0	1.0	1.1	0.1	0.1	2	0.4	0.4	0.4	0.0	0.0	C40-C41
Melanoma of skin	1	0.2	0.2	0.2	0.0	0.0	2	0.4	0.4	0.3	0.0	0.1	C43
Other skin	5	1.1	1.0	0.9	0.0	0.1	5	0.9	0.9	0.7	0.0	0.1	C44
Connective tissue	5	1.1	1.1	0.9	0.1	0.1	5	1.0	1.1	0.9	0.1	0.1	C47,C49
Breast	3	0.6	0.6	0.5	0.0	0.1	181	33.8	35.9	27.4	2.2	2.9	C50
Vulva							1	0.2	0.2	0.1	0.0	0.0	C51
Vagina							0	0.1	0.1	0.1	0.0	0.0	C52
Cervix uteri							66	12.4	13.1	9.7	0.8	1.0	C53
Corpus uteri							23	4.2	4.5	3.5	0.3	0.4	C54
Uterus unspecified							1	0.2	0.3	0.2	0.0	0.0	C55
Ovary							26	4.9	5.2	4.3	0.3	0.4	C56
Other female genital organs							1	0.2	0.2	0.2	0.0	0.0	C57
Placenta							0	0.1	0.1	0.0	0.0	0.0	C58
Penis													C60
Prostate	27	5.6	5.6	4.9	0.1	0.7							C61
Testis	1	0.1	0.1	0.1	0.0	0.0							C62
Other male genital organs	0	0.1	0.1	0.1	0.0	0.0							C63
Kidney	4	0.9	0.9	0.9	0.1	0.1	2	0.4	0.4	0.3	0.0	0.0	C64
Ureter	0	0.1	0.1	0.1	0.0	0.0	0	0.1	0.1	0.1	0.0	0.0	C66
Bladder	17	3.6	3.6	3.1	0.1	0.4	2	0.4	0.4	0.3	0.0	0.0	C67
Other urinary organs	0	0.1	0.1	0.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	C68
Eye	0	0.1	0.1	0.1	0.0	0.0	1	0.2	0.2	0.2	0.0	0.0	C69
Brain, nervous system	8	1.8	1.7	1.6	0.1	0.2	5	0.9	1.0	0.9	0.1	0.1	C70-72
Thyroid	6	1.3	1.3	1.0	0.1	0.1	22	4.2	4.4	3.7	0.3	0.3	C73
Adrenal gland	0	0.1	0.1	0.1	0.0	0.0	0	0.1	0.1	0.1	0.0	0.0	C74
Hodgkin disease	2	0.4	0.3	0.4	0.0	0.0	1	0.1	0.1	0.1	0.0	0.0	C81
Non-Hodgkin lymphoma	13	2.8	2.8	2.4	0.2	0.2	13	2.5	2.6	2.2	0.1	0.3	C82-85,C96
Multiple myeloma	4	0.8	0.8	0.7	0.0	0.1	3	0.5	0.5	0.4	0.0	0.1	C90
Lymphoid leukemia	6	1.2	1.2	1.6	0.1	0.1	2	0.4	0.5	0.7	0.0	0.0	C91
Myeloid leukemia	3	0.7	0.7	0.9	0.0	0.1	3	0.6	0.6	0.7	0.0	0.0	C92-94
Leukemia unspecified	3	0.6	0.6	0.7	0.0	0.0	0	0.1	0.1	0.0	0.0	0.0	C95
Myelodysplastic disease	0	0.0	0.0	0.0	0.0	0.0	1	0.2	0.3	0.2	0.0	0.0	D45-D47
Other and unspecified	8	1.6	1.6	1.3	0.1	0.2	7	1.3	1.4	1.1	0.1	0.1	O&U
<b>All sites</b>	<b>476</b>	<b>100.0</b>	<b>99.6</b>	<b>84.9</b>	<b>4.8</b>	<b>10.1</b>	<b>534</b>	<b>100.0</b>	<b>106.0</b>	<b>81.5</b>	<b>5.9</b>	<b>8.9</b>	<b>ALL</b>

**Table 3.11.4** 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	127	86.6	0.0	84	94.0	0.0	C00-C08
Oropharynx	51	90.2	0.0	5	100.0	0.0	C09-C10,C14
Nasopharynx	51	88.2	0.0	18	100.0	0.0	C11
Hypopharynx	45	95.6	0.0	1	100.0	0.0	C12-C13
Esophagus	89	93.3	0.0	13	100.0	0.0	C15
Stomach	28	96.4	0.0	14	100.0	0.0	C16
Small intestine	3	100.0	0.0	2	100.0	0.0	C17
Colon and rectum	166	91.6	0.0	169	94.1	0.0	C18-C21
Liver and bile duct	203	26.1	50.7	59	37.3	32.2	C22,C24
Gallbladder	2	50.0	0.0	2	100.0	0.0	C23
pancrease	10	80.0	0.0	7	71.4	0.0	C25
Nose,sinuses etc	14	100.0	0.0	4	100.0	0.0	C30-C31
Larynx	52	92.3	0.0	2	50.0	0.0	C32
Trachea, brochus and lung	209	60.8	28.2	90	71.1	20.0	C33-C34
Other thoracic organs	2	100.0	0.0	1	100.0	0.0	C37-C38
Bone	14	78.6	0.0	6	100.0	0.0	C40-C41
Melanoma of skin	3	100.0	0.0	6	100.0	0.0	C43
Other skin	15	100.0	0.0	14	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	16	93.8	0.0	16	93.8	0.0	C47,C49
Breast	9	88.9	0.0	542	91.3	0.0	C50
Vulva				3	100.0	0.0	C51
Vagina				1	0.0	0.0	C52
Cervix uteri				198	81.8	6.1	C53
Corpus uteri				68	92.6	0.0	C54
Uterus unspecified				4	100.0	0.0	C55
Ovary				78	89.7	0.0	C56
Other female genital organs				3	100.0	0.0	C57
Placenta				1	0.0	0.0	C58
Penis	10	80.0	0.0				C60
Prostate	80	93.8	0.0				C61
Testis	3	100.0	0.0				C62
Other male genital organs	1	100.0	0.0				C63
Kidney	13	92.3	0.0	6	100.0	0.0	C64
Renal pelvis	0	0.0	0.0	0	0.0	0.0	C65
Ureter	1	0.0	0.0	1	100.0	0.0	C66
Bladder	52	90.4	0.0	6	100.0	0.0	C67
Other urinary organs	1	100.0	0.0	0	0.0	0.0	C68
Eye	1	100.0	0.0	3	100.0	0.0	C69
Brain, nervous system	25	92.0	0.0	15	80.0	0.0	C70-C72
Thyroid	18	88.9	11.1	67	91.0	3.0	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	5	100.0	0.0	2	100.0	0.0	C81
Non-Hodgkin lymphoma	40	100.0	0.0	40	100.0	0.0	C82-C85,C96
Immunoproliferative diseases	0	0.0	0.0	0	0.0	0.0	C88
Multiple myeloma	11	100.0	0.0	8	100.0	0.0	C90
Leukemia	35	97.1	0.0	17	100.0	0.0	C91-C95
Myelodysplastic	0	0.0	0.0	4	100.0	0.0	D45-D47
Other and unspecified	23	65.2	0.0	21	57.1	0.0	O&U
<b>All site</b>	<b>1,429</b>	<b>77.5</b>	<b>11.5</b>	<b>1,602</b>	<b>87.6</b>	<b>3.2</b>	<b>All</b>
<b>All site without liver</b>	<b>1,226</b>	<b>86.0</b>	<b>5.0</b>	<b>1,543</b>	<b>89.6</b>	<b>2.1</b>	<b>All</b>