Published in final edited form as:

Cancer. 2005 December 15; 104(12 Suppl): 2975–2981.

Asian Subgroups and Cancer Incidence and Mortality Rates in California

Sandy L. Kwong, M.P.H.¹, Moon S. Chen Jr., Ph.D., M.P.H.², Kurt P. Snipes, Ph.D.¹, Dileep G. Bal, M.D.¹, and William E. Wright, Ph.D.¹

¹ *Cancer Control Branch, California Department of Health Services, Sacramento, California.*

² *Department of Public Health Sciences, University of California–Davis, Sacramento, California.*

Abstract

The objective of this study was to characterize better the cancer burden among Asian subgroups in California. Nearly 3.7 million Asians reside in California, and no other state has as many Asians. Cancer statistics for Asians often are combined with statistics for Pacific Islanders, and rates for subgroups are not often examined, because most states do not have a large enough population. Asians are affected disproportionately by certain cancers, such as stomach and liver cancers. The California Cancer Registry, a population-based cancer registry, has collected data, including race/ethnicity data, since 1988. The 5-year, average, annual, age-adjusted cancer incidence and mortality rates from 1997 through 2001 were calculated for 5 Asian subgroups: Chinese, Filipino, Japanese, Korean, and Vietnamese. Cancer incidence and mortality varied greatly. Incidence rates for all sites combined among males varied from a low of 318.6 per 100,000 for Chinese to a high of 366.0 per 100,000 among Japanese. For females, rates ranged from 236.6 per 100,000 among Koreans to 302.4 per 100,000 among Japanese. Mortality rates also varied by Asian subgroup. Presenting one statistic for Asian/Pacific Islanders did not provide an accurate depiction of the cancer burden among the different Asian subgroups. Acculturation will continue to affect the patterns of cancer incidence among Asian subgroups in California.

Keywords

Asian American Network for Cancer Awareness, Research, and Training; cancer surveillance; Chinese; incidence; mortality; Filipino; Japanese; Korean; Vietnamese; California

Asians and Pacific Islanders are often aggregated into one group in presentations of cancer incidence and mortality. The term “Asian,” as it is used for the U.S. Census, characterizes individuals from the Far East, Southeast Asia, or the Indian Subcontinent.¹ This is a diverse group that represents individuals from Cambodia, China, India, Japan, Korea, Pakistan, the Philippine Islands, Thailand, Vietnam, and other countries. The Asian population includes many groups who differ in language and culture. These cultural differences may influence lifestyle factors, such as diet and tobacco use, which, in turn, affect cancer incidence and survival.

In addition to differences in culture, Asian subgroups also differ in their length of residence in the United States. For example, Chinese and Japanese have resided in the U.S. for several

Address for reprints: Sandy L. Kwong, M.P.H., Cancer Surveillance Section, 1700 Tribute Road, Suite 100, Sacramento, CA 95815; Fax: (916) 779-2608; E-mail: skwong@ccr.ca.gov.

Presented at Asian American Network for Cancer Awareness, Research, and Training (AANCART): Fifth Asian American Cancer Control Academy, Sacramento, California, October 22–23, 2004.

generations; whereas other groups, such as Korean, Hmong, Vietnamese, Laotians, and Cambodians, are more recent immigrants. It is well established that cancer incidence among recent immigrants reflects that of their homeland; however, over several generations, a shift toward rates of their new home occurs.^{2–5} Epidemiologic studies investigating this shift may provide information regarding the possible genetic and environmental contributions to cancer etiology, prevention, and control.

Most epidemiologic studies on cancer have been based on white and African-American populations, whose cancer risks and health issues can be very different from those of Asian populations. Although individuals of Asian race were significantly less likely to develop or die from cancer than non-Hispanic white individuals, they were at higher risk for developing some cancers, such as liver and stomach cancers.^{6–8}

In 2000, nearly 12 million Asians lived in the U.S. and 36%, or close to 3.7 million Asians, resided in California.¹ California had the largest population of Asian Americans in the U.S. and was a logical state in which to characterize better the cancer incidence and mortality rates among Asians. The large population of Asian/Pacific Islanders allowed for the calculation of incidence and mortality rates for the Asian subgroups.

MATERIALS AND METHODS

The California Cancer Registry (CCR), which is a population-based, statewide registry, collected incident cancers through a network of 10 regional registries. State law mandating the reporting of newly diagnosed cancers in California was passed in 1985, and statewide implementation was effective as of January 1, 1988, with standardized data collection and quality-control procedures.^{9–12} For the current study, all patients who were diagnosed with invasive cancer between January 1, 1988 and December 31, 2001 were included.

Race/ethnicity information on patients with cancer was based primarily on information contained in the patient's medical record. This information may be based on self-identification by the patient, on the assumptions by an admissions clerk or other medical personnel, or by inference using the race/ethnicity of parents, birthplace, maiden name, or surname. Individuals with race coded as white, black, or unknown with a surname that appeared on the 1980 U.S. Census list of 12,497 Hispanic surnames were categorized as Hispanic. Individuals with race coded as white, black, or unknown but with a Vietnamese or Hmong surname were categorized as Asian.

Ethnic-specific population estimates for the Chinese, Filipinos, Japanese, Korean, and Vietnamese were available only in census years. Race-specific, age-specific, and gender-specific population estimates for California were obtained from the U.S. Census Bureau from the 1990 and 2000 U.S. Census.^{13,14} For each Asian subgroup, data for each intercensal year between 1990 and 2000 were estimated by linear interpolation and extrapolation for 2001, by age and gender. Linear interpolation assumes a fixed rate of growth for each year. For the 2000 Census, no population estimates were produced for the individual Asian subgroups, because the Census allowed respondents to select any number of racial/ethnic groups. A minimum estimate was produced that included only those who self-identified as one Asian subgroup, and a maximum estimate was based on those who self-identified as many racial/ethnic groups, one of which was an Asian subgroup. The average between the minimum and maximum estimate was used for each Asian subgroup.

Cancer patterns were examined for the five most populous Asian subgroups in California: Chinese, Filipino, Japanese, Korean, and Vietnamese. All of these groups are relatively homogenous. Rates for South Asians were not reported, because they were inclusive of several ethnic groups. Cancer rates for Hmong have been reported previously.¹⁵ Currently, counts for

many cancer sites are too few to produce accurate rates for other Asian subgroups and Pacific Islander subgroups.

Rates were calculated using SEER*Stat software and were standardized to the 2000 U.S. population.¹⁶ For the four major racial/ethnic groups, cancer incidence and mortality patterns and trend data were examined. Because of small numbers of patients for the Asian subgroups, 5-year, age-adjusted incidence and mortality rates were calculated. Trend data were not examined for the subgroups. Two measures of change were reported: the percent change (PC) and the estimated annual PC (EAPC). The PC was based on the average of the 2-year endpoints, 1988–1989 and 2000–2001, rather than 1 year of data. Second, the EAPC was calculated using the average percentage increase or decrease in cancer incidence and mortality rates per year during 1988–2001, and a regression line was fitted using the assumption that the natural logarithm of cancer rates changed at a constant rate during the 14-year period.

RESULTS

Incidence and Mortality Rates by Subgroup: Chinese

Among the Asian subgroups, cancer incidence rates among Chinese were consistently among the lowest. Chinese had the highest mortality rates for lung and bronchial cancer (34.3 per 100,000) among all Asian subgroups (see Tables 1, 2).

Incidence and Mortality Rates by Subgroup: Filipino

Filipinos had the highest rate for prostate cancer (109.9 per 100,000) and thyroid cancer (10.8 per 100,000) among the Asian subgroups. The rate for uterine cancer among Filipino women was only slightly lower at 16.5 per 100,000 compared with Japanese women, who had the highest rate. Cancer mortality rates among Filipinos were the lowest of all Asian subgroups: 117.2 per 100,000. However, mortality rates among Filipinos for female breast cancer (17.3 per 100,000), male prostate cancer (17.5 per 100,000), and thyroid cancer (1.3 per 100,000) were the highest among all of the subgroups.

Incidence and Mortality Rates by Subgroup: Japanese

Japanese had the highest incidence rates for colorectal cancer (57.5 per 100,000), female breast cancer (105.5 per 100,000), and uterine cancer (16.7 per 100,000) among all of the Asian subgroups. The Japanese had the second highest mortality rate for all sites combined among the Asian subgroups at 138.9 per 100,000, and they had the highest mortality rates for colorectal cancer (20.5 per 100,000) and uterine cancer (2.5 per 100,000) compared with the other Asian subgroups.

Incidence and Mortality Rates by Subgroup: Korean

Koreans had the highest stomach cancer incidence rate at 37.4 per 100,000. The rate for female breast cancer was the lowest among Koreans (49.1 per 100,000). The cancer mortality rate among Koreans was the highest among the Asian subgroups (146.1 per 100,000). The stomach cancer mortality rate was highest among Koreans (22.4 per 100,000).

Incidence and Mortality Rates by Subgroup: Vietnamese

Among the Asian subgroups, Vietnamese had the highest rates for liver cancer (33.3 per 100,000) and for lung and bronchial cancers (51.6 per 100,000). Liver cancer mortality rates (20.8 per 100,000) in Vietnamese were the highest among all of the Asian subgroups.

DISCUSSION

Of the four major racial/ethnic groups, Asian/Pacific Islanders in California have the lowest cancer incidence and mortality rates.⁶ However, incidence and mortality rates vary greatly by Asian subgroup. Presenting one statistic for Asian/Pacific Islanders does not accurately depict the cancer burden among the different Asian subgroups.

Cigarette smoking prevalence rates among Asian groups have decreased in California. Studies have found that male adult smoking rates have declined from 16.2%¹⁷ to 14.5%¹⁸ among Chinese, from 32.9%¹⁷ to 24.4%¹⁷ among Filipinos, from 22.7%¹⁷ to 13.2%¹⁸ among Japanese, from 36.0%¹⁹ to 31.6%¹⁸ among Vietnamese. With decreases in smoking prevalence documented among these Asian subgroups, the incidence of smoking-related cancers should decline. The decline in cancer incidence and mortality experienced by Asian/Pacific Islanders currently should continue if smoking prevalence continues to decrease among Asian subgroups.

Acculturation will affect the patterns of cancer and in general health among Asians and the associated subgroups.²⁰ Although behaviors are difficult to quantify, lifestyles that differ from the traditional Asia lifestyle are being adopted U.S. Studies have found that cancer patterns change for different Asian subgroups as their time of residence in the U.S. is extended. For example, a study based in Los Angeles County found that, among Japanese and Filipino women, breast cancer incidence increased after immigrating to the U.S. Breast cancer rates quickly were approaching the rates of non-Hispanic white women.²¹ Other studies also have reported differences in exposures and lifestyles between migrants and their descendants that affect the risk of many types of cancer and general health.^{22–24} These statistics will provide the groundwork for further investigation of the factors associated with changing cancer patterns.

These findings are subject to some limitations. It is likely that data from the CCR had some racial misclassification for the four major racial/ethnic groups.²⁵ In a study performed by Swallen et al. at the Northern California Cancer Center, it was found that approximately 20% of Vietnamese patients with cancer actually were not Vietnamese but were Chinese or “other Asian.”²⁶ That study documented the misclassification in the San Francisco/Oakland Cancer Registry, which is part of the CCR. Consequently, this misclassification led to an overestimation of the incidence rates among the Vietnamese subgroup. Similar misclassification may affect other Asian subgroups, but the extent has not been examined for all Asian subgroups. Misclassification among Asian subgroups has been acknowledged as an issue that affects the accurate characterization of the cancer burden.^{27,28} A committee that spans many state cancer registries was organized by the North American Association of Central Cancer Registries to develop better methodology for identifying Asian subgroups.

It is increasingly important to provide health statistics for the growing Asian-American population. However, one major challenge is the sporadic availability of population estimates. Denominator data obtained for Asian subgroups are produced only every 10 years when the Census is conducted. Although population estimates are projected during intercensal years for the four major racial/ethnic groups, no such estimates for Asian subgroups are made. Population estimates for 1991 through 1999 are projected using linear interpolation based on the 1990 and 2000 Census and are extrapolated for 2001. Depending on whether the Census data were underreported or over-reported, incidence rates were overestimated or underestimated. Linear interpolation and extrapolation assumed for a steady rate of growth each year and will not reflect migrant fluctuation for specific Asian sub-populations.

In California, Asian-American women are the least likely to be diagnosed with cancer, although cancer remains the leading cause of death.²⁹ This statistic should serve as a reminder for

physicians to educate Asian Americans about the importance of cancer screening for early detection and to reduce cancer deaths. Cancer screening rates among Asian Americans are consistently the lowest among the four major racial/ethnic groups.³⁰ In conclusion, although cancer incidence and mortality rates among Asian Americans generally are lower compared with other groups, cancer is the leading cause of death in Asian Americans. The evaluation of cancer burden among Asians showed great variation among Asian subgroups. Better characterization of the burden may improve the targeting of interventions.

References

1. Barnes, JS.; Bennett, CE. U.S. Census Bureau, Census 2000 brief, series C2KBR/01-16, The Asian population: 2000. Washington, DC: U.S. Government Printing Office; 2002.
2. Prehn, A.; Lin, S.; Clark, C., et al. Cancer incidence in Chinese, Japanese and Filipinos in the US and Asia 1988–1992. Union City, CA: Northern California Cancer Center; 1999.
3. Pineda MD, White E, Kristal AR, et al. Asian breast cancer survival in the US: a comparison between Asian immigrants, US-born Asian Americans and Caucasians. *Int J Epidemiol* 2001;30:976–982. [PubMed: 11689507]
4. Haselkorn T, Stewart SL, Horn-Ross PL. Why are thyroid cancer rates so high in Southeast Asian women living in the United States? The Bay Area Thyroid Study. *Cancer Epidemiol Biomarkers Prev* 2003;12:144–150. [PubMed: 12582024]
5. Ziegler RG, Hoover RN, Pike MC, et al. Migration patterns and breast cancer risk in Asian American women. *J Natl Cancer Inst* 1993;85:1819–1827. [PubMed: 8230262]
6. Kwong, SL.; Wright, WE. Cancer in California, 2003. Sacramento, CA: California Department of Health Services, Cancer Surveillance Section; 2003.
7. Miller, BA.; Kolonel, LN.; Bernstein, L., et al., editors. Racial/ethnic patterns of cancer in the United States 1988–1992. NIH Publication No. 96-4104. Bethesda, MD: National Cancer Institute; 1996.
8. Chu KC, Chu KT. 1999–2001 Cancer mortality rates for Asian and Pacific Islander ethnic groups with comparisons to their 1988–1992 rates. *Cancer* 2005;104 (12 Suppl):2989–2998. [PubMed: 16270326]
9. Cancer Surveillance Section. Cancer reporting in California: abstracting and coding procedures for hospitals. California cancer reporting system standards, volume I. Sacramento, CA: California Department of Health Services, Cancer Surveillance Section; 1997.
10. Cancer Surveillance Section. Cancer reporting in California: standards for automated reporting. California cancer reporting system standards, volume II. Sacramento, CA: California Department of Health Services, Cancer Surveillance Section; 1997.
11. Cancer Surveillance Section. Cancer reporting in California: data standard for regional registries and California Cancer Registry. California cancer reporting system standards, volume III. Sacramento, CA: California Department of Health Services, Cancer Surveillance Section; 1997.
12. Cancer Surveillance Section. Cancer reporting in California: reporting procedures for physicians. California cancer reporting system standards, volume IV. Sacramento, CA: California Department of Health Services, Cancer Surveillance Section; 1998.
13. Bureau of the Census. Census of population and housing, 1990: California. Summary tape file 1 on CD-ROM (machine-readable data files). Washington, DC: Public Information Office; 1991.
14. Bureau of the Census. Census 2000. Summary file 2—California. Washington, DC: Public Information Office; 2001.
15. Mills PK, Yang R, Riordan D. Cancer incidence in the Hmong in California, 1988–2000. *Cancer* 2005;104 (12 Suppl):2969–2974. [PubMed: 16247793]
16. Surveillance Research Program, National Cancer Institute. SEER*Stat software, version 5.3.1. Bethesda, MD: National Cancer Institute; 2004.
17. Klatsky AL, Amrstrong MA. Cardiovascular risk factors among Asian Americans living in northern California. *Am J Public Health* 1991;81:1423–1428. [PubMed: 1951798]
18. Tang H, Chen MS Jr, Shimizu R. English language fluency and smoking prevalence among California's Asian Americans. *Cancer* 2005;104(Suppl):xxxx–xxxx.

19. McPhee SJ, Jenkins CNH, Wong C, et al. Smoking cessation intervention among Vietnamese Americans: a controlled trial. *Tobacco Control* 1995;4(Suppl):168–248.
20. Gomez SL, Kelsey JL, Glaser SL, et al. Immigration and acculturation in relation to health and health-related risk factors among specific Asian subgroups in a health maintenance organization. *Am J Public Health* 2004;94:1977–1984. [PubMed: 15514240]
21. Deapen D, Liu L, Perkins C, et al. Rapidly rising breast cancer incidence rates among Asian-American women. *Int J Cancer* 2002;99:747–750. [PubMed: 12115511]
22. Flood DM, Weiss NS, Cook LS. Colorectal cancer incidence in Asian migrants to the United States and their descendants. *Cancer Causes Control* 2000;11:403–411. [PubMed: 10877333]
23. Parker FW, Cho Y, Hummer RA. Immigration and the health of Asian and Pacific Islander adults in the United States. *Am J Epidemiol* 2001;153:372–380. [PubMed: 11207155]
24. Gomez SL, Le GM, Clarke CA, et al. Cancer incidence patterns in Koreans in the US and in Kangwha, South Korea. *Cancer Causes Control* 2003;14:167–174. [PubMed: 12749722]
25. Swallen KC, West DW, Stewart SL, et al. Predictors of misclassification of Hispanic ethnicity in a population-based cancer registry. *Ann Epidemiol* 1997;7:200–206. [PubMed: 9141643]
26. Swallen KC, Glaser SL, Stewart SL, et al. Accuracy of racial classification of Vietnamese patients in a population-based cancer registry. *Ethn Dis* 1998;8:218–227. [PubMed: 9681287]
27. Lauderdale DS, Kestenbaum B. Asian American ethnic identification by surname. *Population Res Policy Rev* 2000;19:283–300.
28. Choi BCK, Hanley JG, Holowaty, et al. Use of surnames to identify individuals of Chinese ancestry. *Am J Epidemiol* 1993;138:723–734. [PubMed: 8237987]
29. Department of Health Services. Death records. Sacramento, CA: State of California, Department of Health Services; 2003.
30. California Department of Health Services. California behavioral risk factor survey, 1996–2002. Sacramento, CA: California Department of Health Services, Cancer Surveillance Section; 2003.

TABLE 1
Five-Year Average, Annual, Age-Adjusted Incidence Rates: California, 1997–2001

	Total		Male		Female	
	Count	Rate	Count	Rate	Count	Rate
Chinese						
All sites combined	12,829	281.1	6486	318.6	6343	251.9
Colon and rectum	1987	45.0	1046	52.5	941	38.9
Corpus and uterus, NOS	284	10.8	0	— ^a	284	10.8
Female breast	1899	71.9	0	— ^a	1899	71.9
Liver	657	14.1	507	23.6	150	6.1
Lung and bronchus	1694	39.0	1003	51.3	691	29.0
Prostate	1463	72.1	1463	72.1	0	— ^a
Stomach	636	14.6	361	18.5	275	11.5
Thyroid	298	5.7	64	2.6	234	8.5
Filipino						
All sites combined	12,557	306.6	5896	354.6	6661	273.1
Colon and rectum	1366	34.7	729	43.8	637	27.9
Corpus and uterus, NOS	430	16.5	0	— ^a	430	16.5
Female breast	2531	97.4	0	— ^a	2531	97.4
Liver	347	8.8	255	14.9	92	4.4
Lung and bronchus	1646	42.7	1133	70.0	513	23.2
Prostate	1772	109.9	1772	109.9	0	— ^a
Stomach	236	6.4	134	8.3	102	5.0
Thyroid	503	10.8	97	5.0	406	15.4
Japanese						
All sites combined	6733	324.3	3098	366.0	3635	302.4
Colon and rectum	1199	57.5	583	69.1	616	49.3
Corpus and uterus, NOS	197	16.7	0	— ^a	197	16.7
Female breast	1222	105.5	0	— ^a	1222	105.5
Liver	158	7.4	61	7.6	97	7.0
Lung and bronchus	736	33.9	395	46.0	341	25.9
Prostate	868	99.5	868	99.5	0	— ^a
Stomach	405	19.7	216	26.6	189	15.1
Thyroid	99	5.2	27	3.2	72	7.0
Korean						
All sites combined	3661	273.4	1755	337.5	1906	236.3
Colon and rectum	516	39.4	265	48.8	251	33.0
Corpus and uterus, NOS	76	8.1	0	— ^a	76	8.1
Female breast	461	49.1	0	— ^a	461	49.1
Liver	279	20.2	183	30.4	96	12.7
Lung and bronchus	461	39.2	296	63.7	165	23.7
Prostate	200	41.6	200	41.6	0	— ^a
Stomach	473	37.4	281	54.2	192	26.1
Thyroid	121	7.2	23	3.3	98	10.4
Vietnamese						
All sites combined	4355	309.8	2244	360.6	2111	272.1
Colon and rectum	474	35.2	235	36.5	239	33.8
Corpus and uterus, NOS	80	9.1	0	— ^a	80	9.1
Female breast	508	54.9	0	— ^a	508	54.9
Liver	465	33.3	360	53.5	105	15.6
Lung and bronchus	642	51.6	426	72.9	216	33.6
Prostate	281	53.6	281	53.6	0	— ^a
Stomach	231	19.3	139	26.1	92	14.2

	Total		Male		Female	
	Count	Rate	Count	Rate	Count	Rate
Thyroid	153	7.8	37	4.1	116	11.5

NOS; not otherwise specified.

^aRates that were based on fewer than 15 patients were not calculated.

TABLE 2
Five-Year Average, Annual, Age-Adjusted Mortality Rates: California, 1997–2001

Disease site	Total		Male		Female	
	Count	Rate	Count	Rate	Count	Rate
Chinese						
All sites combined	5942	136.5	3285	168.7	2657	111.0
Colon and rectum	678	16.0	362	19.0	316	13.6
Corpus and uterus, NOS	42	1.8	0	— ^a	42	1.8
Female breast	327	12.7	0	— ^a	327	12.7
Liver	565	12.4	430	20.7	135	5.6
Lung and bronchus	1467	34.3	887	46.1	580	24.8
Prostate	159	9.9	159	9.9	0	— ^a
Stomach	402	9.3	235	12.3	167	7.0
Thyroid	27	0.7	8	— ^a	19	0.8
Filipino						
All sites combined	4451	117.2	2321	145.8	2130	95.4
Colon and rectum	442	11.7	253	15.4	189	8.7
Corpus and uterus, NOS	55	2.3	0	— ^a	55	2.3
Female breast	433	17.3	0	— ^a	433	17.3
Liver	228	5.8	163	9.4	65	3.1
Lung and bronchus	1102	29.1	731	45.8	371	17.0
Prostate	230	17.5	230	17.5	0	— ^a
Stomach	144	4.0	84	5.2	60	3.1
Thyroid	44	1.3	12	— ^a	32	1.6
Japanese						
All Sites combined	2858	138.9	1387	170.3	1471	118.3
Colon and rectum	412	20.5	218	26.8	194	15.9
Corpus and uterus, NOS	32	2.5	0	— ^a	32	2.5
Female breast	173	15.2	0	— ^a	173	15.2
Liver	146	6.6	51	6.4	95	6.5
Lung and bronchus	607	28.5	336	40.1	271	20.9
Prostate	102	14.3	102	14.3	0	— ^a
Stomach	280	13.9	144	17.8	136	11.1
Thyroid	13	— ^a	7	— ^a	6	— ^a
Korean						
All sites combined	1788	146.1	965	203.4	823	111.4
Colon and rectum	178	14.2	84	16.9	94	12.6
Corpus and uterus, NOS	14	— ^a	0	— ^a	14	— ^a
Female breast	70	7.6	0	— ^a	70	7.6
Liver	212	15.6	131	22.1	81	10.9
Lung and bronchus	384	34.1	243	55.3	141	20.8
Prostate	24	8.0	24	8.0	0	— ^a
Stomach	281	22.4	173	34.6	108	14.5
Thyroid	9	— ^a	1	— ^a	8	— ^a
Vietnamese						
All sites combined	1678	133.1	967	169.2	711	104.9
Colon and rectum	101	8.6	50	9.7	51	7.8
Corpus and uterus, NOS	11	— ^a	0	— ^a	11	— ^a
Female breast	78	8.8	0	— ^a	78	8.8
Liver	279	20.8	207	32.2	72	11.4
Lung and bronchus	401	32.8	269	46.6	132	21.1
Prostate	26	8.5	26	8.5	0	— ^a
Stomach	120	10.0	67	12.4	53	8.0

Disease site	Total		Male		Female	
	Count	Rate	Count	Rate	Count	Rate
Thyroid	7	— ^a	1	— ^a	6	— ^a

NOS: not otherwise specified.

^a Rates that were based on fewer than 15 patients were not calculated.