

APPENDIX

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THAILAND
ESTIMATE*Hutcha Sriplung, M.D.***Geography and Population**

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. Stretching about 1 600 kilometers from north to south, it is bounded in the north by the Union of Myanmar and the Lao People's Democratic Republic, in the east by Lao People's Democratic Republic and the Kingdom of Cambodia, and in the south by Malaysia. The southern part is a long peninsular strip between the Gulf of Thailand to the east and the Indian Ocean to the west. The total area is 513 155 squared kilometers. The climate of the country as a whole is dominated by monsoons. In the most parts of the country, there are three seasons: summer, rainy, and winter while in the Southern region, only two seasons, summer and rainy, are experienced. Thailand is divided into 76 provinces, within four geographical regions: the Northern, Northeastern, Central, and Southern. The population distribution by age group and sex is shown in Figure 1.

Statistical Methods

The data from the two cancer registries in the Northern region, Chiang Mai and Lampang registries, were first pooled by adding together the cases and the person-

years at risk. The expected cases of the Northern region were calculated by adjustment with the ratio of cancer deaths by sex and age groups of the region to the combined cancer deaths in the two provinces in 2004. This adjustment procedure was chosen based on the assumption that the number of cancer death reported by the Ministry of Public Health in 2004 is closed to the true cancer deaths that would have occurred in the province. The same procedure was done for the Northeastern region by adding together cases and person-years at risk from Khon Kaen, Udon Thani, and Nakhon Phanom. Rayong and Prachuap Khiri Khan were representatives of the Central region while Bangkok was considered as on region on itself since it differs greatly from the other provinces in the region. Songkhla was the only province having cancer registry in the Southern region.

Then the age (five-year age groups) and sex specific rates for the four regions of Thailand excluding Bangkok were calculated. When expected cases for the four regions and the actual cases of Bangkok were combined together, the expected number of cases and estimated ASRs for 1999 by sex and site for the whole Kingdom of Thailand were finally obtained.

Figure 1 Population pyramid, Thailand, 1999

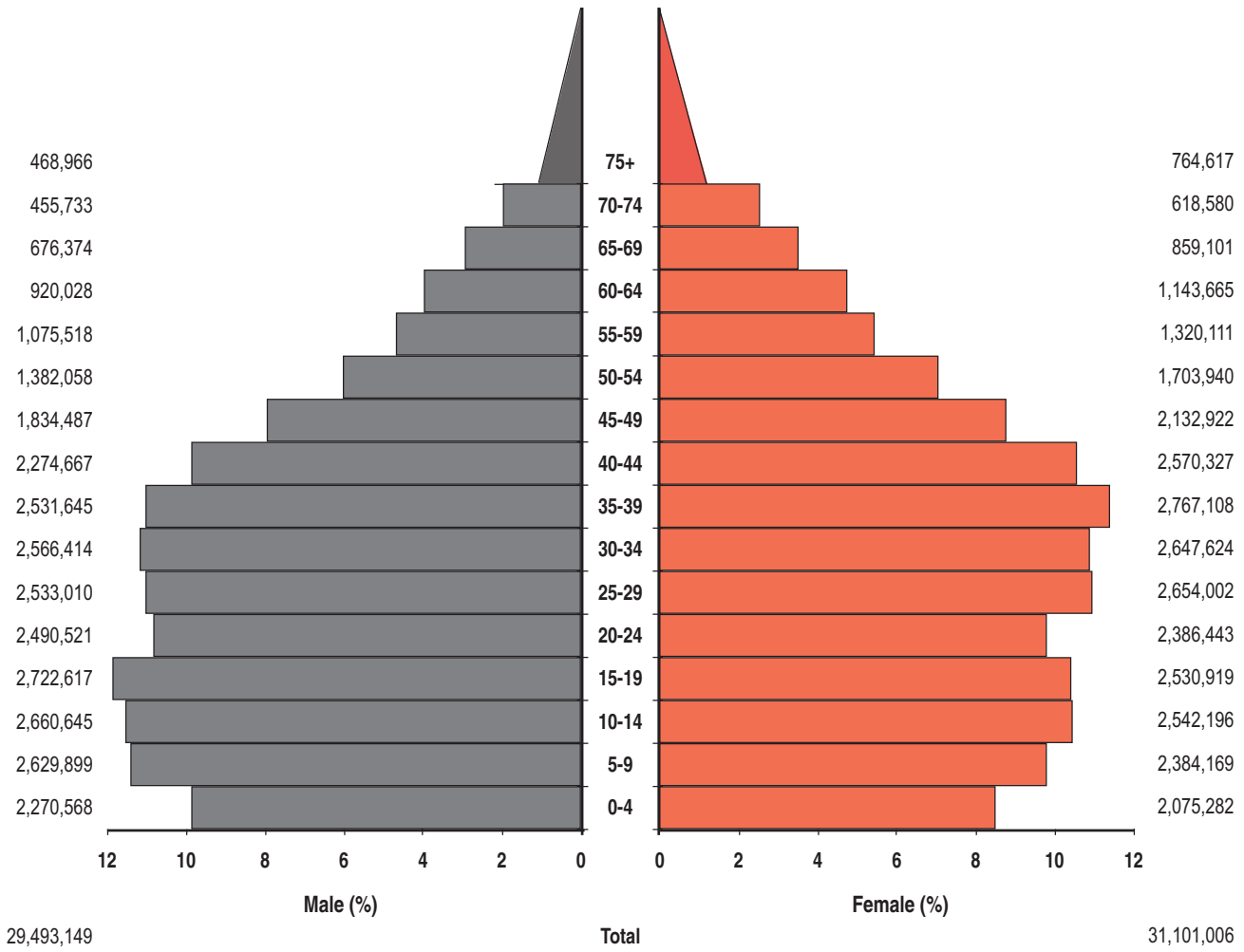


Table 1 Annual incidence, Thailand (estimate), 1999

	Male						Female						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates		No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates		
					0-64 (percent)	0-74 (percent)					0-64 (percent)	0-74 (percent)	
Lip	140	0.1	0.2	0.2	0.01	0.02	966	1.0	1.2	1.3	0.05	0.12	C00
Tongue	1652	1.7	2.1	2.3	0.10	0.29	730	0.7	0.9	1.0	0.05	0.12	C01-02
Salivary gland	337	0.4	0.4	0.4	0.03	0.05	283	0.3	0.3	0.3	0.02	0.03	C07-C08
Mouth	1694	1.8	2.1	2.3	0.13	0.25	1513	1.5	1.9	2.0	0.08	0.24	C03-C06
Oropharynx	906	1.0	1.1	1.2	0.07	0.14	262	0.3	0.3	0.3	0.02	0.03	C09-C10
Nasopharynx	2229	2.4	2.8	2.8	0.21	0.30	1162	1.2	1.4	1.4	0.11	0.14	C11
Hypopharynx	715	0.8	0.9	1.0	0.04	0.13	145	0.1	0.2	0.2	0.01	0.02	C12-C13
Pharynx unspecified	133	0.1	0.2	0.2	0.01	0.02	89	0.1	0.1	0.1	0.01	0.02	C14
Esophagus	2909	3.1	3.6	4.1	0.23	0.53	1136	1.1	1.4	1.6	0.06	0.21	C15
Stomach	2552	2.7	3.2	3.5	0.19	0.44	2159	2.1	2.7	2.8	0.18	0.31	C16
Small intestine	154	0.2	0.2	0.2	0.01	0.02	96	0.1	0.1	0.1	0.01	0.01	C17
Colon	3936	4.2	4.9	5.2	0.30	0.63	3761	3.7	4.6	4.9	0.28	0.56	C18
Rectum	2666	2.8	3.3	3.6	0.20	0.44	2123	2.1	2.6	2.7	0.17	0.30	C19-21
Liver and bile duct	24893	26.3	31.2	33.4	2.26	4.08	9283	9.2	11.5	12.3	0.83	1.53	C22,C24
Gallbladder	650	0.7	0.8	0.9	0.05	0.12	906	0.9	1.1	1.2	0.05	0.16	C23
Pancreas	874	0.9	1.1	1.2	0.08	0.14	754	0.7	0.9	1.0	0.05	0.13	C25
Nose, sinuses etc.	389	0.4	0.5	0.5	0.03	0.06	287	0.3	0.4	0.3	0.02	0.03	C30-C31
Larynx	1942	2.0	2.4	2.7	0.15	0.32	291	0.3	0.4	0.4	0.02	0.05	C32
Bronchus, lung	14840	15.7	18.6	20.6	1.19	2.66	7033	7.0	8.7	9.3	0.58	1.14	C33-C34
Other thoracic organs	219	0.2	0.3	0.3	0.02	0.02	70	0.1	0.1	0.1	0.01	0.01	C37-C38
Bone	551	0.6	0.7	0.7	0.05	0.07	448	0.4	0.6	0.6	0.04	0.04	C40-C41
Connective tissue	917	1.0	1.1	1.2	0.08	0.11	557	0.6	0.7	0.7	0.05	0.06	C47,C49
Melanoma of skin	298	0.3	0.4	0.4	0.03	0.05	237	0.2	0.3	0.3	0.01	0.03	C43
Other skin	2164	2.3	2.7	3.0	0.14	0.34	2337	2.3	2.9	3.1	0.14	0.32	C44
Breast	151	0.2	0.2	0.2	0.02	0.02	17563	17.4	21.7	20.5	1.64	2.12	C50
Uterus unspecified							443	0.4	0.5	0.5	0.04	0.05	C55
Cervix uteri							20862	20.6	25.8	24.7	2.03	2.65	C53
Placenta							261	0.3	0.3	0.3	0.02	0.02	C58
Corpus uteri							2235	2.2	2.8	2.8	0.25	0.32	C54
Ovary							4152	4.1	5.1	5.0	0.41	0.50	C56
Other female genital							713	0.7	0.9	0.9	0.06	0.12	C51,C52,C57
Prostate	2437	2.6	3.1	3.5	0.07	0.39							C61
Testis	489	0.5	0.6	0.6	0.04	0.05							C62
Penis	1294	1.4	1.6	1.7	0.11	0.19							C60
Bladder	2949	3.1	3.7	4.2	0.20	0.50	975	1.0	1.2	1.3	0.06	0.14	C67
Kidney etc.	840	0.9	1.1	1.1	0.07	0.14	593	0.6	0.7	0.8	0.04	0.10	C64-C66:C68
Eye	216	0.2	0.3	0.3	0.02	0.02	143	0.1	0.2	0.2	0.01	0.01	C69
Brain, nervous system	1255	1.3	1.6	1.6	0.11	0.15	1204	1.2	1.5	1.5	0.10	0.13	C70-C72
Thyroid	849	0.9	1.1	1.1	0.07	0.12	3562	3.5	4.4	4.1	0.31	0.39	C73
Other endocrine	202	0.2	0.3	0.3	0.02	0.02	162	0.2	0.2	0.2	0.02	0.02	C74-C75
Hodgkin's disease	310	0.3	0.4	0.4	0.02	0.03	97	0.1	0.1	0.1	0.01	0.01	C81
Non-Hodgkin lymphoma	3500	3.7	4.4	4.5	0.28	0.44	2413	2.4	3.0	3.1	0.19	0.33	C82-C85,C96
Multiple myeloma	466	0.5	0.6	0.6	0.04	0.08	386	0.4	0.5	0.5	0.03	0.08	C88,C90
Lymphoid leukemia	1006	1.1	1.3	1.4	0.08	0.10	637	0.6	0.8	0.9	0.05	0.06	C91
Myeloid leukemia	1163	1.2	1.5	1.5	0.10	0.14	1059	1.0	1.3	1.3	0.08	0.13	C92
Leukemia unspecified	715	0.8	0.9	1.0	0.06	0.07	765	0.8	0.9	1.0	0.07	0.08	C95
Other and unspecified	9141	9.6	11.4	12.0	0.80	1.38	6184	6.1	7.6	7.8	0.55	0.87	O&U
All sites	94746	100.0	118.7	127.7	7.69	15.10	101034	100.0	124.9	125.5	8.81	13.74	ALL