

Cancer In Nevada: 2002 - 2006

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A Report on Cancer
Incidence and Mortality
in Nevada.

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Cancer in Nevada: 2002-2006

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Preface

This report presents cancer incidence and mortality in Nevada for the 2002-2006 years and is based on 52,341 newly diagnosed cancer cases and 20,293 cancer-related deaths among Nevada residents during this time period. Nationwide data are also presented for comparison purposes only. The American Cancer Society estimates that 12,230 people in Nevada will be diagnosed with cancer in 2010, excluding basal and squamous cell skin cancers and in situ carcinomas except for urinary bladder.¹ The cost of cancer nationwide in 2010 is estimated to be \$263.8 billion overall, including \$102.8 billion in direct medical costs, 20.9 billion due to morbidity and \$140.1 billion due to mortality.²

Cancer incidence and mortality for all types of cancers is covered in general as well as the highlights of the top ten leading cancers and top ten 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, 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 brain and other central nervous system.

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) 2010 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, 2006**. For guidance on residency, refer to Chapter III of *NAACCR Standards for Cancer Registries*, Volume II.

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 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 mucoepidermoid 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 as reportable in the year they were diagnosed. For example, those cases reportable in ICD–O–2 but not ICD–O–3 would be included for diagnosis years 1995-2000 only. However, as noted above, all ICD–O–2 codes should be converted to the corresponding ICD–O–3 codes prior to submission.

The following histologies should be reported for all cases diagnosed prior to January 1, 2001. 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. Beginning January 1, 2004, all nonmalignant primary intracranial and central nervous system tumors (see following table) with a benign (/0) or borderline (/1) behavior code are reportable, and are to be included in the data submission. However, exclude benign and borderline tumors of the cranial bones (C41.0). For further guidance, please refer to the following table.

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 2009 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 A.

Gender Specific Cancer Rates

For gender specific cancers, such as prostate and female breast, 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

2002 through 2005 populations used in this report were provided by the Nevada State Demographer. Interim 2006 population estimates were also used in this report and are based on the 2005 population. The 2006 population estimates were updated in July 2007 by the Nevada State Health Division, Bureau of Health Statistics, Planning, Epidemiology and Response. The aggregated 2002 through 2006 populations used for the denominator in incidence and mortality rates are race-specific and sex-specific (See Appendix B). 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
2002-2006

Incidence

In Nevada, 52,341 (28,341 males, 23,995 females and five other gender) cancer cases were reported among Nevada residents during the 2002-2006 period. Nevada's age-adjusted incidence rate, of 457.6 per 100,000, for all cancers combined was lower than the national age-adjusted rate of 473.1⁶ during the same period.

Nevada males had higher incidence rates, both age-adjusted (526.3) and crude (463.9), for all cancers combined compared to Nevada females (403.0 and 405.4 respectively).

Whites had the highest incidence rates, both age-adjusted (476.0) and crude (567.6), compared to Blacks (438.7 and 327.7 respectively), Hispanics (347.1 and 128.8 respectively), Asians (293.4 and 230.8 respectively), and American Indian/Alaska Natives (215.5 and 164.3 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: female breast, prostate, colorectal, melanomas of the skin, non-Hodgkin lymphoma, kidney and renal pelvis, and leukemia.

Lung and bronchus cancer was the most common reportable malignancy among Nevada residents, accounting for 15.8% of all invasive cases during 2002-2006 period. Prostate cancer was the second most common reportable malignancy among Nevada residents, accounting for 15.0% of all invasive cases during 2002-2006 period. Prostate cancer was the leading type of malignancy among males, followed by lung and bronchus, colorectal, urinary bladder, and melanomas of the skin.

Breast cancer was the third most common malignancy among Nevada residents, accounting for 13.0% of all invasive cases during the 2002-2006 period. Breast cancer was also the leading type of malignancy among females, followed by lung and bronchus, colorectal, corpus uteri and uterus not otherwise specified, and thyroid.

The following disparities were found:

- Compared to females, males had higher incidence rates for the following malignancies: lung and bronchus, colorectal, urinary bladder, non-Hodgkin lymphoma, melanomas of the skin, kidney and renal pelvis, and leukemia.
- Whites had the highest incidence rates for the following malignancies: lung and bronchus, female breast, urinary bladder, non-Hodgkin lymphoma, melanomas of the skin, and leukemia compared to Blacks, American Indian/Alaska Natives, Asians, and Hispanics.
- Blacks had the highest incidence rates for prostate, colorectal and kidney and renal pelvis malignancies compared to Whites, American Indian/Alaska Natives, Asians, and Hispanics.
- Asians had the highest incidence rates for thyroid cancer and the lowest incidence rates for prostate, kidney and leukemia compared to Whites, Blacks, American Indian/Alaska Natives, and Hispanics.
- Hispanics had the lowest incidence rate for melanomas of the skin compared to Whites.
- American Indian/Alaska Natives had the lowest incidence rates for the following malignancies: lung and bronchus, female breast, colorectal, and non-Hodgkin lymphoma, and thyroid.
- In addition, American Indian/Alaska Natives had extremely low numbers for urinary bladder, melanomas of the skin, and leukemia cancers, therefore, the incidence rates for these malignancies were not calculated.

Table 1. Percentage of Cancer Cases by Cancer Type, by Gender, Nevada Residents, 2002-2006

Type of Cancer	Male		Female		Total	
Lung and Bronchus	4,367	15.4%	4,004	16.7%	8,371	16.0%
Prostate	7,784	27.5%	NA	NA	7,784	14.9%
Breast	74	0.3%	6,639	27.7%	6,714	12.8%
Urinary Bladder	2,056	7.3%	624	2.6%	2,680	5.1%
Other, Ill-Defined and Unspecified Sites	1,206	4.3%	954	4.0%	2,161	4.1%
Non-Hodgkin Lymphoma	1,197	4.2%	873	3.6%	2,070	4.0%
Melanomas of the Skin	1,154	4.1%	733	3.1%	1,888	3.6%
Kidney	880	3.1%	483	2.0%	1,363	2.6%
Thyroid Gland	331	1.2%	1,007	4.2%	1,338	2.6%
Pancreas	653	2.3%	602	2.5%	1,256	2.4%
Sigmoid Colon	603	2.1%	488	2.0%	1,091	2.1%
Corpus Uteri	NA	NA	1,085	4.5%	1,085	2.1%
Rectum	667	2.4%	418	1.7%	1,085	2.1%
Cecum	419	1.5%	424	1.8%	843	1.6%
Ovary	NA	NA	739	3.1%	739	1.4%
Stomach	447	1.6%	261	1.1%	708	1.4%
Brain	402	1.4%	298	1.2%	700	1.3%
Liver	466	1.6%	183	0.8%	649	1.2%
Ascending Colon	287	1.0%	344	1.4%	631	1.2%
Esophagus	455	1.6%	114	0.5%	569	1.1%
Cervix Uteri	NA	NA	542	2.3%	542	1.0%
Myeloma	293	1.0%	207	0.9%	500	1.0%
Large Intestine, NOS	264	0.9%	215	0.9%	479	0.9%
Rectosigmoid Junction	236	0.8%	206	0.9%	442	0.8%
Acute Myeloid Leukemia	238	0.8%	168	0.7%	407	0.8%
Larynx	316	1.1%	90	0.4%	406	0.8%
Chronic Lymphocytic Leukemia	253	0.9%	124	0.5%	377	0.7%
Connective, Subcutaneous and Other Soft Tissues	170	0.6%	139	0.6%	309	0.6%
Testis	307	1.1%	NA	NA	307	0.6%
Hodgkin Lymphoma	166	0.6%	127	0.5%	293	0.6%
Transverse Colon	135	0.5%	147	0.6%	282	0.5%

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.

Table 1. Percentage of Cancer Cases by Cancer Type, by Gender, Nevada Residents, 2002-2006 (continued)

Type of Cancer	Male		Female		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Descending Colon	127	0.5%	69	0.3%	196	0.4%
Base of Tongue	153	0.5%	42	0.2%	195	0.4%
Other Non-Epithelial Skin	123	0.4%	71	0.3%	194	0.4%
Other and Unspecified Biliary Tract	118	0.4%	65	0.3%	183	0.4%
Other and Unspecified Parts of Tongue	117	0.4%	63	0.3%	180	0.3%
Tonsil	133	0.5%	39	0.2%	172	0.3%
Acute Lymphocytic Leukemia	92	0.3%	78	0.3%	170	0.3%
Hepatic Flexure	72	0.3%	84	0.4%	156	0.3%
Small Intestine	89	0.3%	66	0.3%	155	0.3%
Anus, Anal Canal and Anorectum	56	0.2%	94	0.4%	150	0.3%
Chronic Myeloid Leukemia	83	0.3%	63	0.3%	146	0.3%
Vulva	NA	NA	125	0.5%	125	0.2%
Parotid Gland	77	0.3%	41	0.2%	118	0.2%
Mesothelioma	82	0.3%	21	0.1%	103	0.2%
Splenic Flexure	45	0.2%	48	0.2%	93	0.2%
Floor of Mouth	58	0.2%	33	0.1%	91	0.2%
Gallbladder	39	0.1%	50	0.2%	89	0.2%
Other Urinary Organs	66	0.2%	21	0.1%	87	0.2%
Aleukemic, Subleukemic and NOS Leukemia	47	0.2%	35	0.2%	82	0.2%
Renal Pelvis	46	0.2%	32	0.1%	78	0.2%
Lip	63	0.2%	12	0.1%	75	0.1%
Eye and Orbit	47	0.2%	26	0.1%	73	0.1%
Nasopharynx	55	0.2%	17	0.1%	72	0.1%
Other and Unspecified Parts of Mouth	33	0.1%	29	0.1%	62	0.1%
Ureter	35	0.1%	24	0.1%	59	0.1%
Appendix	31	0.1%	27	0.1%	58	0.1%
Kaposi Sarcoma	~	0.2%	~	- - -	51	0.1%
Other Acute Leukemia	29	0.1%	22	0.1%	51	0.1%
Other Lymphocytic Leukemia	41	0.1%	10	0.0%	51	0.1%
Bones, Joints and Articular Cartilage of Other and Unspecified Sites	37	0.1%	13	0.1%	50	0.1%
Oropharynx	39	0.1%	11	0.1%	50	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, 2002-2006 (continued)

Type of Cancer	Male		Female		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Hypopharynx	32	0.1%	16	0.1%	48	0.1%
Palate	26	0.1%	22	0.1%	48	0.1%
Uterus, NOS	NA	NA	45	0.2%	45	0.1%
Accessory Sinuses	27	0.1%	14	0.1%	41	0.1%
Other Female Genital Organs	NA	NA	41	0.2%	41	0.1%
Peritoneum, Omentum and Mesentery	6	0.0%	35	0.2%	41	0.1%
Pyriform Sinus	32	0.1%	9	0.0%	41	0.1%
Intrahepatic Bile Duct	20	0.1%	19	0.1%	39	0.1%
Retroperitoneum	19	0.1%	20	0.1%	39	0.1%
Bones, Joints and Articular Cartilage of Limbs	23	0.1%	15	0.1%	38	0.1%
Nose, Nasal Cavity and Middle Ear	25	0.1%	13	0.1%	38	0.1%
Gum	21	0.1%	14	0.1%	35	0.1%
Other Endocrine (Including Thymus)	19	0.1%	16	0.1%	35	0.1%
Vagina	NA	NA	34	0.1%	34	0.1%
Other and Unspecified Oral (Buccal) Cavity and Pharynx	25	0.1%	7	0.0%	32	0.1%
Penis	32	0.1%	NA	NA	32	0.1%
Other and Unspecified Major Salivary Glands	19	0.1%	12	0.1%	31	0.1%
Spinal Cord, Cranial Nerves, and Other Parts of CNS	10	0.0%	18	0.1%	28	0.1%
Other Digestive Organs	12	0.0%	14	0.1%	26	0.1%
Acute Monocytic Leukemia	11	0.0%	14	0.1%	25	0.1%
Adrenal Gland	15	0.1%	5	0.0%	20	0.0%
Meninges	8	0.0%	12	0.1%	20	0.0%
Other Myeloid/Monocytic Leukemia	10	0.0%	10	0.0%	20	0.0%
Other Male Genital Organs	17	0.1%	NA	NA	17	0.0%
Peripheral Nerves and Autonomic Nervous System	~	0.0%	~	---	11	0.0%
Mediastinum and Other Respiratory Organs	~	0.0%	~	---	10	0.0%
Pleura	~	0.0%	~	---	8	0.0%
Placenta	0	0.0%	6	0.0%	6	0.0%
Trachea	~	---	~	---	~	0.0%
Heart	~	---	~	---	~	---
Total	28,341	100.0%	23,995	100.0%	52,341	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, 2002-2006

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 CNS	420	7.2	6.9	328	5.5	5.5	748	6.3	6.2
Breast	74	1.4	1.2	6,639	109.9	112.2	6,714	57.4	55.8
Cervix Uteri	NA	NA	NA	542	9.1	9.2	542	4.5	4.5
Colorectal	2,886	54.9	47.2	2,470	42.5	41.7	5,356	48.3	44.5
Corpus Uteri and Uterus NOS	NA	NA	NA	1,130	18.6	19.1	1,130	9.6	9.4
Esophagus	455	8.2	7.5	114	2.0	1.9	569	4.9	4.7
Hodgkin Lymphoma	166	2.8	2.7	127	2.1	2.2	293	2.4	2.4
Kidney and Renal Pelvis	926	16.7	15.2	515	8.6	8.7	1,441	12.3	12.0
Larynx	316	5.7	5.2	90	1.5	1.5	406	3.5	3.4
Leukemia	804	15.4	13.2	524	9.0	8.9	1,329	11.9	11.1
Lip, Oral Cavity and Pharynx	883	15.4	14.5	367	6.1	6.2	1,250	10.6	10.4
Liver and Bile Ducts	486	8.7	8.0	202	3.5	3.4	688	6.0	5.7
Lung and Bronchus	4,367	82.1	71.5	4,004	67.1	67.6	8,371	74.0	69.6
Melanomas of the Skin	1,154	20.9	18.9	733	12.2	12.4	1,888	16.2	15.7
Myeloma	293	5.5	4.8	207	3.5	3.5	500	4.4	4.2
Non-Hodgkin Lymphoma	1,197	22.2	19.6	873	14.9	14.8	2,070	18.4	17.2
Ovary	NA	NA	NA	739	12.3	12.5	739	6.4	6.1
Pancreas	653	12.5	10.7	602	10.4	10.2	1,256	11.4	10.4
Prostate	7,784	142.8	127.4	NA	NA	NA	7,784	67.0	64.7
Stomach	447	8.7	7.3	261	4.5	4.4	708	6.4	5.9
Thyroid Gland	331	5.5	5.4	1,007	16.8	17.0	1,338	11.0	11.1
Urinary Bladder	2,056	40.4	33.7	624	10.7	10.5	2,680	24.3	22.3
All Other Sites	2,643	49.4	43.3	1,897	32.4	32.01	4,541	40.5	37.8
Total	28,341	526.3	463.9	23,995	403.0	405.4	52,341	457.6	435.2

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. Cancer Incidence, by Cancer Type and Gender, White Nevada Residents, 2002-2006

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 CNS	345	8.0	9.0	257	6.0	6.9	602	7.0	7.9
Breast	67	1.5	1.8	5,343	115.1	142.4	5,411	59.6	71.4
Cervix Uteri	NA	NA	NA	362	8.7	9.7	362	4.3	4.8
Colorectal	2,376	55.5	62.1	1,986	42.7	52.9	4,362	48.8	57.6
Corpus Uteri and Uterus NOS	NA	NA	NA	923	19.7	24.6	923	10.0	12.2
Esophagus	403	8.9	10.5	88	1.9	2.4	491	5.3	6.5
Hodgkin Lymphoma	125	3.2	3.3	99	2.5	2.6	224	2.8	3.0
Kidney and Renal Pelvis	745	16.7	19.5	393	8.5	10.5	1,138	12.4	15.0
Larynx	276	6.1	7.2	83	1.8	2.2	359	3.8	4.7
Leukemia	649	16.1	17.0	392	8.9	10.5	1,042	12.2	13.8
Lip, Oral Cavity and Pharynx	765	16.9	20.0	306	6.6	8.2	1,071	11.6	14.1
Liver and Bile Ducts	348	8.0	9.1	127	2.8	3.4	475	5.3	6.3
Lung and Bronchus	3,797	86.5	99.2	3,546	73.5	94.5	7,343	79.4	96.9
Melanomas of the Skin	1,124	26.3	29.4	703	16.3	18.7	1,828	21.0	24.1
Myeloma	231	5.3	6.0	143	3.0	3.8	374	4.1	4.9
Non-Hodgkin Lymphoma	955	22.5	25.0	714	15.6	19.0	1,669	18.9	22.0
Ovary	NA	NA	NA	603	13.1	16.1	603	6.7	8.0
Pancreas	534	12.5	14.0	487	10.3	13.0	1,022	11.4	13.5
Prostate	6,176	137.4	161.4	NA	NA	NA	6,176	65.3	81.5
Stomach	313	7.6	8.2	190	4.1	5.1	503	5.7	6.6
Thyroid Gland	268	6.2	7.0	713	17.5	19.0	981	11.7	12.9
Urinary Bladder	1,847	43.6	48.3	549	11.7	14.6	2,396	26.4	31.6
All Other Sites	2,138	52.1	55.9	1,528	33.2	40.7	3,667	42.2	48.4
Total	23,482	540.8	613.6	19,535	423.2	520.6	43,022	476.0	567.6

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. Cancer Incidence, by Cancer Type and Gender, Black Nevada Residents, 2002-2006

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 CNS	14	3.8	3.4	16	4.5	3.9	30	4.2	3.6
Breast	~	---	---	~	108.4	90.3	376	57.3	45.4
Cervix Uteri	NA	NA	NA	37	10.4	9.0	37	5.4	4.5
Colorectal	172	61.2	41.4	161	51.2	39.0	333	55.5	40.2
Corpus Uteri and Uterus NOS	NA	NA	NA	46	14.0	11.1	46	7.5	5.6
Esophagus	18	5.8	4.3	11	4.1	2.7	29	5.1	3.5
Hodgkin Lymphoma	7	2.0	1.7	9	2.0	2.2	16	2.0	1.9
Kidney and Renal Pelvis	50	15.5	12.0	45	13.1	10.9	95	14.3	11.5
Larynx	~	3.5	2.4	~	---	---	13	2.1	1.6
Leukemia	34	10.3	8.2	31	8.3	7.5	65	9.2	7.8
Lip, Oral Cavity and Pharynx	36	11.0	8.7	13	4.2	3.2	49	7.6	5.9
Liver and Bile Ducts	33	10.1	7.9	10	2.9	2.4	43	6.3	5.2
Lung and Bronchus	215	75.6	51.7	172	55.5	41.6	387	65.4	46.7
Melanomas of the Skin	~	---	---	~	---	---	~	0.9	0.6
Myeloma	25	10.1	6.0	30	9.6	7.3	55	9.6	6.6
Non-Hodgkin Lymphoma	59	17.9	14.2	37	11.2	9.0	96	14.7	11.6
Ovary	NA	NA	NA	29	9.3	7.0	29	5.2	3.5
Pancreas	48	17.9	11.6	53	18.2	12.8	101	18.1	12.2
Prostate	499	174.6	120.1	NA	NA	NA	499	80.3	60.2
Stomach	36	13.0	8.7	21	7.1	5.1	57	10.0	6.9
Thyroid Gland	8	2.2	1.9	46	12.3	11.1	54	7.3	6.5
Urinary Bladder	44	20.1	10.6	25	8.6	6.1	69	13.3	8.3
All Other Sites	125	42.4	30.1	107	33.7	25.9	232	37.6	28.0
Total	1,437	498.1	345.8	1,279	390.8	309.5	2,716	438.7	327.7

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. Cancer Incidence, by Cancer Type and Gender, American Indian/Alaska Native Nevada Residents, 2002-2006

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 CNS	~	---	---	0	0.0	0.0	~	---	---
Breast	~	---	---	~	49.8	45.9	39	27.6	24.1
Cervix Uteri	NA	NA	NA	~	---	---	~	---	---
Colorectal	16	29.9	20.2	16	20.6	19.3	32	24.1	19.8
Corpus Uteri and Uterus NOS	NA	NA	NA	13	18.8	15.7	13	10.3	8.0
Esophagus	~	---	---	0	0.0	0.0	~	---	---
Hodgkin Lymphoma	~	---	---	~	---	---	~	---	---
Kidney and Renal Pelvis	~	17.5	12.6	~	---	---	13	11.0	8.0
Larynx	~	---	---	0	0.0	0.0	~	---	---
Leukemia	0	0.0	0.0	~	---	---	~	---	---
Lip, Oral Cavity and Pharynx	6	11.3	7.6	0	0.0	0.0	6	5.2	3.7
Liver and Bile Ducts	~	---	---	~	11.8	7.3	8	8.9	4.9
Lung and Bronchus	30	52.5	37.9	11	17.2	13.3	41	33.2	25.3
Melanomas of the Skin	~	---	---	~	---	---	~	4.0	3.1
Myeloma	0	0.0	0.0	~	---	---	~	---	---
Non-Hodgkin Lymphoma	6	11.0	7.6	6	11.9	7.3	12	11.6	7.4
Ovary	NA	NA	NA	~	---	---	~	---	---
Pancreas	~	---	---	~	---	---	6	6.4	3.7
Prostate	38	80.3	48.0	NA	NA	NA	38	34.7	23.5
Stomach	~	---	---	0	0.0	0.0	~	---	---
Thyroid Gland	~	---	---	~	8.8	9.7	10	5.6	6.2
Urinary Bladder	~	---	---	~	---	---	~	4.6	3.1
All Other Sites	9	12.8	11.4	9	11.1	10.9	18	11.9	11.1
Total	136	255.6	171.7	130	186.9	157.2	266	215.5	164.3

Notes: NOS - Not otherwise specified

CNS - central nervous system

NA - Not Applicable

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

Cancer Incidence in Nevada

Table 6. Cancer Incidence, by Cancer Type and Gender, Asian Nevada Residents, 2002-2006

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 CNS	7	2.2	2.0	15	4.0	3.8	22	3.3	3.0
Breast	~	---	---	~	72.8	68.4	275	42.4	37.0
Cervix Uteri	NA	NA	NA	38	8.7	9.5	38	4.9	5.1
Colorectal	92	43.0	26.8	123	39.1	30.8	215	40.7	29.0
Corpus Uteri and Uterus NOS	NA	NA	NA	50	11.6	12.5	50	6.7	6.7
Esophagus	8	3.6	2.3	6	1.8	1.5	14	2.6	1.9
Hodgkin Lymphoma	9	2.4	2.6	5	1.1	1.3	14	1.7	1.9
Kidney and Renal Pelvis	26	11.1	7.6	20	5.9	5.0	46	8.0	6.2
Larynx	~	---	---	~	---	---	~	0.7	0.7
Leukemia	15	6.1	4.4	24	8.8	6.0	39	7.7	5.3
Lip, Oral Cavity and Pharynx	22	7.3	6.4	20	5.1	5.0	42	6.0	5.7
Liver and Bile Ducts	45	17.8	13.1	31	10.6	7.8	76	13.7	10.2
Lung and Bronchus	123	53.0	35.8	111	33.3	27.8	234	41.5	31.5
Melanomas of the Skin	~	---	---	0	0.0	0.0	~	---	---
Myeloma	10	3.9	2.9	7	3.9	1.8	17	3.9	2.3
Non-Hodgkin Lymphoma	36	17.1	10.5	28	7.9	7.0	64	11.8	8.6
Ovary	NA	NA	NA	38	9.1	9.5	38	5.2	5.1
Pancreas	12	6.0	3.5	21	8.5	5.3	33	7.5	4.4
Prostate	150	64.5	43.7	NA	NA	NA	150	26.7	20.2
Stomach	30	12.9	8.7	24	7.3	6.0	54	9.7	7.3
Thyroid Gland	19	6.4	5.5	87	21.2	21.8	106	14.7	14.3
Urinary Bladder	27	13.5	7.9	10	2.6	2.5	37	7.1	5.0
All Other Sites	75	32.6	21.8	68	22.5	17.0	143	26.8	19.3
Total	713	305.5	207.7	1,001	286.3	250.7	1,714	293.4	230.8

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 Incidence in Nevada

Table 7. Cancer Incidence, by Cancer Type and Gender, Hispanic Nevada Residents, 2002-2006

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 CNS	48	7.1	3.3	38	4.8	3.0	86	5.8	3.2
Breast	~	---	---	~	77.6	39.0	497	39.8	18.3
Cervix Uteri	NA	NA	NA	97	12.6	7.6	97	6.2	3.6
Colorectal	190	46.9	13.2	160	35.5	12.6	350	40.7	12.9
Corpus Uteri and Uterus NOS	NA	NA	NA	87	14.0	6.8	87	7.2	3.2
Esophagus	18	4.0	1.3	8	1.8	0.6	26	2.8	1.0
Hodgkin Lymphoma	17	1.2	1.2	11	0.9	0.9	28	1.0	1.0
Kidney and Renal Pelvis	85	20.8	5.9	45	7.7	3.5	130	13.0	4.8
Larynx	~	6.3	1.6	~	---	---	25	3.0	0.9
Leukemia	76	12.2	5.3	59	7.7	4.6	135	9.5	5.0
Lip, Oral Cavity and Pharynx	39	7.6	2.7	20	4.0	1.6	59	5.8	2.2
Liver and Bile Ducts	54	13.5	3.7	25	5.4	2.0	79	9.0	2.9
Lung and Bronchus	174	46.3	12.1	148	38.4	11.6	322	42.5	11.9
Melanomas of the Skin	11	2.2	0.8	20	2.8	1.6	31	2.4	1.1
Myeloma	21	5.3	1.5	18	3.6	1.4	39	4.3	1.4
Non-Hodgkin Lymphoma	101	19.5	7.0	61	11.5	4.8	162	15.0	6.0
Ovary	NA	NA	NA	61	9.6	4.8	61	4.9	2.3
Pancreas	54	15.0	3.7	34	8.2	2.7	88	11.1	3.2
Prostate	479	138.9	33.2	NA	NA	NA	479	61.3	17.6
Stomach	61	15.3	4.2	23	5.0	1.8	84	9.5	3.1
Thyroid Gland	29	4.4	2.0	136	15.1	10.7	165	9.3	6.1
Urinary Bladder	72	20.1	5.0	16	4.1	1.3	88	11.4	3.2
All Other Sites	236	35.3	16.4	143	27.3	11.3	379	31.7	14.0
Total	1,789	422.0	123.9	1,708	298.0	134.3	3,497	347.1	128.8

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
2002-2006

Mortality

In Nevada, 20,293 (10,887 males and 9,406 females) died from cancer during the 2002-2006 period. Nevada's age-adjusted cancer mortality rate for all cancers combined, at 187.0 per 100,000 Nevada residents, was similar to the national age-adjusted rate of 186.9⁷ in the 2002-2006 period.

Nevada males had higher overall cancer mortality rates, both age-adjusted (220.0) and crude (178.2), compared to Nevada females (161.8 and 158.9 respectively).

Blacks had the highest age-adjusted mortality rate (211.1), compared to Whites (196.2), Asians (129.2), Hispanics (117.8), and American Indian/Alaska Natives (93.7). Whites had the highest crude mortality rate (229.6), compared to Blacks (143.3), Asian (89.5), American Indian/Alaska Native (61.8), and Hispanics (33.1).

From 2002 to 2006, 73.0% of all cancer mortalities in Nevada were attributed to the following malignancies: trachea, lung and bronchus; colon, rectum, and anus; breast; pancreas; prostate; leukemia; non-Hodgkin lymphoma; liver and intrahepatic bile duct; bladder; and ovary cancer.

Trachea, lung and bronchus cancer was the leading cause of cancer death among Nevada residents, accounting for 30.7% of all cancer-related deaths during the 2002-2006 period.

Cancers of the colon, rectum, and anus were the second leading cause of cancer death among Nevada residents, accounting for 10.0% of all cancer-related deaths during the 2002-2006 period, while breast cancer was the third leading cause of cancer death among female Nevada residents, accounting for 14.7% of all cancer-related deaths among female Nevada residents.

The following disparities were found:

- Of the top ten causes of cancer-related deaths which apply to both males and females, males had higher age-adjusted mortality rates than females for the following in the 2002 through 2006 period: trachea, lung and bronchus; colon, rectum and anus; pancreas; leukemia; liver and intrahepaic bile ducts; non-Hodgkin lymphoma; bladder; and brain and other central nervous system.
- For five of the top ten leading causes of cancer death in Nevada, from 2002 to 2006, Whites had the highest age-adjusted mortality rate when compared to Blacks, American Indian/Alaska Natives, Asians, and Hispanics. These included the following malignancies: trachea, lung and bronchus; leukemia; non-Hodgkin lymphoma; bladder; and ovary.
- Blacks had the highest age-adjusted mortality rate for colon, rectum, and anus; breast; pancreas; and prostate compared to Whites, American Indian/Alaska Natives, Asians, and Hispanics.
- Asians had the highest age-adjusted mortality rate for liver and intrahepatic bile duct in Nevada in the 2002-2006 period.
- Hispanics and American Indian/Alaska Natives did not have the highest age-adjusted mortality rate for any of the top ten leading causes of cancer death in Nevada from 2002-2006.

Table 8. Percentage of Cancer Mortality by Cancer Type, by Gender, Nevada Residents, 2002-2006

Type of Cancer	Male		Female		Total	
Trachea, Bronchus and Lung	3,331	30.6%	2,900	30.8%	6,231	30.7%
Colon, Rectum and Anus	1,108	10.2%	918	9.8%	2,026	10.0%
Breast	14	0.1%	1,381	14.7%	1,395	6.9%
Pancreas	625	5.7%	517	5.5%	1,142	5.6%
Prostate	1,048	9.6%	NA	NA	1,048	5.2%
Leukemia	414	3.8%	274	2.9%	688	3.4%
Liver and Intrahepatic Bile Duct	346	3.2%	293	3.1%	639	3.1%
Non-Hodgkin Lymphoma	406	3.7%	196	2.1%	602	3.0%
Bladder	400	3.7%	139	1.5%	539	2.7%
Brain and Other Central Nervous System	~	---	~	5.3%	496	2.4%
Ovary	396	3.6%	93	1.0%	489	2.4%
Esophagus	260	2.4%	207	2.2%	467	2.3%
Kidney and Renal Pelvis	286	2.6%	136	1.4%	422	2.1%
Stomach	241	2.2%	157	1.7%	398	2.0%
Skin	192	1.8%	146	1.6%	338	1.7%
Multiple Myeloma and Immunoproliferative Neoplasms	223	2.0%	89	0.9%	312	1.5%
Lip, Oral Cavity and Pharynx	212	1.9%	93	1.0%	305	1.5%
Corpus Uteri and Uterus, Part Unspecified	~	---	~	1.8%	168	0.8%
Cervix Uteri	NA	NA	160	1.7%	160	0.8%
Larynx	90	0.8%	29	0.3%	119	0.6%
Hodgkin Lymphoma	22	0.2%	19	0.2%	41	0.2%
Other and Unspecified Cancers	1,271	11.7%	997	10.6%	2,268	11.2%
Total	10,887	100.0%	9,406	100.0%	20,293	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, 2002-2006

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	400	9.0	6.5	139	2.5	2.3	539	5.3	4.5
Brain and Other Central Nervous System	260	4.7	4.3	207	3.5	3.5	467	4.1	3.9
Breast	14	0.2	0.2	1,381	23.5	23.3	1,395	12.7	11.6
Cervix Uteri	NA	NA	NA	160	2.7	2.7	160	1.4	1.3
Colon, Rectum and Anus	1,108	23.0	18.1	918	16.3	15.5	2,026	19.3	16.8
Corpus Uteri and Uterus, Part Unspecified	NA	NA	NA	167	2.9	2.8	168	1.6	1.4
Esophagus	396	7.3	6.5	93	1.6	1.6	489	4.3	4.1
Hodgkin Lymphoma	22	0.4	0.4	19	0.3	0.3	41	0.4	0.3
Kidney and Renal Pelvis	286	5.6	4.7	136	2.4	2.3	422	3.8	3.5
Larynx	90	1.7	1.5	29	0.5	0.5	119	1.1	1.0
Leukemia	414	8.6	6.8	274	4.8	4.6	688	6.5	5.7
Lip, Oral Cavity and Pharynx	212	4.0	3.5	93	1.6	1.6	305	2.7	2.5
Liver and Intrahepatic Bile Duct	406	7.5	6.6	196	3.4	3.3	602	5.4	5.0
Multiple Myeloma and Immunoproliferative Neoplasms	192	4.0	3.1	146	2.5	2.5	338	3.2	2.8
Non-Hodgkin Lymphoma	346	6.9	5.7	293	5.2	4.9	639	6.0	5.3
Ovary	NA	NA	NA	495	8.3	8.4	496	4.4	4.1
Pancreas	625	12.2	10.2	517	9.0	8.7	1,142	10.4	9.5
Prostate	1,048	25.9	17.2	NA	NA	NA	1,048	10.8	8.7
Skin	223	4.2	3.7	89	1.5	1.5	312	2.7	2.6
Stomach	241	4.9	3.9	157	2.8	2.7	398	3.7	3.3
Trachea, Bronchus, and Lung	3,331	64.5	54.5	2,900	49.2	49.0	6,231	56.1	51.8
Other and Unspecified Cancers	1,271	25.5	20.8	997	17.5	16.8	2,268	21.1	18.9
Total	10,887	220.0	178.2	9,406	161.8	158.9	20,293	187.0	168.7

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, 2002-2006

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	368	9.7	9.6	121	2.6	3.2	489	5.7	6.5
Brain and Other Central Nervous System	224	5.1	5.9	177	3.8	4.7	401	4.5	5.3
Breast	10	0.2	0.3	1,155	24.8	30.8	1,165	13.2	15.4
Cervix Uteri	NA	NA	NA	122	2.7	3.3	122	1.4	1.6
Colon, Rectum and Anus	955	23.8	25.0	772	16.7	20.6	1,727	20.0	22.8
Corpus Uteri and Uterus, Part Unspecified	NA	NA	NA	136	2.9	3.6	137	1.6	1.8
Esophagus	354	8.0	9.2	77	1.6	2.1	431	4.7	5.7
Hodgkin Lymphoma	19	0.4	0.5	16	0.4	0.4	35	0.4	0.5
Kidney and Renal Pelvis	238	5.7	6.2	116	2.5	3.1	354	4.0	4.7
Larynx	83	1.9	2.2	26	0.6	0.7	109	1.2	1.4
Leukemia	362	9.2	9.5	226	5.0	6.0	588	6.9	7.8
Lip, Oral Cavity and Pharynx	189	4.4	4.9	76	1.6	2.0	265	2.9	3.5
Liver and Intrahepatic Bile Duct	301	6.9	7.9	137	2.9	3.7	438	4.9	5.8
Multiple Myeloma and Immunoproliferative Neoplasms	164	4.0	4.3	109	2.3	2.9	273	3.1	3.6
Non-Hodgkin Lymphoma	300	7.4	7.8	253	5.4	6.7	553	6.4	7.3
Ovary	NA	NA	NA	427	9.0	11.4	428	4.7	5.6
Pancreas	515	12.1	13.5	421	8.9	11.2	936	10.4	12.3
Prostate	888	25.7	23.2	NA	NA	NA	888	10.8	11.7
Skin	220	5.2	5.7	86	1.9	2.3	306	3.4	4.0
Stomach	163	4.1	4.3	118	2.5	3.1	281	3.3	3.7
Trachea, Bronchus, and Lung	2,933	68.3	76.6	2,618	54.5	69.8	5,551	60.7	73.2
Other and Unspecified Cancers	1,092	26.9	28.5	836	17.9	22.3	1,928	22.1	25.4
Total	9,380	229.2	245.1	8,025	170.6	213.9	17,405	196.2	229.6

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 11. Cancer Mortality, by Cancer Type and Gender, Black Nevada Residents, 2002-2006

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	17	8.2	4.1	8	2.9	1.9	25	5.0	3.0
Brain and Other Central Nervous System	8	3.2	1.9	11	3.4	2.7	19	3.3	2.3
Breast	~	---	---	~	28.8	22.0	95	16.2	11.5
Cervix Uteri	NA	NA	NA	12	3.4	2.9	12	1.8	1.4
Colon, Rectum and Anus	70	28.7	16.8	59	19.4	14.3	129	23.3	15.6
Corpus Uteri and Uterus, Part Unspecified	NA	NA	NA	12	3.6	2.9	12	2.0	1.4
Esophagus	16	6.1	3.9	11	4.2	2.7	27	5.2	3.3
Hodgkin Lymphoma	0	0.0	0.0	~	---	---	~	---	---
Kidney and Renal Pelvis	16	6.0	3.9	8	2.3	1.9	24	3.9	2.9
Larynx	~	---	---	~	---	---	~	---	---
Leukemia	20	6.7	4.8	11	3.0	2.7	31	4.7	3.7
Lip, Oral Cavity and Pharynx	10	3.0	2.4	6	2.3	1.5	16	2.8	1.9
Liver and Intrahepatic Bile Duct	31	10.1	7.5	6	1.9	1.5	37	5.8	4.5
Multiple Myeloma and Immunoproliferative Neoplasms	10	4.5	2.4	22	7.4	5.3	32	5.9	3.9
Non-Hodgkin Lymphoma	14	4.3	3.4	14	5.5	3.4	28	5.4	3.4
Ovary	NA	NA	NA	22	7.6	5.3	22	4.2	2.7
Pancreas	48	18.8	11.6	45	15.8	10.9	93	17.1	11.2
Prostate	87	43.9	20.9	NA	NA	NA	87	18.2	10.5
Skin	0	0.0	0.0	~	---	---	~	---	---
Stomach	26	9.9	6.3	12	4.5	2.9	38	7.1	4.6
Trachea, Bronchus, and Lung	186	68.7	44.8	122	39.9	29.5	308	53.1	37.2
Other and Unspecified Cancers	77	27.9	18.5	70	22.7	16.9	147	25.1	17.7
Total	642	252.0	154.5	546	180.0	132.1	1,188	211.1	143.3

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 12. Cancer Mortality, by Cancer Type and Gender, American Indian/Alaska Native Nevada Residents, 2002-2006

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	11	14.8	13.3	11	8.1	6.8
Cervix Uteri	NA	NA	NA	0	0.0	0.0	0	0.0	0.0
Colon, Rectum and Anus	~	---	---	~	---	---	6	3.8	3.7
Corpus Uteri and Uterus, Part Unspecified	NA	NA	NA	~	---	---	~	---	---
Esophagus	~	---	---	0	0.0	0.0	~	---	---
Hodgkin Lymphoma	0	0.0	0.0	~	---	---	~	---	---
Kidney and Renal Pelvis	~	14.3	8.8	~	---	---	10	8.4	6.2
Larynx	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Leukemia	0	0.0	0.0	~	---	---	~	---	---
Lip, Oral Cavity and Pharynx	~	---	---	0	0.0	0.0	~	---	---
Liver and Intrahepatic Bile Duct	~	---	---	~	10.2	6.0	8	8.5	4.9
Multiple Myeloma and Immunoproliferative Neoplasms	~	---	---	~	---	---	~	---	---
Non-Hodgkin Lymphoma	~	---	---	~	---	---	~	---	---
Ovary	NA	NA	NA	0	0.0	0.0	0	0.0	0.0
Pancreas	0	0.0	0.0	~	---	---	~	---	---
Prostate	~	---	---	NA	NA	NA	~	---	---
Skin	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Stomach	~	---	---	~	---	---	~	---	---
Trachea, Bronchus, and Lung	18	32.0	22.7	11	21.1	13.3	29	26.9	17.9
Other and Unspecified Cancers	~	9.0	6.3	~	---	---	9	8.6	5.6
Total	52	107.0	65.6	48	82.6	58.0	100	93.7	61.8

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 13. Cancer Mortality, by Cancer Type and Gender, Asian Nevada Residents, 2002-2006

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	~	---	---	~	---	---	7	2.2	0.9
Brain and Other Central Nervous System	~	---	---	~	1.5	1.5	10	1.5	1.3
Breast	0	0.0	0.0	57	16.1	14.3	57	9.4	7.7
Cervix Uteri	NA	NA	NA	11	2.6	2.8	11	1.5	1.5
Colon, Rectum and Anus	28	13.0	8.2	44	15.4	11.0	72	14.5	9.7
Corpus Uteri and Uterus, Part Unspecified	NA	NA	NA	6	1.4	1.5	6	0.8	0.8
Esophagus	~	5.2	2.6	~	---	---	12	3.1	1.6
Hodgkin Lymphoma	~	---	---	0	0.0	0.0	~	---	---
Kidney and Renal Pelvis	10	3.6	2.9	6	2.6	1.5	16	3.0	2.2
Larynx	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Leukemia	13	6.6	3.8	18	5.9	4.5	31	6.2	4.2
Lip, Oral Cavity and Pharynx	5	1.8	1.5	9	2.4	2.3	14	2.1	1.9
Liver and Intrahepatic Bile Duct	30	10.8	8.7	29	9.7	7.3	59	10.2	7.9
Multiple Myeloma and Immunoproliferative Neoplasms	~	---	---	~	2.1	1.3	8	2.3	1.1
Non-Hodgkin Lymphoma	10	4.0	2.9	6	2.7	1.5	16	3.3	2.2
Ovary	NA	NA	NA	24	6.8	6.0	24	4.0	3.2
Pancreas	17	10.3	5.0	21	7.2	5.3	38	8.4	5.1
Prostate	21	15.8	6.1	NA	NA	NA	21	6.5	2.8
Skin	0	0.0	0.0	~	---	---	~	---	---
Stomach	21	12.2	6.1	11	3.4	2.8	32	7.0	4.3
Trachea, Bronchus, and Lung	84	37.6	24.5	79	23.4	19.8	163	29.2	21.9
Other and Unspecified Cancers	33	14.3	9.6	33	12.9	8.3	66	13.6	8.9
Total	293	144.0	85.3	372	118.9	93.1	665	129.2	89.5

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, 2002-2006

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	~	3.3	0.6	~	---	---	13	2.1	0.5
Brain and Other Central Nervous System	21	4.1	1.5	13	2.4	1.0	34	3.1	1.3
Breast	0	0.0	0.0	66	13.9	5.2	66	7.7	2.4
Cervix Uteri	NA	NA	NA	15	2.7	1.2	15	1.4	0.6
Colon, Rectum and Anus	46	17.8	3.2	40	10.1	3.1	86	13.0	3.2
Corpus Uteri and Uterus, Part Unspecified	NA	NA	NA	11	1.8	0.9	11	0.9	0.4
Esophagus	~	3.7	1.0	~	---	---	17	2.0	0.6
Hodgkin Lymphoma	~	---	---	0	0.0	0.0	~	---	---
Kidney and Renal Pelvis	~	4.2	1.0	~	---	---	18	2.1	0.7
Larynx	~	2.1	0.3	~	---	---	6	0.9	0.2
Leukemia	17	3.2	1.2	18	3.2	1.4	35	3.3	1.3
Lip, Oral Cavity and Pharynx	~	1.5	0.5	~	---	---	8	0.8	0.3
Liver and Intrahepatic Bile Duct	40	12.1	2.8	19	4.6	1.5	59	7.8	2.2
Multiple Myeloma and Immunoproliferative Neoplasms	13	3.1	0.9	9	2.4	0.7	22	2.7	0.8
Non-Hodgkin Lymphoma	21	6.3	1.5	16	3.6	1.3	37	4.6	1.4
Ovary	NA	NA	NA	21	3.5	1.7	21	1.8	0.8
Pancreas	43	13.6	3.0	26	6.4	2.0	69	9.3	2.5
Prostate	49	26.5	3.4	NA	NA	NA	49	10.3	1.8
Skin	~	---	---	~	---	---	~	---	---
Stomach	28	6.2	1.9	15	3.3	1.2	43	4.6	1.6
Trachea, Bronchus, and Lung	106	32.1	7.3	67	20.2	5.3	173	25.9	6.4
Other and Unspecified Cancers	61	13.9	4.2	50	11.8	3.9	111	13.0	4.1
Total	500	154.0	34.6	398	93.0	31.3	898	117.8	33.1

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, 2002-2006

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	43,272	40,887	7,249	6,895	1,123	1,100	6,201	5,861	33,318	32,103	91,162	86,846	178,008
1-4	166,591	158,083	27,923	26,660	4,556	4,321	23,536	22,467	127,254	121,464	349,861	332,995	682,855
5-14	447,850	424,770	73,738	70,587	12,483	12,009	49,263	47,032	276,435	260,702	859,770	815,099	1,674,869
15-24	475,535	451,971	70,732	68,133	13,794	13,224	50,997	52,539	281,926	240,634	892,983	826,501	1,719,484
25-34	486,081	469,683	57,908	58,276	11,717	12,338	58,526	64,682	302,018	236,257	916,249	841,237	1,757,486
35-44	593,060	554,760	64,462	60,408	12,551	13,004	54,699	66,525	216,558	175,743	941,330	870,440	1,811,770
45-54	603,369	574,661	53,661	52,512	10,281	11,663	45,458	62,420	117,186	105,106	829,956	806,362	1,636,318
55-64	484,380	483,567	29,889	34,744	7,162	8,259	29,367	41,949	52,727	55,026	603,525	623,544	1,227,069
65-74	319,964	320,450	19,556	21,323	3,694	4,149	16,996	24,204	25,021	28,985	385,232	399,110	784,342
75-84	173,554	208,867	9,038	10,795	1,532	1,930	7,405	10,309	9,810	12,668	201,340	244,570	445,910
85+	33,373	64,727	1,362	2,951	331	715	910	1,376	1,397	2,775	37,372	72,545	109,917
Total	3,827,029	3,752,427	415,518	413,285	79,224	82,712	343,358	399,363	1,443,650	1,271,461	6,108,779	5,919,248	12,028,028

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		
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		9590-9989
Palate	C05		9050-9055
Other and Unspecified Parts of the Mouth	C06		9140
Nasopharynx	C11		
Tonsil	C09		
Oropharynx	C10		
Pyriiform Sinus	C12		
Hypopharynx	C13		
Other and Unspecified Oral Cavity and Pharynx	C14		
Digestive System			
Esophagus	C15		
Stomach	C16		
Small Intestine	C17		
Colon (excluding Rectum)			
Cecum	C18.0		
Appendix	C18.1		
Ascending Colon	C18.2		9590-9989
Hepatic Flexure	C18.3		9050-9055
Transverse Colon	C18.4		9140

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