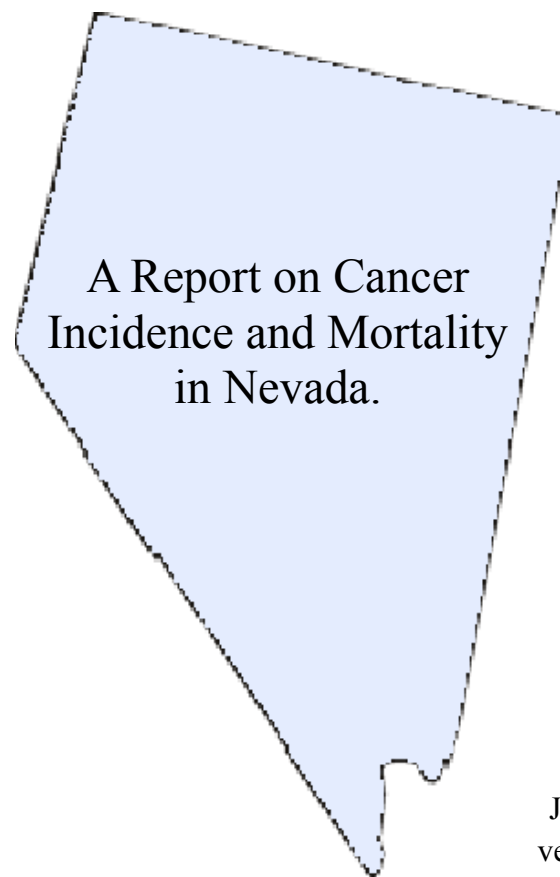


Cancer in Nevada: 2005 - 2009

Bureau of Health Statistics, Planning, Epidemiology and Response
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Cancer in Nevada: 2005-2009

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Preface

This report presents cancer incidence and mortality in Nevada for the 2005-2009 years and is based on 56,399 newly diagnosed cancer cases and 21,363 cancer-related deaths among Nevada residents during this time period. Nationwide data for 2005-2009 are also presented for comparison purposes. The American Cancer Society estimates that 12,230 people in Nevada will be diagnosed with cancer in 2010 and 12,800 people in Nevada will be diagnosed with cancer in 2011, excluding basal and squamous cell skin cancers and in situ carcinomas except for urinary bladder.¹

Cancer incidence and mortality for all types of cancers is covered in general as well as the highlights of the top leading cancers and the leading causes of cancer deaths in Nevada. The top ten most prevalent malignancies in Nevada include: lung and bronchus, prostate, breast, colorectal, urinary bladder, non-Hodgkin lymphoma, melanomas of the skin, kidney and renal pelvis, thyroid gland, and leukemia. The ten leading causes of cancer-related deaths include: trachea, lung and bronchus; colon, rectum, and anus; breast; pancreas; prostate; leukemia; liver and intrahepatic bile duct; non-Hodgkin lymphoma; bladder; and esophagus.

The report includes gender and race/ethnicity information in order to highlight potential areas for cancer control programs, which will go a long way in reducing the risk and impact of cancer in Nevada.

This publication and other publications are available from the Nevada State Health Division website at:
http://health.nv.gov/FP_Publications.htm.

This report contains information from the Nevada Central Cancer Registry (NCCR) within the Bureau of Health Statistics, Planning, Epidemiology and Response. The goal of the Nevada Central Cancer Registry is to gather comprehensive, timely, and accurate data on the incidence of cancer in Nevada.

Technical Notes

Mortality

Nevada Office of Vital Records

The Bureau of Health Statistics, Planning, Epidemiology and Response oversees the Nevada Office of Vital Records, which collects, processes, analyzes, and maintains the Nevada birth and death records. Funeral directors, or persons acting as such, are legally responsible for filing death certificates. The vital records statistical database includes those individuals who died in Nevada (residents and non-residents) and includes Nevada residents who died outside the state of Nevada.

Mortality data in this report includes only Nevada residents. Also included in this report are demographic data of the individual, including gender and race/ethnicity, and cancer-related cause of death (identified by International Classification of Disease (ICD-10) codes).

Incidence

Data Inclusion and Exclusion Criteria

The National Program of Cancer Registries (NPCR) 2012 data submission specifications were used for this report. The following are the specifications as outlined by NPCR:

Diagnosis Years: Include cases diagnosed in all residents of your catchment area beginning with your NPCR reference year (e.g., 1995) through **December 31, 2009**, during the first part of the NPCR 2012 Data Submission in November 2011 (November 1-30 2011). For guidance on residency, refer to page 19 of *NAACCR Standards for Cancer Registries*, Volume II, Version 12 (revised August 2009) or Version 12.1 (revised June 2010).

Reportable Diagnoses: All histologies with a behavior code of /2 or /3 (or in some cases behavior code of /0 [see 3h] or behavior code of /1 [see 3g]) in the *International Classification of Diseases for Oncology*, Third Edition (ICD-O-3), are reportable in the year that they were diagnosed with the following exceptions or restrictions:

a. Exclude neoplasms of the skin (C44.0–C44.9) with the following histologies **UNLESS** they occur at the mucocutaneous sites [vagina (C52.9), clitoris (C51.2), vulva (C51.0–51.9), prepuce (C60.0), penis (C60.9), and scrotum (C63.2)]:

- 8000–8005 Neoplasms, malignant, NOS
- 8010–8046 Epithelial carcinomas
- 8050–8084 Papillary and squamous cell carcinomas
- 8090–8110 Basal cell carcinomas

b. Exclude carcinoma *in situ* of the cervix (C53.0-C53.9, any morphology and /2) after January 1, 1996.

c. Exclude prostate intraepithelial neoplasia, grade III (PIN III) (C61.9, 8148/2) after January 1, 2001.

- d. Exclude squamous intraepithelial neoplasia, grade III (8077/2) of the following sites: anus (C21.1, AIN III), cervix (C53, CIN III), vagina (C52.9, VAIN III), and vulvar (C51, VIN III).
- e. If a pathologist reports a case as invasive (/3) and the histology is usually associated with a benign (/0) or borderline (/1) behavior code, the case is reportable. Include any appropriate over-ride codes.
- f. Include all pilocytic astrocytomas. If necessary, convert behavior code to /3 before submitting cases.
- g. Include all cases diagnosed prior to January 1, 2001 with the following histologies. These histologies are generally coded to ovary (C56.9), but are not limited to this primary site.

Descriptive Terms and Topography Codes	ICD-O-3	ICD-O-2
Serous cystadenoma, borderline malignancy (C56.9)	8442/1	8442/3
Serous tumor, NOS, of low malignant potential (C56.9)	8442/1	8442/3
Papillary cystadenoma, borderline malignancy (C56.9)	8451/1	8451/3
Serous papillary cystic tumor of borderline malignancy (C56.9)	8462/1	8462/3
Papillary serous cystadenoma, borderline malignancy (C56.9)	8462/1	8462/3
Papillary serous tumor of low malignant potential (C56.9)	8462/1	8462/3
Atypical proliferative papillary serous tumor (C56.9)	8462/1	8462/3
Mucinous cystic tumor of borderline malignancy (C56.9)	8462/1	8462/3
Mucinous cystadenoma, borline malignancy (C56.9)	8462/1	8462/3
Pseudomucinous cystadenoma, borderline malignancy (C56.9)	8472/1	8472/3
Mucinous tumor, NOS, of low malignant potential (C56.9)	8472/1	8472/3
Papillary mucinous cystadenoma, borderline malignancy (C56.9)	8473/1	8473/3
Papillary pseudomucinous cystadenoma, borderline malignancy (C56.9)	8473/1	8473/3
Papillary mucinous tumor of low malignant potential (C56.9)	8473/1	8473/3

h. Include all nonmalignant primary intracranial and central nervous system tumors (see following table) with a benign (/0) or borderline (/1) behavior code diagnosed January 1, 2004 and later. Benign and borderline tumors of the cranial bones (C41.0) will continue to be excluded.

Required Sites for Benign and Borderline Primary Intracranial and Central Nervous System Tumors			
General Term	Specific Sites	ICD-O-3 Topography Code	
Meninges	Cerebral Meninges	C70.0	
	Spinal Meninges	C70.1	
	Meninges, NOS	C70.9	
Brain	Cerebrum	C71.0	
	Frontal lobe	C71.1	
	Temporal lobe	C71.2	
	Parietal lobe	C71.3	
	Occipital lobe	C71.4	
	Ventricle, NOS	C71.5	
	Cerebellum, NOS	C71.6	
	Brain stem	C71.7	
	Overlapping lesion of brain	C71.8	
	Brain, NOS	C71.9	
	Spinal cord, cranial nerves, and other parts of the central nervous system	Spinal cord	C72.0
Cauda equine		C72.1	
Olfactory nerve		C72.2	
Optic nerve		C72.3	
Acoustic nerve		C72.4	
Cranial nerve, NOS		C72.5	
Overlapping lesion of brain and central nervous system		C72.8	
Nervous system, NOS		C72.9	
Pituitary, craniopharyngeal duct, and pineal gland		Pituitary gland	C75.1
		Craniopharyngeal duct	C75.2
	Pineal gland	C75.3	

General considerations for this report include:

Updated Data

The NCCR database is constantly being updated with new information, so the numbers published in this report may not match, or be directly comparable, with previously published data. The data that are presented in this report are from the NCCR as of the January 2012 NPCR submission.

Cancer Cases Reported

The number of cases included in this report are those reported as having invasive cancer, except for urinary bladder cancer, which includes cases diagnosed with *in situ* cancer. Both melanomas of the skin and non-epithelial skin cancers exclude basal and squamous cancers.

Suppression of Data

For all tables in this report, rates for categories with a count of less than five have been suppressed (indicated by “- -”), because when the number of cases in a cell is very small, the calculated rate is unstable.³ In addition, counts of less than five and their counterparts have been suppressed for, statistical reliability, data quality, or confidentiality (indicated by “~”).

Cancer Classification

The NCCR uses the International Classification of Diseases for Oncology coding structure (ICD-O-3) which includes topography (primary site) and morphology (tumor type). A detailed list of the actual groupings used for cancer incidence data, using both topography and morphology codes, can be found in Appendix B.

Gender Specific Cancer Rates

For gender specific cancers, the rates listed in this report are per 100,000 gender-specific population, unless otherwise noted.

Race/Ethnicity Groups

Race/ethnicity groups used in this report include: White (non-Hispanic), Black (non-Hispanic), American Indian/Alaska Native (non-Hispanic), Asian (non-Hispanic), and Hispanic; where all individuals of Hispanic ethnicity are represented in this report as Hispanic regardless of racial identity. These race/ethnicity groups were calculated to be mutually exclusive.

Population Estimates

2005 through 2009 populations used in this report and were provided by the Nevada State Demographer in April, 2012. The aggregated 2005 through 2009 populations used for the denominator in incidence and mortality rates are race-specific and sex-specific (See Appendix A). Therefore, slight variations may occur when comparing rates in this report with other sources that use United States Census population estimates.

✦ Definitions

Crude Rate: In this report, crude rates are the number of cases which occur per 100,000 Nevada population and are not adjusted for other factors, such as age. Gender and/or race/ethnicity specific populations are used in the denominator when applicable.

Age-adjusted Incidence Rate (direct method): These are observed age-specific crude rates which are applied to the 2000 U.S. standard population 11 age groups to eliminate differences in crude rates and allow for comparison among populations with different age distributions.⁴

Standard Population: This is the standard population or weights that are used in the calculation of age-adjusted rates to serve as an index.⁵ The 2000 U.S. standard population has been used in this report and it is also used as the standard population by many national agencies.

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CANCER IN NEVADA

Highlights
2005-2009

Incidence

In Nevada, 56,399 (30,453 males, 25,938 females and eight other gender) cancer cases were reported among Nevada residents during the 2005-2009 period. Nevada's total age-adjusted incidence rate for 2005-2009 was 435.0 per 100,000 for all cancers combined was lower than the national age-adjusted rate of 465.2.⁶

Nevada males had higher incidence rates, both age-adjusted (498.9) and crude (451.9), for all cancers combined compared to Nevada females (385.0 and 396.2 respectively).

Whites had the highest incidence rates, both age-adjusted (450.7) and crude (558.3), compared to Blacks (442.4 and 353.7 respectively), Hispanics (311.6 and 120.8 respectively), Asians (301.2 and 245.0 respectively), and American Indian/Alaska Natives (206.3 and 165.7 respectively).

Compared to the national rates, Nevada had higher age-adjusted incidence rates for the following malignancies: lung and bronchus, urinary bladder, and thyroid gland. Lower incidence rates were observed for the following types of cancer: prostate, breast, colorectal, non-Hodgkin lymphoma, melanomas of the skin, kidney and renal pelvis, and leukemia.

Lung and bronchus cancer was the most common reportable malignancy among Nevada residents, accounting for 15.2% of all invasive cases during 2005-2009 period. Prostate cancer was the second most common reportable malignancy among Nevada residents, accounting for 14.9% of all invasive cases during 2005-2009 period. Prostate cancer was the leading type of malignancy among males, followed by lung and bronchus, colorectal, urinary bladder, and non-Hodgkin lymphoma.

Breast cancer was the third most common malignancy among Nevada residents, accounting for 13.3% of all invasive cases during the 2005-2009 period. Breast cancer was also the leading type of malignancy among females, followed by lung and bronchus, colorectal, thyroid gland, and corpus uteri and uterus not otherwise specified.

The following disparities were found:

- Of the top ten cancers in Nevada, from 2005 to 2009, males had higher age-adjusted incidence rates than females for seven. More specifically, males had higher age-adjusted incidence rates than females for the following malignancies: lung and bronchus, colorectal, urinary bladder, non-Hodgkin lymphoma, melanomas of the skin, kidney and renal pelvis, and leukemia.
- Of the top ten cancers in Nevada, from 2005 to 2009, female Nevada residents had higher age-adjusted incidence rates than male in breast cancer and thyroid cancer.
- Whites had the highest age-adjusted incidence rates when compared to Blacks, American Indian/Alaska Natives, Asians, and Hispanics for five of the top ten types of cancer in Nevada in 2005-2009. These included the following malignancies: lung and bronchus, urinary bladder, non-Hodgkin lymphoma, melanomas of the skin, and leukemia.
- Blacks had the highest incidence rates for prostate, breast, colorectal, and kidney and renal pelvis malignancies compared to Whites, American Indian/Alaska Natives, Asians, and Hispanics.
- Asians had the highest age-adjusted incidence rate for thyroid cancer in Nevada in the 2005-2009 period.
- Hispanics and American Indian/Alaska Natives did not have the highest age-adjusted incidence rate for any of the top ten cancers in Nevada from 2005-2009.

Table 1. Percentage of Cancer Cases by Cancer Type, by Gender, Nevada Residents, 2005-2009

Type of Cancer	Male		Female		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Lung and Bronchus	4,399	14.4%	4,166	16.1%	8,567	15.2%
Prostate	8,376	27.5%	NA	NA	8,377	14.9%
Breast	81	0.3%	7,412	28.6%	7,493	13.3%
Urinary Bladder	2,154	7.1%	688	2.7%	2,842	5.0%
Non-Hodgkin Lymphoma	1,245	4.1%	971	3.7%	2,216	3.9%
Melanoma Of The Skin	1,150	3.8%	720	2.8%	1,870	3.3%
Thyroid Gland	428	1.4%	1,288	5.0%	1,716	3.0%
Kidney	1,093	3.6%	613	2.4%	1,706	3.0%
Pancreas	772	2.5%	659	2.5%	1,431	2.5%
Rectum	706	2.3%	484	1.9%	1,190	2.1%
Corpus Uteri	NA	NA	1,178	4.5%	1,178	2.1%
Sigmoid Colon	630	2.1%	484	1.9%	1,116	2.0%
Cecum	416	1.4%	415	1.6%	831	1.5%
Liver	561	1.8%	204	0.8%	765	1.4%
Stomach	469	1.5%	271	1.0%	740	1.3%
Ovary	NA	NA	728	2.8%	728	1.3%
Brain	436	1.4%	283	1.1%	719	1.3%
Ascending Colon	320	1.1%	363	1.4%	683	1.2%
Esophagus	529	1.7%	121	0.5%	650	1.2%
Cervix Uteri	NA	NA	550	2.1%	550	1.0%
Chronic Lymphocytic Leukemia	339	1.1%	176	0.7%	515	0.9%
Myeloma	311	1.0%	198	0.8%	509	0.9%
Large Intestine, NOS	274	0.9%	185	0.7%	459	0.8%
Acute Myeloid Leukemia	265	0.9%	167	0.6%	432	0.8%
Rectosigmoid Junction	246	0.8%	177	0.7%	423	0.8%
Larynx	310	1.0%	68	0.3%	378	0.7%
Connective, Subcutaneous, and Other Soft Tissues	204	0.7%	153	0.6%	357	0.6%
Hodgkin Lymphoma	186	0.6%	137	0.5%	323	0.6%
Testis	321	1.1%	NA	NA	322	0.6%
Transverse Colon	161	0.5%	146	0.6%	307	0.5%
Base Of Tongue	192	0.6%	41	0.2%	233	0.4%

Notes: NOS - Not otherwise specified

CNS - central nervous system

NA - Not Applicable

~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

- - - Sufficient data are not available to calculate reliable rates.

Table 1. Percentage of Cancer Cases by Cancer Type, by Gender, Nevada Residents, 2005-2009 (continued)

Type of Cancer	Male		Female		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Tonsil	172	0.6%	47	0.2%	220	0.4%
Other Non-Epithelial Skin	125	0.4%	86	0.3%	211	0.4%
Acute Lymphocytic Leukemia	135	0.4%	72	0.3%	207	0.4%
Anus, Anal Canal, and Anorectum	78	0.3%	118	0.5%	196	0.3%
Other and Unspecified Biliary Tract	116	0.4%	76	0.3%	192	0.3%
Descending Colon	112	0.4%	75	0.3%	188	0.3%
Small Intestine	107	0.4%	77	0.3%	184	0.3%
Other and Unspecified Parts Of Tongue	114	0.4%	66	0.3%	180	0.3%
Chronic Myeloid Leukemia	84	0.3%	56	0.2%	140	0.2%
Vulva	NA	NA	139	0.5%	139	0.2%
Hepatic Flexure	68	0.2%	64	0.2%	132	0.2%
Aleukemic, Subleukemic, and NOS Leukemia	81	0.3%	48	0.2%	129	0.2%
Parotid Gland	80	0.3%	49	0.2%	129	0.2%
Other Urinary Organs	93	0.3%	24	0.1%	117	0.2%
Mesothelioma	90	0.3%	22	0.1%	112	0.2%
Gallbladder	35	0.1%	70	0.3%	105	0.2%
Renal Pelvis	73	0.2%	30	0.1%	103	0.2%
Splenic Flexure	54	0.2%	48	0.2%	102	0.2%
Eye and Orbit	55	0.2%	43	0.2%	98	0.2%
Lip	80	0.3%	15	0.1%	95	0.2%
Floor Of Mouth	53	0.2%	30	0.1%	83	0.1%
Oropharynx	59	0.2%	24	0.1%	83	0.1%
Appendix	37	0.1%	33	0.1%	70	0.1%
Other and Unspecified Parts Of Mouth	40	0.1%	27	0.1%	67	0.1%
Nasopharynx	48	0.2%	18	0.1%	66	0.1%
Bones, Joints, and Articular Cartilage Of Other and Unspecified Sites	37	0.1%	20	0.1%	57	0.1%
Bones, Joints, and Articular Cartilage Of Limbs	37	0.1%	14	0.1%	51	0.1%
Palate	22	0.1%	29	0.1%	51	0.1%
Peritoneum, Omentum, and Mesentery	~	- - -	~	0.2%	51	0.1%
Ureter	28	0.1%	22	0.1%	50	0.1%
Other Digestive Organs	24	0.1%	24	0.1%	48	0.1%

Notes: NOS - Not otherwise specified

CNS - central nervous system

NA - Not Applicable

~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

- - - Sufficient data are not available to calculate reliable rates.

Table 1. Percentage of Cancer Cases by Cancer Type, by Gender, Nevada Residents, 2005-2009 (continued)

Type of Cancer	Male		Female		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Other Lymphocytic Leukemia	40	0.1%	6	0.0%	46	0.1%
Intrahepatic Bile Ducts	23	0.1%	22	0.1%	45	0.1%
Kaposi Sarcoma	~	0.1%	~	---	45	0.1%
Other Female Genital Organs	NA	NA	43	0.2%	43	0.1%
Hypopharynx	31	0.1%	9	0.0%	40	0.1%
Nose, Nasal Cavity, and Middle Ear	22	0.1%	18	0.1%	40	0.1%
Pyriform Sinus	32	0.1%	8	0.0%	40	0.1%
Penis	39	0.1%	NA	NA	39	0.1%
Accessory Sinuses	23	0.1%	15	0.1%	38	0.1%
Other Acute Leukemia	25	0.1%	13	0.1%	38	0.1%
Uterus, NOS	NA	NA	37	0.1%	37	0.1%
Other Endocrine (Including Thymus)	19	0.1%	15	0.1%	34	0.1%
Other and Unspecified Major Salivary Glands	18	0.1%	16	0.1%	34	0.1%
Other and Unspecified Oral (Buccal) Cavity and Pharynx	28	0.1%	5	0.0%	33	0.1%
Other Myeloid/Monocytic Leukemia	20	0.1%	11	0.0%	31	0.1%
Spinal Cord, Cranial Nervous, and Other Parts Of CNS	9	0.0%	20	0.1%	29	0.1%
Vagina	NA	NA	29	0.1%	29	0.1%
Gum	15	0.0%	12	0.0%	27	0.0%
Adrenal Gland	16	0.1%	10	0.0%	26	0.0%
Retroperitoneum	11	0.0%	13	0.1%	24	0.0%
Acute Monocytic Leukemia	15	0.0%	7	0.0%	22	0.0%
Mediastinum and Other Respiratory Organs	12	0.0%	6	0.0%	18	0.0%
Meninges	8	0.0%	8	0.0%	16	0.0%
Other Male Genital Organs	15	0.0%	NA	NA	15	0.0%
Peripheral Nerves and Autonomic Nervous System	7	0.0%	6	0.0%	13	0.0%
Placenta	0	0.0%	5	0.0%	5	0.0%
Pleura	~	---	~	---	~	0.0%
Trachea	~	---	~	---	~	0.0%
Heart	~	---	0	0.0%	~	---
Other, Ill-Defined, and Unspecified Sites	1,262	4.1%	1,037	4.0%	2,299	4.1%
Total	30,453	100.0%	25,938	100.0%	56,399	100.0%

Notes: NOS - Not otherwise specified

CNS - central nervous system

NA - Not Applicable

~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

Cancer Incidence in Nevada

Table 2. Nevada Cancer Incidence, by Cancer Type and Gender, Nevada Residents, 2005-2009

Cancer Type	Male Count	Male Age-Adjusted Rate*	Male Crude Rate	Female Count	Female Age-Adjusted Rate*	Female Crude Rate	Total Count	Total Age-Adjusted Rate*	Total Crude Rate
Brain and Other Central Nervous System	453	7.1	6.7	311	4.6	4.8	764	5.8	5.8
Breast	81	1.3	1.2	7,412	108.8	113.2	7,493	56.7	56.4
Cervix Uteri	NA	NA	NA	550	8.2	8.4	550	4.1	4.1
Colorectal	3,024	50.5	44.9	2,474	37.4	37.8	5,501	43.5	41.4
Connective, Subcutaneous, and Other Soft Tissues	204	3.3	3.0	153	2.3	2.3	357	2.8	2.7
Corpus Uteri and Uterus NOS	NA	NA	NA	1,215	17.5	18.6	1,215	9.0	9.1
Esophagus	529	8.6	7.9	121	1.8	1.8	650	5.0	4.9
Hodgkin Lymphoma	186	2.8	2.8	137	2.1	2.1	323	2.4	2.4
Kidney and Renal Pelvis	1,166	18.4	17.3	643	9.5	9.8	1,809	13.7	13.6
Larynx	310	4.8	4.6	68	1.0	1.0	378	2.8	2.8
Leukemia	1,004	17.0	14.9	556	8.4	8.5	1,560	12.3	11.7
Lip, Oral Cavity, and Pharynx	984	15.1	14.6	396	5.8	6.0	1,381	10.3	10.4
Liver and Intrahepatic Bile Ducts	584	9.1	8.7	226	3.4	3.5	810	6.2	6.1
Lung and Bronchus	4,399	74.3	65.3	4,166	61.7	63.6	8,567	67.2	64.5
Melanomas of the Skin	1,150	18.6	17.1	720	10.7	11.0	1,870	14.3	14.1
Myeloma	311	5.2	4.6	198	2.9	3.0	509	4.0	3.8
Non-Hodgkin Lymphoma	1,245	20.3	18.5	971	14.6	14.8	2,216	17.3	16.7
Other non-Epithelial Skin	125	2.2	1.9	86	1.3	1.3	211	1.7	1.6
Ovary	NA	NA	NA	728	10.7	11.1	728	5.5	5.5
Pancreas	772	13.0	11.5	659	9.9	10.1	1,431	11.3	10.8
Prostate	8,376	133.9	124.3	NA	NA	NA	8,377	62.9	63.1
Stomach	469	8.1	7.0	271	4.1	4.1	740	5.9	5.6
Testis	321	4.6	4.8	NA	NA	NA	322	2.4	2.4
Thyroid Gland	428	6.4	6.4	1,288	19.3	19.7	1,716	12.7	12.9
Urinary Bladder	2,154	37.3	32.0	688	10.4	10.5	2,842	22.7	21.4
All Other Sites	2,178	37.1	32.3	1,901	28.6	29.0	4,079	32.5	30.7
Total	30,453	498.9	451.9	25,938	385.0	396.2	56,399	435.0	424.5

Notes: NOS - Not otherwise specified

CNS - central nervous system

NA - Not Applicable

~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

*Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 Nevada residents.

Cancer Incidence in Nevada

Table 3. Nevada Cancer Incidence, by Cancer Type and Gender, White Nevada Residents, 2005-2009

Cancer Type	Male Count	Male Age-Adjusted Rate*	Male Crude Rate	Female Count	Female Age-Adjusted Rate*	Female Crude Rate	Total Count	Total Age-Adjusted Rate*	Total Crude Rate
Brain and Other Central Nervous System	352	7.6	8.6	242	5.2	6.0	594	6.3	7.4
Breast	68	1.4	1.7	5,804	114.0	144.8	5,872	58.8	72.7
Cervix Uteri	NA	NA	NA	352	7.9	8.8	352	3.9	4.4
Colorectal	2,418	51.0	59.4	1,935	37.5	48.3	4,356	43.8	53.9
Connective, Subcutaneous, and Other Soft Tissues	158	3.5	2.0	113	2.3	1.4	271	2.9	3.4
Corpus Uteri and Uterus NOS	NA	NA	NA	928	17.6	23.2	928	9.0	11.5
Esophagus	460	9.3	11.3	94	1.8	2.3	554	5.4	6.9
Hodgkin Lymphoma	129	3.0	3.2	102	2.5	2.5	231	2.7	2.9
Kidney and Renal Pelvis	939	19.0	23.1	506	9.9	12.6	1,445	14.3	17.9
Larynx	260	5.1	6.4	61	1.1	1.5	321	3.0	4.0
Leukemia	769	17.1	18.9	412	8.4	10.3	1,181	12.5	14.6
Lip, Oral Cavity, and Pharynx	834	16.6	20.5	320	6.2	8.0	1,155	11.3	14.3
Liver and Intrahepatic Bile Ducts	390	7.9	9.6	151	2.9	3.8	541	5.4	6.7
Lung and Bronchus	3,731	77.4	91.6	3,672	68.6	91.6	7,404	72.3	91.6
Melanomas of the Skin	1,090	23.0	26.8	676	14.2	16.9	1,766	18.3	21.9
Myeloma	225	4.7	5.5	148	2.8	3.7	373	3.7	4.6
Non-Hodgkin Lymphoma	991	21.2	24.3	766	15.0	19.1	1,757	18.0	21.7
Other non-Epithelial Skin	112	2.5	2.7	67	1.4	1.7	179	1.9	2.2
Ovary	NA	NA	NA	579	11.3	14.4	579	5.8	7.2
Pancreas	611	12.8	15.0	516	9.8	12.9	1,127	11.2	13.9
Prostate	6,442	127.2	158.2	NA	NA	NA	6,442	60.6	79.7
Stomach	306	6.6	7.5	167	3.3	4.2	473	4.8	5.9
Testis	229	5.7	5.6	NA	NA	NA	229	2.9	2.8
Thyroid Gland	331	7.0	8.1	918	20.7	22.9	1,249	27.6	15.5
Urinary Bladder	1,915	40.6	47.0	608	11.5	15.2	2,523	54.1	31.2
All Other Sites	1,734	37.8	42.6	1,484	29.0	37.0	3,218	33.0	39.8
Total	24,494	508.1	601.4	20,621	405.1	514.5	45,120	450.7	558.3

Notes: NOS - Not otherwise specified

CNS - central nervous system

NA - Not Applicable

~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

*Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 Nevada residents.

Cancer Incidence in Nevada

Table 4. Nevada Cancer Incidence, by Cancer Type and Gender, Black Nevada Residents, 2005-2009

Cancer Type	Male Count	Male Age-Adjusted Rate*	Male Crude Rate	Female Count	Female Age-Adjusted Rate*	Female Crude Rate	Total Count	Total Age-Adjusted Rate*	Total Crude Rate
Brain and Other Central Nervous System	23	5.8	5.0	19	4.5	4.1	42	5.1	4.6
Breast	7	1.6	1.5	476	119.1	103.6	483	62.8	52.5
Cervix Uteri	NA	NA	NA	48	11.2	10.5	48	5.7	5.2
Colorectal	214	61.4	46.5	192	50.7	41.8	406	56.0	44.2
Connective, Subcutaneous, and Other Soft Tissues	13	3.3	1.4	12	3.0	1.3	25	3.2	2.7
Corpus Uteri and Uterus NOS	NA	NA	NA	65	16.7	14.2	65	8.9	7.1
Esophagus	26	8.2	5.6	13	3.8	2.8	39	5.8	4.2
Hodgkin Lymphoma	10	2.3	2.2	10	2.2	2.2	20	2.2	2.2
Kidney and Renal Pelvis	64	18.5	13.9	53	13.6	11.5	117	15.8	12.7
Larynx	~	5.6	3.9	~	---	---	22	3.1	2.4
Leukemia	48	13.4	10.4	23	5.9	5.0	71	9.4	7.7
Lip, Oral Cavity, and Pharynx	43	11.3	9.3	10	2.5	2.2	53	6.7	5.8
Liver and Intrahepatic Bile Ducts	57	14.9	12.4	10	2.7	2.2	67	8.5	7.3
Lung and Bronchus	244	73.8	53.0	203	53.3	44.2	447	62.8	48.6
Melanomas of the Skin	~	---	---	~	---	---	~	---	---
Myeloma	34	11.0	7.4	21	5.7	4.6	55	8.1	6.0
Non-Hodgkin Lymphoma	61	16.4	13.3	46	11.3	10.0	107	13.7	11.6
Other non-Epithelial Skin	~	---	---	~	1.3	1.1	~	1.0	0.9
Ovary	NA	NA	NA	28	7.4	6.1	28	4.0	3.0
Pancreas	62	18.7	13.5	64	17.9	13.9	126	18.4	13.7
Prostate	561	164.3	121.9	NA	NA	NA	561	75.8	61.0
Stomach	33	9.6	7.2	29	7.9	6.3	62	8.7	6.7
Testis	5	1.1	1.1	NA	NA	NA	5	0.5	0.5
Thyroid Gland	11	2.5	2.4	44	10.2	9.6	55	12.7	6.0
Urinary Bladder	53	19.1	11.5	28	7.4	6.1	81	27.7	8.8
All Other Sites	135	42.9	29.3	120	32.6	26.1	255	36.9	27.7
Total	1,728	506.9	375.5	1,524	392.2	331.8	3,252	442.4	353.7

Notes: NOS - Not otherwise specified

CNS - central nervous system

NA - Not Applicable

~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

*Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 Nevada residents.

Cancer Incidence in Nevada

Table 5. Nevada Cancer Incidence, by Cancer Type and Gender, American Indian/Alaska Native Nevada Residents, 2005-2009

Cancer Type	Male Count	Male Age-Adjusted Rate*	Male Crude Rate	Female Count	Female Age-Adjusted Rate*	Female Crude Rate	Total Count	Total Age-Adjusted Rate*	Total Crude Rate
Brain and Other Central Nervous System	5	8.4	5.8	0	0.0	0.0	5	3.9	2.8
Breast	~	---	---	~	44.5	42.1	39	24.7	22.1
Cervix Uteri	NA	NA	NA	~	---	---	~	---	---
Colorectal	17	28.9	19.8	15	20.4	16.6	32	23.8	18.2
Connective, Subcutaneous, and Other Soft Tissues	~	---	---	0	0.0	0.0	~	---	---
Corpus Uteri and Uterus NOS	NA	NA	NA	8	9.2	8.9	8	5.2	4.5
Esophagus	~	---	---	~	---	---	~	---	---
Hodgkin Lymphoma	~	---	---	0	0.0	0.0	~	---	---
Kidney and Renal Pelvis	10	16.0	11.6	6	7.5	6.7	16	10.9	9.1
Larynx	~	---	---	~	---	---	~	---	---
Leukemia	~	---	---	~	---	---	~	---	---
Lip, Oral Cavity, and Pharynx	7	9.9	8.1	0	0.0	0.0	7	4.6	4.0
Liver and Intrahepatic Bile Ducts	~	7.6	5.8	~	---	---	~	6.5	5.1
Lung and Bronchus	32	57.0	37.2	12	16.0	13.3	44	34.5	25.0
Melanomas of the Skin	~	---	---	~	---	---	~	4.2	3.4
Myeloma	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Non-Hodgkin Lymphoma	5	8.5	5.8	5	8.4	5.5	10	8.5	5.7
Other non-Epithelial Skin	~	---	---	~	---	---	~	---	---
Ovary	NA	NA	NA	6	7.1	6.7	6	3.8	3.4
Pancreas	8	10.9	9.3	5	7.4	5.5	13	9.0	7.4
Prostate	31	49.5	36.0	NA	NA	NA	31	22.2	17.6
Stomach	~	---	---	0	0.0	0.0	~	---	---
Testis	~	---	---	NA	NA	NA	~	---	---
Thyroid Gland	~	---	---	12	12.1	13.3	13	13.1	7.4
Urinary Bladder	~	11.6	5.8	~	---	---	~	17.2	4.5
All Other Sites	11	13.9	12.8	11	14.8	12.2	22	14.7	12.5
Total	156	251.6	181.3	136	171.7	150.8	292	206.3	165.7

Notes: NOS - Not otherwise specified

CNS - central nervous system

NA - Not Applicable

~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

*Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 Nevada residents.

Cancer Incidence in Nevada

Table 6. Nevada Cancer Incidence, by Cancer Type and Gender, Asian Nevada Residents, 2005-2009

Cancer Type	Male Count	Male Age-Adjusted Rate*	Male Crude Rate	Female Count	Female Age-Adjusted Rate*	Female Crude Rate	Total Count	Total Age-Adjusted Rate*	Total Crude Rate
Brain and Other Central Nervous System	17	4.6	4.2	10	2.2	2.1	27	3.2	3.1
Breast	~	---	---	~	85.4	86.2	405	49.8	46.5
Cervix Uteri	NA	NA	NA	48	9.9	10.3	48	5.7	5.5
Colorectal	126	44.9	31.2	135	31.9	28.9	261	37.2	30.0
Connective, Subcutaneous, and Other Soft Tissues	6	1.7	0.7	12	2.6	1.4	18	2.2	2.1
Corpus Uteri and Uterus NOS	NA	NA	NA	75	14.8	16.0	75	8.5	8.6
Esophagus	12	4.4	3.0	8	2.5	1.7	20	3.3	2.3
Hodgkin Lymphoma	7	1.6	1.7	8	1.7	1.7	15	1.7	1.7
Kidney and Renal Pelvis	40	13.6	9.9	16	3.3	3.4	56	7.5	6.4
Larynx	~	1.8	1.7	~	---	---	~	1.0	1.0
Leukemia	21	7.1	5.2	23	5.5	4.9	44	6.2	5.1
Lip, Oral Cavity, and Pharynx	31	9.1	7.7	28	6.6	6.0	59	7.6	6.8
Liver and Intrahepatic Bile Ducts	51	14.9	12.6	33	8.9	7.1	84	11.5	9.6
Lung and Bronchus	160	59.2	39.7	116	28.6	24.8	276	41.0	31.7
Melanomas of the Skin	~	---	---	~	---	---	~	---	---
Myeloma	~	5.6	3.2	~	---	---	17	3.0	2.0
Non-Hodgkin Lymphoma	30	10.2	7.4	47	12.1	10.1	77	11.3	8.8
Other non-Epithelial Skin	~	---	---	0	0.0	0.0	~	---	---
Ovary	NA	NA	NA	40	8.1	8.6	40	4.7	4.6
Pancreas	31	10.4	7.7	28	7.4	6.0	59	8.7	6.8
Prostate	191	65.3	47.4	NA	NA	NA	192	26.8	22.0
Stomach	41	14.3	10.2	34	8.8	7.3	75	11.1	8.6
Testis	7	1.7	1.7	NA	NA	NA	7	0.8	0.8
Thyroid Gland	28	7.8	6.9	116	23.4	24.8	144	29.3	16.5
Urinary Bladder	29	11.4	7.2	10	2.3	2.1	39	14.7	4.5
All Other Sites	76	30.1	18.8	83	22.1	17.8	159	25.4	18.3
Total	931	321.7	230.9	1,280	289.9	273.8	2,212	301.2	254.0

Notes: NOS - Not otherwise specified

CNS - central nervous system

NA - Not Applicable

~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

*Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 Nevada residents.

Cancer Incidence in Nevada

Table 7. Nevada Cancer Incidence, by Cancer Type and Gender, Hispanic Nevada Residents, 2005-2009

Cancer Type	Male Count	Male Age-Adjusted Rate*	Male Crude Rate	Female Count	Female Age-Adjusted Rate*	Female Crude Rate	Total Count	Total Age-Adjusted Rate*	Total Crude Rate
Brain and Other Central Nervous System	50	5.0	2.9	39	4.6	2.6	89	4.9	2.7
Breast	~	---	---	~	70.7	36.3	553	36.4	17.1
Cervix Uteri	NA	NA	NA	93	9.8	6.1	93	4.8	2.9
Colorectal	198	38.2	11.5	160	29.1	10.5	358	33.5	11.1
Connective, Subcutaneous, and Other Soft Tissues	22	2.2	0.7	14	1.1	0.4	36	1.7	1.1
Corpus Uteri and Uterus NOS	NA	NA	NA	129	17.8	8.5	129	9.2	4.0
Esophagus	~	5.1	1.3	~	---	---	27	2.6	0.8
Hodgkin Lymphoma	34	2.4	2.0	15	0.9	1.0	49	1.7	1.5
Kidney and Renal Pelvis	104	17.5	6.1	55	7.0	3.6	159	11.5	4.9
Larynx	20	3.3	1.2	0	0.0	0.0	20	1.6	0.6
Leukemia	114	14.2	6.6	68	7.7	4.5	182	10.4	5.6
Lip, Oral Cavity, and Pharynx	49	7.8	2.9	26	4.3	1.7	75	6.0	2.3
Liver and Intrahepatic Bile Ducts	74	12.5	4.3	28	5.5	1.8	102	9.0	3.2
Lung and Bronchus	194	47.7	11.3	135	27.4	8.9	330	36.4	10.2
Melanomas of the Skin	18	4.2	1.0	18	2.0	1.2	36	2.8	1.1
Myeloma	28	5.0	1.6	16	2.3	1.1	44	3.5	1.4
Non-Hodgkin Lymphoma	114	17.6	6.6	77	13.2	5.1	191	15.3	5.9
Other non-Epithelial Skin	~	---	---	~	1.4	0.5	11	1.1	0.3
Ovary	NA	NA	NA	70	9.8	4.6	70	5.1	2.2
Pancreas	56	11.4	3.3	40	7.9	2.6	96	9.5	3.0
Prostate	469	103.8	27.3	NA	NA	NA	469	46.4	14.5
Stomach	74	17.3	4.3	37	5.4	2.4	111	10.3	3.4
Testis	63	3.2	3.7	NA	NA	NA	64	1.7	2.0
Thyroid Gland	51	6.4	3.0	157	15.3	10.3	208	21.0	6.4
Urinary Bladder	69	17.1	4.0	14	3.0	0.9	83	20.9	2.6
All Other Sites	168	24.5	9.8	157	27.3	10.3	325	26.6	10.0
Total	1,996	367.4	116.3	1,912	274.1	125.7	3,910	311.6	120.8

Notes: NOS - Not otherwise specified

CNS - central nervous system

NA - Not Applicable

~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

*Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 Nevada residents.

CANCER IN NEVADA

Highlights
2005-2009

Mortality

In Nevada, 21,363 (11,557 males and 9,806 females) died from cancer during the 2005-2009 period. Nevada's total age-adjusted cancer mortality rate for 2005-2009 was 173.8 per 100,000 for all cancers combined, lower than the national rate of 178.7.⁶

Nevada males had higher overall cancer mortality rates, both age-adjusted (207.3) and crude (171.5), compared to Nevada females (173.8 and 160.8 respectively).

Blacks had the highest age-adjusted mortality rate (197.7), compared to Whites (181.5), Asians (129.6), Hispanics (120.0), and American Indian/Alaska Natives (93.3). Whites had the highest crude mortality rate (221.3), compared to Blacks (145.6), Asian (97.5), American Indian/Alaska Native (62.4), and Hispanics (34.8).

Compared to the national rates, Nevada had higher age-adjusted mortality rates for the following of these malignancies: colon, rectum and anus; liver and intrahepatic bile duct; trachea, lung, and bronchus; esophagus; and bladder.

From 2005 to 2009, 73.4% of all cancer mortalities in Nevada were attributed to the following malignancies: trachea, lung and bronchus; colon, rectum, and anus; breast; pancreas; prostate; leukemia; liver and intrahepatic bile duct; non-Hodgkin lymphoma; bladder; and esophagus.

Trachea, lung and bronchus cancer was the leading cause of cancer death among Nevada residents, accounting for 30.3% of all cancer-related deaths during the 2005-2009 period.

Cancers of the colon, rectum, and anus were the second leading cause of cancer death among Nevada residents, accounting for 9.8% of all cancer-related deaths during the 2005-2009 period.

Breast cancer was the second leading cause of cancer death among female Nevada residents, accounting for 15.0% of all cancer related deaths among female Nevada residents while prostate cancer was the third leading cause of cancer death among male Nevada residents, accounting for 9.4% of all cancer death among male Nevada residents during the 2005-2009 period.

The following disparities were found:

- Of the top ten leading causes of cancer death in Nevada from 2005 to 2009, males had higher age-adjusted mortality rates than females for eight. More specifically, males had higher age-adjusted mortality rates than females for the following causes of cancer death: trachea, lung and bronchus; colon, rectum and anus; pancreas; leukemia; liver and intrahepatic bile ducts; non-Hodgkin lymphoma; bladder; and esophagus.
- Of the top ten leading causes of cancer death in Nevada, from 2005 to 2009, Whites had the highest age-adjusted mortality rates when compared to Blacks, American Indian/Alaska Natives, Asians, and Hispanics for four. These included the following malignancies: trachea, lung and bronchus; leukemia; non-Hodgkin lymphoma; and bladder.
- Blacks had the highest age-adjusted mortality rates for esophagus; colon, rectum, and anus; breast; and prostate compared to Whites, American Indian/Alaska Natives, Asians, and Hispanics.
- American Indian/Alaska Natives had the highest age-adjusted mortality rate for pancreas in Nevada in the 2005-2009 period.
- Asians had the highest age-adjusted mortality rate for liver and intrahepatic bile duct in Nevada in the 2005-2009 period.
- Hispanics did not have the highest age-adjusted mortality rates for any of the top ten leading causes of cancer death in Nevada from 2005-2009.

Table 8. Percentage of Cancer Mortality by Cancer Type, by Gender, Nevada Residents, 2005-2009

Type of Cancer	Male		Female		Total	
Trachea, Bronchus, and Lung	3,438	29.7%	3,031	30.9%	6,469	30.3%
Colon, Rectum, and Anus	1,139	9.9%	953	9.7%	2,092	9.8%
Breast	12	0.1%	1,470	15.0%	1,482	6.9%
Pancreas	694	6.0%	601	6.1%	1,295	6.1%
Prostate	1,091	9.4%	NA	NA	1,091	5.1%
Leukemia	447	3.9%	271	2.8%	718	3.4%
Liver and Intrahepatic Bile Duct	484	4.2%	232	2.4%	716	3.4%
Non-Hodgkin Lymphoma	366	3.2%	288	2.9%	654	3.1%
Bladder	431	3.7%	164	1.7%	595	2.8%
Esophagus	456	3.9%	106	1.1%	562	2.6%
Brain and Other Central Nervous System	314	2.7%	193	2.0%	507	2.4%
Kidney and Renal Pelvis	319	2.8%	150	1.5%	469	2.2%
Ovary	NA	NA	462	4.7%	462	2.2%
Stomach	240	2.1%	164	1.7%	404	1.9%
Skin	256	2.2%	85	0.9%	341	1.6%
Multiple Myeloma and Immunoproliferative Neoplasms	180	1.6%	126	1.3%	306	1.4%
Lip, Oral Cavity, and Pharynx	194	1.7%	87	0.9%	281	1.3%
Corpus Uteri and Uterus, Part Unspecified	NA	NA	209	2.1%	209	1.0%
Cervix Uteri	NA	NA	169	1.7%	169	0.8%
Larynx	112	1.0%	39	0.4%	151	0.7%
Hodgkin Lymphoma	32	0.3%	17	0.2%	49	0.2%
Other and Unspecified Cancers	1,352	11.7%	989	10.1%	2,341	11.0%
Total	11,557	100.0%	9,806	100.0%	21,363	100.0%

Notes: ~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

NA - Not Applicable

Cancer Mortality in Nevada

Table 9. Nevada Cancer Mortality, by Cancer Type and Gender, Nevada Residents, 2005-2009

Cancer Type	Male Count	Male Age-Adjusted Rate*	Male Crude Rate	Female Count	Female Age-Adjusted Rate*	Female Crude Rate	Total Count	Total Age-Adjusted Rate*	Total Crude Rate
Bladder	431	8.6	6.4	164	2.6	2.5	595	5.2	4.5
Brain and Other Central Nervous System	314	5.0	4.7	193	2.9	2.9	507	3.9	3.8
Breast	12	0.2	0.2	1,470	22.1	22.5	1,482	11.9	11.2
Cervix Uteri	NA	NA	NA	169	2.5	2.6	169	1.3	1.3
Colon, Rectum, and Anus	1,139	20.3	16.9	953	14.7	14.6	2,092	17.3	15.7
Corpus Uteri and Uterus, Part Unspecified	NA	NA	NA	209	3.1	3.2	209	1.7	1.6
Esophagus	456	7.6	6.8	106	1.6	1.6	562	4.4	4.2
Hodgkin Lymphoma	32	0.6	0.5	17	0.3	0.3	49	0.4	0.4
Kidney and Renal Pelvis	319	5.5	4.7	150	2.3	2.3	469	3.8	3.5
Larynx	112	1.9	1.7	39	0.6	0.6	151	1.2	1.1
Leukemia	447	8.4	6.6	271	4.2	4.1	718	6.0	5.4
Lip, Oral Cavity, and Pharynx	194	3.2	2.9	87	1.3	1.3	281	2.2	2.1
Liver and Intrahepatic Bile Duct	484	7.8	7.2	232	3.5	3.5	716	5.6	5.4
Multiple Myeloma and Immunoproliferative Neoplasms	180	3.4	2.7	126	1.9	1.9	306	2.6	2.3
Non-Hodgkin Lymphoma	366	6.4	5.4	288	4.5	4.4	654	5.4	4.9
Ovary	NA	NA	NA	462	6.9	7.1	462	3.7	3.5
Pancreas	694	11.9	10.3	601	9.1	9.2	1,295	10.4	9.7
Prostate	1,091	23.6	16.2	NA	NA	NA	1,091	9.9	8.2
Skin	256	4.3	3.8	85	1.3	1.3	341	2.7	2.6
Stomach	240	4.4	3.6	164	2.5	2.5	404	3.4	3.0
Trachea, Bronchus, and Lung	3,438	60.2	51.0	3,031	45.6	46.3	6,469	52.0	48.7
Other and Unspecified Cancers	1,352	23.9	20.1	989	15.1	15.1	2,341	19.2	17.6
Total	11,557	207.3	171.5	9,806	148.5	149.8	21,363	173.8	160.8

Notes: ~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

*Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 Nevada residents.

NA - Not Applicable

Cancer Mortality in Nevada

Table 10. Cancer Mortality, by Cancer Type and Gender, White Nevada Residents, 2005-2009

Cancer Type	Male Count	Male Age-Adjusted Rate*	Male Crude Rate	Female Count	Female Age-Adjusted Rate*	Female Crude Rate	Total Count	Total Age-Adjusted Rate*	Total Crude Rate
Bladder	394	9.4	9.7	147	2.8	3.7	541	5.7	6.7
Brain and Other Central Nervous System	270	5.7	6.6	162	3.2	4.0	432	4.4	5.3
Breast	11	0.2	0.3	1,188	22.8	29.6	1,199	12.2	14.8
Cervix Uteri	NA	NA	NA	123	2.5	3.1	123	1.3	1.5
Colon, Rectum, and Anus	933	20.7	22.9	782	15.1	19.5	1,715	17.7	21.2
Corpus Uteri and Uterus, Part Unspecified	NA	NA	NA	171	3.2	4.3	171	1.7	2.1
Esophagus	410	8.4	10.1	85	1.6	2.1	495	4.8	6.1
Hodgkin Lymphoma	24	0.6	0.6	14	0.3	0.3	38	0.4	0.5
Kidney and Renal Pelvis	259	5.6	6.4	128	2.4	3.2	387	3.9	4.8
Larynx	98	2.1	2.4	35	0.7	0.9	133	1.3	1.6
Leukemia	373	8.9	9.2	220	4.4	5.5	593	6.3	7.3
Lip, Oral Cavity, and Pharynx	165	3.4	4.1	78	1.5	1.9	243	2.4	3.0
Liver and Intrahepatic Bile Duct	340	7.0	8.3	160	3.0	4.0	500	5.0	6.2
Multiple Myeloma and Immunoproliferative Neoplasms	138	3.2	3.4	100	1.9	2.5	238	2.4	2.9
Non-Hodgkin Lymphoma	307	6.8	7.5	245	4.8	6.1	552	5.7	6.8
Ovary	NA	NA	NA	387	7.4	9.7	387	3.9	4.8
Pancreas	561	12.0	13.8	472	9.0	11.8	1,033	10.4	12.8
Prostate	906	23.3	22.2	NA	NA	NA	906	9.8	11.2
Skin	248	5.3	6.1	79	1.6	2.0	327	3.3	4.0
Stomach	146	3.3	3.6	109	2.1	2.7	255	2.6	3.2
Trachea, Bronchus, and Lung	2,971	63.4	72.9	2,704	50.8	67.5	5,675	56.2	70.2
Other and Unspecified Cancers	1,148	25.4	28.2	794	15.2	19.8	1,942	19.9	24.0
Total	9,702	214.5	238.2	8,183	156.2	204.2	17,885	181.5	221.3

Notes: ~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

*Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 Nevada residents.

NA - Not Applicable

Cancer Mortality in Nevada

Table 11. Cancer Mortality, by Cancer Type and Gender, Black Nevada Residents, 2005-2009

Cancer Type	Male Count	Male Age-Adjusted Rate*	Male Crude Rate	Female Count	Female Age-Adjusted Rate*	Female Crude Rate	Total Count	Total Age-Adjusted Rate*	Total Crude Rate
Bladder	14	5.1	3.0	8	2.3	1.7	22	3.6	2.4
Brain and Other Central Nervous System	11	3.5	2.4	9	2.2	2.0	20	2.7	2.2
Breast	~	---	---	~	28.9	23.5	109	15.6	11.9
Cervix Uteri	NA	NA	NA	13	3.0	2.8	13	1.5	1.4
Colon, Rectum, and Anus	86	26.1	18.7	78	21.1	17.0	164	23.2	17.8
Corpus Uteri and Uterus, Part Unspecified	NA	NA	NA	14	3.4	3.0	14	1.8	1.5
Esophagus	19	6.5	4.1	13	3.6	2.8	32	4.9	3.5
Hodgkin Lymphoma	~	---	---	~	---	---	~	---	---
Kidney and Renal Pelvis	21	6.9	4.6	10	2.7	2.2	31	4.5	3.4
Larynx	~	2.6	1.5	~	---	---	~	1.4	1.0
Leukemia	26	7.6	5.6	8	1.9	1.7	34	4.5	3.7
Lip, Oral Cavity, and Pharynx	~	2.5	2.2	~	---	---	12	1.5	1.3
Liver and Intrahepatic Bile Duct	44	13.9	9.6	10	2.7	2.2	54	7.7	5.9
Multiple Myeloma and Immunoproliferative Neoplasms	22	8.0	4.8	15	4.6	3.3	37	6.3	4.0
Non-Hodgkin Lymphoma	15	4.4	3.3	10	2.5	2.2	25	3.3	2.7
Ovary	NA	NA	NA	23	6.5	5.0	23	3.6	2.5
Pancreas	53	15.7	11.5	53	14.7	11.5	106	15.3	11.5
Prostate	97	38.7	21.1	NA	NA	NA	97	16.8	10.5
Skin	~	---	---	0	0.0	0.0	~	---	---
Stomach	25	8.4	5.4	14	3.9	3.0	39	5.9	4.2
Trachea, Bronchus, and Lung	198	61.8	43.0	148	41.3	32.2	346	50.8	37.6
Other and Unspecified Cancers	79	25.9	17.2	69	19.4	15.0	148	22.2	16.1
Total	730	238.1	158.6	609	166.4	132.6	1,339	197.7	145.6

Notes: ~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

*Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 Nevada residents.

NA - Not Applicable

Cancer Mortality in Nevada

Table 12. Cancer Mortality, by Cancer Type and Gender, American Indian/Alaska Native Nevada Residents, 2005-2009

Cancer Type	Male Count	Male Age-Adjusted Rate*	Male Crude Rate	Female Count	Female Age-Adjusted Rate*	Female Crude Rate	Total Count	Total Age-Adjusted Rate*	Total Crude Rate
Bladder	~	---	---	~	---	---	~	---	---
Brain and Other Central Nervous System	~	---	---	0	0.0	0.0	~	---	---
Breast	0	0.0	0.0	10	13.4	11.1	10	7.7	5.7
Cervix Uteri	NA	NA	NA	~	---	---	~	---	---
Colon, Rectum, and Anus	~	---	---	~	---	---	~	---	---
Corpus Uteri and Uterus, Part Unspecified	NA	NA	NA	0	0.0	0.0	0	0.0	0.0
Esophagus	~	---	---	~	---	---	~	---	---
Hodgkin Lymphoma	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Kidney and Renal Pelvis	~	10.1	5.8	~	---	---	~	5.4	4.0
Larynx	~	---	---	0	0.0	0.0	~	---	---
Leukemia	0	0.0	0.0	~	---	---	~	---	---
Lip, Oral Cavity, and Pharynx	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Liver and Intrahepatic Bile Duct	~	7.4	5.8	~	---	---	~	3.9	3.4
Multiple Myeloma and Immunoproliferative Neoplasms	~	---	---	~	---	---	~	---	---
Non-Hodgkin Lymphoma	~	---	---	~	---	---	~	---	---
Ovary	NA	NA	NA	0	0.0	0.0	0	0.0	0.0
Pancreas	8	13.4	9.3	6	8.6	6.7	14	10.8	7.9
Prostate	8	23.1	9.3	NA	NA	NA	8	8.6	4.5
Skin	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Stomach	~	---	---	0	0.0	0.0	~	---	---
Trachea, Bronchus, and Lung	16	29.4	18.6	12	21.0	13.3	28	25.3	15.9
Other and Unspecified Cancers	~	---	---	~	12.1	8.9	~	7.3	5.1
Total	61	117.9	70.9	49	75.7	54.3	110	93.3	62.4

Notes: ~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

*Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 Nevada residents.

NA - Not Applicable

Cancer Mortality in Nevada

Table 13. Cancer Mortality, by Cancer Type and Gender, Asian Nevada Residents, 2005-2009

Cancer Type	Male Count	Male Age-Adjusted Rate*	Male Crude Rate	Female Count	Female Age-Adjusted Rate*	Female Crude Rate	Total Count	Total Age-Adjusted Rate*	Total Crude Rate
Bladder	~	5.8	2.2	~	---	---	11	2.6	1.3
Brain and Other Central Nervous System	~	2.5	2.2	~	---	---	12	1.8	1.4
Breast	0	0.0	0.0	84	18.8	18.0	84	11.0	9.6
Cervix Uteri	NA	NA	NA	9	1.9	1.9	9	1.1	1.0
Colon, Rectum, and Anus	47	16.9	11.7	37	10.9	7.9	84	13.4	9.6
Corpus Uteri and Uterus, Part Unspecified	NA	NA	NA	6	1.1	1.3	6	0.6	0.7
Esophagus	~	3.3	2.0	~	---	---	11	1.7	1.3
Hodgkin Lymphoma	~	---	---	0	0.0	0.0	~	---	---
Kidney and Renal Pelvis	14	4.4	3.5	5	1.1	1.1	19	2.5	2.2
Larynx	~	---	---	~	---	---	~	---	---
Leukemia	15	5.4	3.7	16	3.9	3.4	31	4.5	3.6
Lip, Oral Cavity, and Pharynx	9	2.7	2.2	7	1.9	1.5	16	2.2	1.8
Liver and Intrahepatic Bile Duct	40	11.7	9.9	33	9.6	7.1	73	10.6	8.4
Multiple Myeloma and Immunoproliferative Neoplasms	~	4.5	2.2	~	---	---	13	2.4	1.5
Non-Hodgkin Lymphoma	13	4.0	3.2	11	3.8	2.4	24	4.0	2.8
Ovary	NA	NA	NA	25	5.6	5.3	25	3.3	2.9
Pancreas	29	10.2	7.2	29	7.2	6.2	58	8.4	6.7
Prostate	25	14.1	6.2	NA	NA	NA	25	5.6	2.9
Skin	0	0.0	0.0	~	---	---	~	---	---
Stomach	26	11.0	6.4	22	6.2	4.7	48	8.1	5.5
Trachea, Bronchus, and Lung	122	47.6	30.3	79	19.0	16.9	201	30.5	23.1
Other and Unspecified Cancers	46	15.9	11.4	49	14.0	10.5	95	14.9	10.9
Total	423	160.6	104.9	426	108.6	91.1	849	129.6	97.5

Notes: ~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

*Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 Nevada residents.

NA - Not Applicable

Cancer Mortality in Nevada

Table 14. Cancer Mortality, by Cancer Type and Gender, Hispanic Nevada Residents, 2005-2009

Cancer Type	Male Count	Male Age-Adjusted Rate*	Male Crude Rate	Female Count	Female Age-Adjusted Rate*	Female Crude Rate	Total Count	Total Age-Adjusted Rate*	Total Crude Rate
Bladder	12	4.7	0.7	5	0.9	0.3	17	2.3	0.5
Brain and Other Central Nervous System	20	2.2	1.2	18	2.8	1.2	38	2.6	1.2
Breast	0	0.0	0.0	77	12.8	5.1	77	7.0	2.4
Cervix Uteri	NA	NA	NA	22	3.1	1.4	22	1.6	0.7
Colon, Rectum, and Anus	70	16.9	4.1	53	10.6	3.5	123	13.3	3.8
Corpus Uteri and Uterus, Part Unspecified	NA	NA	NA	18	3.1	1.2	18	1.7	0.6
Esophagus	~	3.3	0.9	~	---	---	18	1.7	0.6
Hodgkin Lymphoma	~	1.0	0.3	~	---	---	~	0.5	0.2
Kidney and Renal Pelvis	20	4.0	1.2	5	0.6	0.3	25	2.1	0.8
Larynx	5	2.0	0.3	0	0.0	0.0	5	0.8	0.2
Leukemia	32	7.6	1.9	26	3.6	1.7	58	5.1	1.8
Lip, Oral Cavity, and Pharynx	10	1.8	0.6	0	0.0	0.0	10	0.8	0.3
Liver and Intrahepatic Bile Duct	54	11.9	3.1	28	5.1	1.8	82	8.1	2.5
Multiple Myeloma and Immunoproliferative Neoplasms	8	2.7	0.5	6	0.9	0.4	14	1.6	0.4
Non-Hodgkin Lymphoma	28	6.1	1.6	18	4.5	1.2	46	5.3	1.4
Ovary	NA	NA	NA	26	5.0	1.7	26	2.8	0.8
Pancreas	41	9.1	2.4	36	8.6	2.4	77	8.9	2.4
Prostate	53	20.8	3.1	NA	NA	NA	53	8.4	1.6
Skin	6	1.9	0.3	5	0.6	0.3	11	1.1	0.3
Stomach	37	10.1	2.2	19	3.3	1.2	56	6.0	1.7
Trachea, Bronchus, and Lung	123	32.8	7.2	84	18.3	5.5	207	24.7	6.4
Other and Unspecified Cancers	73	14.2	4.3	65	12.5	4.3	138	13.4	4.3
Total	613	153.0	35.7	515	96.9	33.8	1,128	120.0	34.8

Notes: ~ Data do not meet the criteria for statistical reliability, data quality, or confidentiality.

--- Sufficient data are not available to calculate reliable rates.

*Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 Nevada residents.

NA - Not Applicable

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Appendix A: Nevada Population Estimates, 2005-2009

Age	Race/Ethnicity												
	White		Black		American Indian/Alaska Native		Asian		Hispanic		Total		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
<1	42,778	40,186	8,677	8,280	1,134	1,167	7,795	7,346	39,253	38,031	99,637	95,010	194,647
1-4	174,857	163,782	31,868	30,512	4,730	4,646	28,908	27,671	150,023	144,714	390,386	371,325	761,711
5-14	452,904	429,780	76,363	73,011	12,871	12,256	58,799	56,128	330,135	312,319	931,072	883,495	1,814,567
15-24	506,751	480,779	80,083	76,902	14,656	14,205	57,729	58,428	322,286	279,695	981,505	910,009	1,891,514
25-34	524,928	505,026	63,679	64,242	13,123	13,440	65,446	72,929	346,558	275,671	1,013,734	931,307	1,945,041
35-44	584,949	555,437	65,972	63,232	13,014	13,502	63,248	75,392	266,469	214,748	993,652	922,310	1,915,962
45-54	652,958	620,239	62,482	59,655	11,686	13,288	53,758	71,670	149,498	132,457	930,382	897,308	1,827,689
55-64	546,403	546,452	36,157	41,404	8,246	9,602	36,356	52,607	68,809	69,755	695,972	719,820	1,415,793
65-74	358,481	365,854	22,238	25,442	4,389	5,124	20,699	29,769	29,885	35,516	435,692	461,705	897,397
75-84	186,284	222,503	10,765	12,873	1,789	2,166	9,082	13,360	11,653	15,147	219,573	266,049	485,622
85+	41,517	78,183	1,949	3,715	400	815	1,437	2,259	1,844	3,497	47,146	88,468	135,614
Total	4,072,811	4,008,220	460,232	459,268	86,037	90,210	403,258	467,559	1,716,414	1,521,549	6,738,752	6,546,807	13,285,559

Appendix B: ICD-0-3 Codes Used for Incidence

Type of Cancer	ICD-O-3 Codes		
	ICD-O-3 Site	ICD-O-3 Histology	Excluded Histology/Site
Lip, Oral Cavity and Pharynx			
Lip	C00		9590-9989, 9050-9055, 9140
Base of Tongue	C01		
Other and Unspecified Parts of the Tongue	C02		
Parotid Gland	C07		
Other and Unspecified Major Salivary Glands	C08		
Floor of Mouth	C04		
Gum	C03		
Palate	C05		
Other and Unspecified Parts of the Mouth	C06		
Nasopharynx	C11		
Tonsil	C09		
Oropharynx	C10		
Pyramiform Sinus	C12		
Hypopharynx	C13		
Other and Unspecified Oral Cavity and Pharynx	C14		
Digestive System			
Esophagus	C15		9590-9989, 9050-9055, 9140
Stomach	C16		
Small Intestine	C17		
Colon (excluding Rectum)			
Cecum	C18.0		
Appendix	C18.1		
Ascending Colon	C18.2		
Hepatic Flexure	C18.3		
Transverse Colon	C18.4		

Type of Cancer	ICD-O-3 Codes		
	ICD-O-3 Site	ICD-O-3 Histology	Excluded Histology/Site
Splenic Flexure	C18.5		
Descending Colon	C18.6		
Sigmoid Colon	C18.7		
Large Intestine, NOS	C18.8-C18.9, C26.0		
Rectum	C20		
Rectosigmoid Junction	C19		
Anus, Anal Canal and Anorectum	C21		
Liver	C22.0		
Intrahepatic Bile Ducts	C22.1		
Gallbladder	C23		
Other and Unspecified Biliary Tract	C24		
Pancreas	C25		
Retroperitoneum	C48.0		
Peritoneum, Omentum and Mesentery	C48.1-C48.2		
Other Digestive Organs	C26.8-C26.9, C48.8		
Respiratory System			
Nose, Nasal Cavity and Middle Ear	C30		9590-9989, 9050-9055, 9140
Accessory Sinuses	C31		
Larynx	C32		
Lung and Bronchus	C34		
Pleura	C38.4		
Trachea	C33		
Mediastinum and Other Respiratory Organs	C38.1-C38.3, C38.8, C39.0, C39.8, C39.9		
Bones, Joints and Articular Cartilage			
Bones, Joints and Articular Cartilage of Limbs	C40		9590-9989, 9050-9055, 9140
Bones, Joints and Articular Cartilage of Other and Unspecified Sites	C41		

Type of Cancer	ICD-O-3 Codes		
	ICD-O-3 Site	ICD-O-3 Histology	Excluded Histology/Site
Soft Tissue Including Heart			
Heart	C38		9590-9989,
Peripheral Nerves and Autonomic Nervous System	C47		9050-9055,
Connective, Subcutaneous and Other Soft Tissues	C49		9140
Skin (excluding basal and squamous)			
Melanoma of the Skin	C44	8720-8790	
Other Non-Epithelial Skin	C44		8000-8005, 8010-8045, 8050-8084, 8090-8110, 8720-8790, 9590-9989, 9050-9055, 9140
Breast	C50		9590-9989, 9050-9055, 9140
Female Genital System			
Cervix Uteri	C53		
Corpus Uteri	C54		
Uterus, NOS	C55		
Ovary	C56		9590-9989,
Vagina	C52		9050-9055,
Vulva	C51		9140
Placenta	C58		
Other Female Genital Organs	C57		
Male Genital System			
Prostate	C61		9590-9989,
Testis	C62		9050-9055,
Penis	C60		9140
Other Male Genital Organs	C63		

Type of Cancer	ICD-O-3 Codes		
	ICD-O-3 Site	ICD-O-3 Histology	Excluded Histology/Site
Urinary System			
Urinary Bladder	C67		9590-9989, 9050-9055, 9140
Kidney	C64		
Renal Pelvis	C65		
Ureter	C66		
Other Urinary Organs	C68		
Eye and Orbit	C69		9590-9989, 9050-9055, 9140
Brain and Other Central Nervous System (CNS)			
Brain	C71		9530-9539, 9590-9989, 9050-9055, 9140
Meninges	C70		9590-9989, 9050-9055, 9140
Spinal Cord, Cranial Nerves and Other Parts of CNS	C72		9590-9989, 9050-9055, 9140
	C71	9530-9539	
Endocrine System			
Thyroid gland	C73		9590-9989, 9050-9055, 9140
Adrenal gland	C74		
Other Endocrine (including Thymus)	C37, C75		
Hodgkin Lymphoma		9650-9667	
Non-Hodgkin Lymphoma		9590-9596, 9670-9671, 9678-9680, 9689-9691, 9698-9702,	

Type of Cancer	ICD-O-3 Codes		
	ICD-O-3 Site	ICD-O-3 Histology	Excluded Histology/Site
Non-Hodgkin Lymphoma (continued)		9708-9709, 9714-9719, 9727-9729, 9673, 9675, 9684, 9687, 9695, 9705	
		9823, 9827	C42.0,C42.1,C42.4
Myeloma		9731-9732, 9734	
Leukemia			
<i>Lymphocytic</i>			
Acute Lymphocytic		9826, 9835-9837	
Chronic Lymphocytic	C42.0,C42.1,C42.4	9823	
Other Lymphocytic		9820, 9832-9834, 9940	
<i>Myeloid and Monocytic</i>			
Acute Myeloid		9840, 9861, 9866, 9867, 9910, 9920, 9871-9874, 9895-9897	
Acute Monocytic		9891	
Chronic Myeloid		9863, 9875, 9876, 9945, 9946	
Other Myeloid/Monocytic		9860, 9930	
<i>Other</i>			
Other, Acute		9801, 9805, 9931	
Aleukemic, Subleukemic and NOS		9733, 9742, 9800, 9831, 9870, 9948, 9963, 9964	

Type of Cancer	ICD-O-3 Codes		
	ICD-O-3 Site	ICD-O-3 Histology	Excluded Histology/Site
	C42.0, C42.1, C42.4	9827	
Mesothelioma		9050-9055	
Kaposi Sarcoma		9140	
Other, Ill-Defined and Unspecified Sites	All other sites and histologies		

Appendix C: Formulas

CRUDE RATE:

$$\frac{\text{Number of Events}}{\text{Population}} \times 100,000$$

AGE-SPECIFIC CRUDE RATE:

$$\frac{\text{Number of Events in a specific age group}}{\text{Population in specific age group}} \times 100,000$$

AGE-ADJUSTED RATE (ADR):

If k = the number of age groups,

d_i = the number of events in the i -th age interval,

p_i = the population size in the i -th age interval,

m_i = the age-specific crude rate in the i -th age interval = $(d_i / p_i) \times 100,000$, and

P_{si} = proportion of the population in the i -th age group in the standard population (2000 U.S. population),

Then

$$ADR = \sum_{i=1}^k (m_i * P_{si})$$

Appendix D: ICD-10 Codes Used for Mortality

Cancer Type	ICD-10 Codes
Bladder	C67
Brain and Other Central Nervous System	C70-C72
Breast	C50
Cervix Uteri	C53
Colon, Rectum, and Anus	C18-C21
Corpus Uteri and Uterus, Part Unspecified	C54-C55
Esophagus	C15
Hodgkin Lymphoma	C81
Kidney and Renal Pelvis	C64-C65
Larynx	C32
Leukemia	C91-C95
Lip, Oral Cavity and Pharynx	C00-C14
Liver and Intrahepatic Bile Duct	C22
Multiple Myeloma and Immunoproliferative Neoplasms	C88, C90
Non-Hodgkin Lymphoma	C82-C85
Other and Unspecified Cancers	C17, C23-C24, C26-C31, C37-C41, C44-C49, C51-C52, C57-C60, C62-C62, C66, C68-C69, C73-C80, C96, C97
Ovary	C56
Pancreas	C25
Prostate	C61
Skin	C43
Stomach	C16
Trachea, Bronchus, and Lung	C33-C34