Cancer Incidence and Mortality in Nebraska: 2012

June, 2015

The Nebraska Cancer Registry contains a wealth of information, not all of which is included in this report:

What types of data are available?

- Demographic: age at diagnosis, gender, race/ethnicity, county of residence
- Medical history: date of diagnosis, primary site, cell type, stage of disease at diagnosis
- Therapy: surgery, radiation therapy, chemotherapy, immunotherapy, hormone therapy
- Follow up: length of survival, cause of death

Who may request data from the Nebraska Cancer Registry?

- Medical Researchers
- Health Planners
- Market Researchers
- Health Care Facility Administrators
- Physicians
- Nurses
- Health Care Facility Cancer Committees
- Oncology Conference Planners and Speakers
- Patient Care Evaluators
- Pharmaceutical Companies
- Government Officials
- Concerned Citizens
- Students

How do I make a request?

Contact the Office of Health Statistics at the
Nebraska Department of Health and Human Services
Division of Public Health
P.O. Box 95026, Lincoln, NE 68509-5026
Phone 402-471-2180, Monday-Friday between 8 AM and 5 PM

Please note: To comply with confidentiality regulations, the Nebraska Department of Health and Human Services reserves the right to limit the amount and type of data that are released in response to a request.

NEBRASKA CANCER REGISTRY
2012 ANNUAL REPORT

Nebraska Department of Health and Human Services

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EXECUTIVE SUMMARY

The Cancer Incidence and Mortality in Nebraska annual report for 2012 provides a comprehensive overview of the impact of cancer in Nebraska. The purpose of the report is to present the most recent statistics that describe cancer incidence and mortality in Nebraska, for the entire state and by county and region; in-depth analyses of selected cancer sites; and comparisons of trends between Nebraska and the United States. Findings from the report include:

- ***Overall Cancer Incidence:*** In 2012, there were 8,964 diagnoses of cancer among Nebraska residents. This number is slightly lower than the number of cancers that were diagnosed in 2011 (9,174).

- ***Cancer Incidence by Gender:*** In 2012, prostate, lung, and colorectal cancers were the most frequently diagnosed cases among Nebraska men, while breast, lung, and colorectal cancers were the most frequently diagnosed cases among Nebraska women. Taken together, these cancers accounted for about half of all cancer cases diagnosed among Nebraska residents in 2012.

- ***Cancer Incidence by Age:*** During the past five years (2008-2012), more than half (56%) of all cancers in Nebraska occurred among people 65 years of age and older. Less than 1% were diagnosed among children and adolescents. The average age at diagnosis was 65.7 years of age.

- ***Cancer Incidence by Site:*** During the past five years (2008-2012), cancers of the liver, lung, ovaries, prostate, and stomach and melanoma of the skin were diagnosed significantly less often among Nebraska residents when compared to the rest of the U.S., while colorectal and endometrial cancers were diagnosed significantly more often.

- ***Cancer Incidence by Race:*** During the past decade (2003-2012), African-Americans in Nebraska were significantly more likely to be diagnosed with myeloma, colorectal, lung, pancreas, prostate, stomach, and liver cancers than were whites. Liver cancer diagnoses were also significantly more frequent among Native Americans, Asian-American/Pacific Islanders and Hispanics compared to whites. Hispanics were also more likely to be diagnosed with stomach cancer when compared with whites.

- ***Overall Cancer Mortality:*** In 2012, 3,481 Nebraska residents died from cancer, which is a slight increase from the 2011 cancer death total of 3,403. This is the fourth year in a row that cancer has surpassed heart disease as Nebraska's leading cause of death.

- ***Cancer Mortality by Site:*** During the past five years (2008-2012), deaths from cancers of the stomach, lung, and female breast occurred significantly less often among Nebraska residents when compared to the rest of the U.S., while deaths from invasive brain tumors occurred significantly more often. Lung cancer was the leading cause of cancer mortality in Nebraska in 2012, accounting for 25% of all cancer deaths, followed by colorectal cancer. During the past two decades,

prostate and female breast cancer mortality rates in Nebraska have both declined by about 40%, which is consistent with national trends.

- ***Cancer Incidence by County:*** Below are the Nebraska counties where cancer incidence during 2008-2012 was significantly different (p<.01) from the state:

Significantly lower ▼		*Significantly higher ▲*	
County	*Primary Sites*	*County*	*Primary Sites*
Brown	Female breast	Douglas	Lung & bronchus
Cedar	Lung & bronchus, female breast, non-Hodgkin lymphoma (NHL)	Madison	Prostate
Cherry	Urinary bladder, melanoma	Saline	Colon & rectum
Dawson	NHL		
Dodge	Melanoma		
Lancaster	Prostate		
Merrick	NHL		
Perkins	Female breast		
Pierce	Female breast, kidney & renal pelvis		
Rock	Female breast		
Seward	Lung & bronchus		
Sheridan	Lung & bronchus, urinary bladder		
Stanton	Lung & bronchus, prostate		
Wayne	Lung & bronchus		
York	Lung & bronchus, colon & rectum		

- ***Annual Report Special Topic:*** The special topic for this report is pediatric cancer. For this report, pediatric cancers are defined as those cancers occurring among anyone under the age of 20. During the past five years (2008-2012), pediatric cancers accounted for 503 invasive cases and 57 benign brain and central nervous system tumors among Nebraska residents, along with 74 deaths. State and national trends of the past decade show increasing pediatric cancer incidence, although Nebraska's rates have increased more sharply than U.S. rates.

INTRODUCTION

This publication represents the 26th annual statistical summary of the Nebraska Cancer Registry (NCR) since it began collecting data in 1987. The purpose of this report is to present the registry's most recent data to the citizens of the State of Nebraska. The majority of the data cover cancer diagnoses and cancer deaths that occurred between January 1, 2012 and December 31, 2012, as well as during the past five years (January 1, 2008-December 31, 2012).

The NCR was founded in 1986, when the Nebraska Unicameral authorized funding for a state cancer registry using a portion of funds generated by the state's cigarette tax. The establishment of the registry successfully combined the efforts of many Nebraska physicians, legislators, concerned citizens, and the Nebraska Medical Foundation, all of whom had worked for years toward this goal. The Nebraska Medical Foundation also helped establish the registry with financial assistance. Since 1994, the NCR has received additional funding from the Centers for Disease Control and Prevention (CDC).

The NCR is managed by the Nebraska Department of Health and Human Services (DHHS) in Lincoln. However, registry data are collected and edited by NCR staff in Omaha, under contract to the Nebraska Medical Foundation. Analysis of registry data and preparation of the annual statistical report are the responsibility of DHHS.

The purpose of the registry is to gather data that describe how many Nebraska residents are diagnosed with cancer, what types of cancer they have, how far the disease has advanced at the time of diagnosis, what types of treatment they receive, and how long they survive after diagnosis. These data are put to a variety of uses both inside and outside of DHHS. Within DHHS, they are used to identify geographic patterns and long-term trends, to compare Nebraska's cancer experience with the rest of the nation, to investigate reports of possible cancer clusters, and to help plan and evaluate cancer control programs. Outside of DHHS, the registry has furnished data to many individuals, institutions, and organizations, including the North American Association of Central Cancer Registries (NAACCR), the National Cancer Institute (NCI), the American Cancer Society (ACS), CDC, and the University of Nebraska Medical Center. The NCR also contributes its data to several national cancer incidence databases (see page 5). In recognition of the accuracy and completeness of the data that it has collected, NAACCR has awarded the NCR its gold standard certificate of data quality for 18 consecutive years (1995-2012).

All individual records in the cancer registry are kept in strict confidence as prescribed by both state and federal law. The NCR follows all of the privacy safeguards in the Health Insurance Portability and Accountability Act (HIPAA), although some of the procedural requirements do not apply to the registry.

DHHS welcomes inquiries about cancer from the public for aggregate statistics or general information from the registry. To obtain cancer data or information about the registry not included in this report, please refer to the instructions provided inside the front cover.

An electronic copy of this report is available on the DHHS website at http://dhhs.ne.gov/publichealth/Pages/ced_cancer_index.aspx

METHODOLOGY

Data Collection and Management

The NCR gathers data on Nebraska residents diagnosed and treated for invasive and in situ tumors. The registry does not include benign tumors (except for benign brain and other nervous system tumors, which became reportable as of January 1, 2004), benign polyps, and basal cell and squamous cell carcinomas of the skin. Information gathered from each case includes the patient's name, address, birth date, race, gender, and Social Security number; date of diagnosis; primary site of the cancer (coded according to the International Classification of Diseases for Oncology, 3rd edition [ICD-O-3]); stage of disease at diagnosis; facility where the initial diagnosis was made; basis of staging; method of diagnostic confirmation; histological type (also classified according to the ICD-O-3); and initial treatment. The registry does not actively collect follow-up information on registered cases, but most facilities provide it, and it includes the date of last contact with the patient, status of disease, type of additional treatment, and quality of survival. Death of registered cases is ascertained using death certificates available at DHHS and from the National Death Index. The registry collects information on cancer cases from every hospital in the state, excluding facilities operated by the U.S. Department of Veterans Affairs. The registry also includes Nebraska residents who are diagnosed with and/or treated for cancer out of state, as well as cases identified through pathology laboratories, outpatient treatment facilities, physician offices, and death certificates.

Nebraska cancer mortality data are obtained from death certificates on file with DHHS. Mortality data are available for every Nebraska resident who dies from cancer, whether death occurs in or outside of Nebraska. The mortality data presented in this report are limited to those deaths where cancer is listed as the underlying (i.e., primary) cause of death. Causes of death are coded according to the Tenth Edition of the International Classification of Disease (ICD-10).

The U.S. cancer incidence data presented in this report were compiled by CDC's National Program of Cancer Registries (NPCR) and, for benign brain and other nervous system tumors, NCI's Surveillance, Epidemiology, and End Results (SEER) Program. NPCR provides support for cancer registries in 45 states (including Nebraska), the District of Columbia, and some U.S. territories, and covers 96% of the total U.S. population. The mortality data presented in this report were compiled by the National Center for Health Statistics (NCHS) and include all cancer deaths occurring in the United States. Incidence data from NPCR and mortality data from NCHS are available through 2012.

Confidentiality

All data obtained by the NCR from the medical records of individual patients are held in strict confidence by DHHS. As specified in state statute, researchers may obtain case-specific and/or patient-identifiable information from the registry by submitting a written application that describes how the data will be used for scientific study. In situations where contact with a patient or patient's family is proposed, the applicant must substantiate the need for any such contact and submit approval from an Institutional Review Board. In addition, before any individual's name can be given to a researcher, the registry will obtain

permission from the individual that they are willing to be a research subject. Upon favorable review by DHHS, the applicant must also agree to maintain the confidentiality and security of the data throughout the course of the study, to destroy or return the registry data at the end of the study and to present material to the registry prior to publication to assure that no identifiable information is released.

Aggregate data (i.e., statistical information) from the registry are considered open to the public and are available upon request. Details on how to obtain such data are provided inside the front cover of this report.

Quality Assurance

The NCR and reporting facilities spend a great deal of time and energy to ensure that the information they gather is both accurate and complete, and these efforts have met with consistent success. For 18 consecutive years (1995-2012), the NCR has met all of the criteria necessary to earn the gold standard certificate of data quality awarded by NAACCR, which is the accrediting body for all U.S. and Canadian state and provincial cancer registries. These criteria include:

1) Completeness of case ascertainment–-The registry must find at least 95% of the total number of cases that are estimated to have occurred.

2) Completeness of information–-The proportion of registry cases missing information on age at diagnosis, gender, and county of residence must be no more than 2%, and the proportion missing information on race must be no more than 3%.

3) Data accuracy–-Error rates based on edit checks of selected data items must be no greater than 1%.

4) Timeliness–-All data for a single calendar year must be submitted to NAACCR for review no more than 23 months after the year has ended.

Gold standard certification also requires that all cases pass strict edits and that the proportion of registry cases found solely through a review of death certificates must be no more than 3%. Lastly, the proportion of duplicate cases in the registry must be no more than one per 1,000.

Since the NCR has achieved the highest quality standards, its data are now included in several national cancer incidence databases. These databases compile information from cancer registries throughout the United States and Canada that meet the same data quality standards as the NCR. These databases include:

1) *Cancer in North America* (http://www.naaccr.org)

2) *United States Cancer Statistics* (http://apps.nccd.cdc.gov/uscs)

3) *Cancer Facts & Statistics* (http://www.cancer.org/research/cancerfactsstatistics/index)

4) *Cancer Control PLANET* (http://cancercontrolplanet.cancer.gov/)

Definitions

Several technical terms are used in presenting the information in this report. The following definitions are provided here to assist the reader.

Incidence rate
Incidence rate is the number of new cases of a disease that occur within a specific population during a given time period, divided by the size of the population. For example, if 10 residents of a county with 20,000 residents are diagnosed with colorectal cancer during a single year, then the incidence rate for that county for that year is .0005. Since cancer incidence rates are usually expressed per 100,000 population, this figure is then multiplied by 100,000 to yield a rate of 50 per 100,000 per year.

Mortality rate
Mortality rate is the number of deaths that occur within a specific population during a given time period, divided by the size of the population. Like incidence rates, mortality rates are usually expressed as the number of deaths per 100,000 population per year.

Age-adjusted rate
Age-adjustment is a simple mathematical procedure that makes it possible to compare rates between populations that have different age distributions, and to compare rates within a single population over time. All of the incidence and mortality rates in this report are age-adjusted using the U.S. population in 2000 as the standard. Statewide and national rates are age-adjusted using 19 age groups (<1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+ years), while county and regional rates are age-adjusted using 11 age groups (<1, 1-4, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84, 85+ years).

Stage of Disease at Diagnosis
In situ
Tumors diagnosed as in situ consist of invasive cells that are growing in place. In situ tumors are confined to the cell group of origin, and have not penetrated the supporting structure of the organ on which they arose.

Invasive
Tumors diagnosed as invasive have spread beyond the cell group of the organ where they began, and may have spread further. The organ where a malignancy began is also known as the primary site. Invasive tumors are subdivided into three categories:

> Localized--A localized invasive tumor has not spread beyond the organ where it started.
>
> Regional--A regional invasive tumor has spread beyond the organ where it began, by direct extension to immediately adjacent organs or tissues and/or by spread to regional lymph nodes.
>
> Distant--A distant invasive tumor has spread beyond the primary site to distant parts of the body.

Data Analysis

All of the rates presented in this report were calculated using Vintage 2013 bridged-race population estimates developed by the U.S. Census Bureau and the National Center for Health Statistics. Incidence and mortality rates for multiple years (2008-2012) (see Tables 1, 2, 5, 6, 9-20) were calculated using population estimates for the years 2008-2012 combined, while rates for 2003-2012 (see Tables 3 and 7) were calculated using population estimates for the years 2003-2012 combined. Rates that are based on more than one year of data should be interpreted as an average annual rate.

All of the data presented in this report are current through December 31, 2014. However, because some cases diagnosed during or even before 2012 may not yet have been reported to the registry, the incidence data presented in this report should be considered subject to change. **In addition, the incidence data reported in previous editions of this report should no longer be considered complete.**

Internet users should also be aware that the cancer statistics for Nebraska that are published in this report and those that are posted on non-DHHS websites (see page 5) may differ. Some discrepancies may be the result of differences in the dates at which the data were compiled. As noted above, Nebraska incidence data published in this report include all cases reported to the registry through December 31, 2014; Nebraska data available on the CDC/NPCR website include cases that were reported through November 30, 2013.

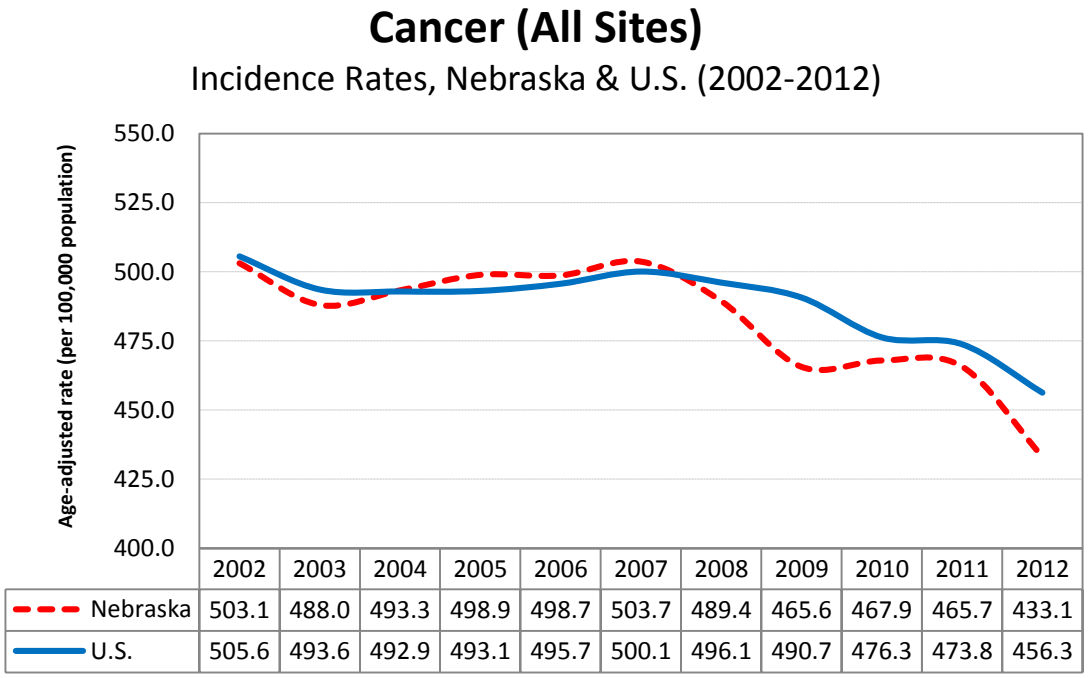
With the exception of bladder cancer, in situ female breast cancer, and benign brain tumors, all of the site-specific incidence rates in this report were calculated with invasive cases only, to maintain comparability with statistics from the NPCR and other cancer registries throughout the United States. For bladder cancer, incidence rates were calculated with invasive and in situ cases combined. All incidence and mortality rates in this report were calculated per 100,000 population, and were age-adjusted according to the age distribution of the population of the United States in 2000. Statewide rates were also calculated for males and females separately, and for both sexes combined. Rates based on fewer than three events are not presented due to their unreliability. Also, the number of cases for any county with fewer than three cases is not shown in order to reduce the possibility of identifying a specific person.

To evaluate the statistical significance of the differences between rates, confidence intervals for rates were calculated using the formula $CI = r \pm (RC \times SE)$, where CI = confidence interval, r = rate, RC = 1.96 (for 95% confidence intervals) or 2.58 (for 99% confidence intervals), and SE = standard error. The standard error for a rate was determined by dividing the rate by the square root of the number of events (cancer diagnoses or deaths). A statistically significant difference exists and is indicated in those instances where the confidence intervals of a pair of rates being compared to each other do not overlap.

CANCER INCIDENCE IN NEBRASKA

The Nebraska Cancer Registry recorded 8,964 diagnoses of cancer among Nebraska residents in 2012, a decrease from the 9,038 diagnoses recorded in 2011. The 2012 number translates into an incidence rate of 433.1 cases per 100,000 population. By primary site, cancers of the lung, breast, prostate, colon and rectum occurred most frequently, accounting for about half (49.8%) of all diagnoses. Recent registry experience suggests that as the registry continues to record cases, the final count for 2012 will probably increase by 100 to 300 cases.

Table 1 presents the number and rate of cancers diagnosed among Nebraska residents during 2012 and 2008-2012, for all sites combined and for cancers of specific sites. The most current estimates of U.S. cancer incidence, which cover the years 2008-2012, are also included. Comparison of the most recent state and national incidence rates for the past five years shows significant differences ($p<.01$) for cancers of the prostate, lung, stomach, liver, and ovaries and melanoma of the skin (Nebraska rates lower than the U.S.) and for colorectal cancer and invasive brain tumors (Nebraska rates higher than the U.S.). Table 2 presents the number of cancers diagnosed in Nebraska during 2008-2012 by age at diagnosis. Table 3 presents Nebraska incidence data by race and ethnicity for the years 2003-2012. Table 4 presents the number of cancers diagnosed and incidence rates for 2012 and 2008-2012 by county of residence, with comparable Nebraska and U.S. rates included. The graph below presents the annual incidence rates for all cancers for Nebraska and the United States since 2002.



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	503.1	488.0	493.3	498.9	498.7	503.7	489.4	465.6	467.9	465.7	433.1
U.S.	505.6	493.6	492.9	493.1	495.7	500.1	496.1	490.7	476.3	473.8	456.3

TABLE 1: Cancer Incidence
Number of Cases and Rates, by Selected Primary Site and Gender
Nebraska (2012 and 2008-2012) & U.S. (2008-2012)

Site	NEBRASKA 2012						NEBRASKA 2008-2012						U.S. 2008-2012		
	Male		Female		Total		Male		Female		Total		Male	Female	Total
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	Rate	Rate	Rate
All Sites	4,627	483.2	4,337	398.5	8,964	433.1	23,049	502.0	22,242	417.3	45,292	451.9	522.8	418.8	461.9
Oral Cavity & Pharynx	142	14.2	63	5.6	205	9.6	775	16.3	351	6.4	1,126	11.0	16.9	6.3	11.3
Esophagus	97	10.0	20	1.7	117	5.5	421	8.9	102	1.8	523	5.1	8.3	1.8	4.7
Stomach	60	6.1	25	2.2	85	4.0	348	7.7	172	3.1	520	5.1	9.2	4.6	6.6
Small Intestine	29	2.9	11	1.0	40	1.9	125	2.7	77	1.4	202	2.0	2.6	1.9	2.2
Colon & Rectum (Colorectal)	466	49.8	419	37.3	885	43.0	2,359	52.0	2,308	41.1	4,667	46.1	48.3	36.6	41.9
Liver & Intrahepatic Bile Duct	88	8.5	28	2.5	116	5.2	402	8.4	153	2.9	556	5.4	11.4	3.9	7.4
Pancreas	149	15.7	122	10.5	271	12.9	622	13.5	593	10.4	1,215	11.9	14.0	10.9	12.3
Larynx	60	5.8	12	1.1	72	3.3	270	5.6	69	1.3	339	3.3	6.3	1.4	3.6
Lung & Bronchus	670	70.8	562	49.8	1,232	59.1	3,187	70.8	2,741	50.0	5,928	58.9	76.6	54.1	63.7
Soft Tissue	41	4.5	30	2.6	71	3.5	173	3.8	135	2.6	308	3.1	3.9	2.8	3.3
Melanoma of the Skin	206	21.3	150	15.0	356	17.6	987	21.7	794	16.1	1,781	18.4	25.5	16.0	19.9
Breast (invasive cases only)	9	0.9	1,275	118.2	1,284	62.5	57	1.3	6,415	122.7	6,472	65.3	1.4	123.0	66.3
Uterine Cervix	---	---	58	6.7	---	---	---	---	303	6.9	---	---	---	7.7	---
Uterine Corpus & Unspecified	---	---	288	25.9	---	---	---	---	1,407	26.2	---	---	---	25.3	---

TABLE 1 (continued): Cancer Incidence

Site	NEBRASKA 2012						NEBRASKA 2008-2012						U.S. 2008-2012		
	Male		Female		Total		Male		Female		Total		Male	Female	Total
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	Rate	Rate	Rate
Ovary	---	---	116	10.8	---	---	---	---	561	10.5	---	---	---	11.8	---
Prostate	1,068	106.4	---	---	---	---	5,954	125.7	---	---	---	---	131.9	---	---
Testis	60	6.8	---	---	---	---	282	6.4	---	---	---	---	5.5	---	---
Urinary Bladder	313	34.2	93	8.4	406	19.5	1,531	34.8	465	8.2	1,996	19.8	36.5	9.0	20.8
Kidney & Renal Pelvis	194	19.7	115	10.7	309	14.8	1,029	21.8	627	11.8	1,656	16.5	21.5	11.3	16.0
Brain & Other Nervous System (invasive cases only)	74	8.1	57	5.5	131	6.8	381	8.4	326	6.4	707	7.4	7.8	5.6	6.6
Thyroid Gland	70	7.6	199	21.0	269	14.3	293	6.3	969	21.0	1,262	13.7	6.8	20.2	13.6
Hodgkin Lymphoma	28	3.1	24	2.7	52	2.9	160	3.5	126	2.8	286	3.1	3.1	2.4	2.8
Non-Hodgkin Lymphoma	199	21.3	187	16.5	386	18.6	1,048	23.2	968	17.7	2,016	20.1	23.2	16.0	19.2
Myeloma	84	8.9	49	4.2	133	6.3	357	7.9	272	4.8	629	6.2	7.7	5.1	6.2
Leukemia	161	17.5	105	9.2	266	13.2	751	16.7	574	10.3	1,325	13.2	17.0	10.4	13.3
Brain & Other Nervous System (benign & uncertain cases only)	71	7.5	102	9.4	173	8.5	329	7.1	594	11.6	923	9.5	8.1	14.0	11.3
Breast (in situ cases only)	1	0.1	292	27.9	293	14.4	5	0.1	1,469	29.1	1,474	15.2	0.2	31.0	16.4

Total rates are per 100,000 population and are age-adjusted to the 2000 U.S. population
Gender-specific rates are per 100,000 male or female population and are age-adjusted to the 2000 U.S. population

TABLE 2: Cancer Incidence
Number of Cases and Percentage Distribution, by Selected Primary Site and Age at Diagnosis
Nebraska (2008-2012)

	0-17 Yrs.		18-44 Yrs.		45-64 Yrs.		65+ Yrs.		TOTAL	
	Number	%	Number	%	Number	%	Number	%	Number	%
All Sites	427	0.9	3,175	7.0	16,164	35.7	25,526	56.4	45,292	100.0
Oral Cavity & Pharynx	3	0.3	71	6.3	515	45.7	537	47.7	1,126	100.0
Esophagus	0	0.0	12	2.3	201	38.4	310	59.3	523	100.0
Stomach	0	0.0	27	5.2	173	33.3	320	61.5	520	100.0
Small Intestine	0	0.0	11	5.4	87	43.1	104	51.5	202	100.0
Colon & Rectum (Colorectal)	2	0.0	200	4.3	1,410	30.2	3,055	65.5	4,667	100.0
Liver & Intrahepatic Bile Duct	5	0.9	22	4.0	256	46.0	273	49.1	556	100.0
Pancreas	1	0.1	20	1.6	359	29.5	835	68.7	1,215	100.0
Larynx	0	0.0	6	1.8	160	47.2	173	51.0	339	100.0
Lung & Bronchus	0	0.0	70	1.2	1,685	28.4	4,173	70.4	5,928	100.0
Soft Tissue	18	5.8	60	19.5	110	35.7	120	39.0	308	100.0
Melanoma of the Skin	2	0.1	300	16.8	734	41.2	745	41.8	1,781	100.0
Female Breast (invasive cases only)	0	0.0	593	9.2	2,850	44.4	2,972	46.3	6,415	100.0
Uterine Cervix	1	0.3	136	44.9	119	39.3	47	15.5	303	100.0
Uterine Corpus & Unspecified	0	0.0	96	6.8	752	53.4	559	39.7	1,407	100.0
Ovary	3	0.5	54	9.6	230	41.0	274	48.8	561	100.0
Prostate	0	0.0	14	0.2	2,406	40.4	3,534	59.4	5,954	100.0
Testis	9	3.2	210	74.5	56	19.9	7	2.5	282	100.0
Urinary Bladder	0	0.0	38	1.9	447	22.4	1,511	75.7	1,996	100.0
Kidney & Renal Pelvis	24	1.4	104	6.3	694	41.9	834	50.4	1,656	100.0
Brain & Other Nervous System (invasive cases only)	101	14.3	114	16.1	208	29.4	284	40.2	707	100.0
Thyroid Gland	17	1.3	430	34.1	557	44.1	258	20.4	1,262	100.0
Hodgkin Lymphoma	36	12.6	133	46.5	71	24.8	46	16.1	286	100.0
Non-Hodgkin Lymphoma	28	1.4	140	6.9	629	31.2	1,219	60.5	2,016	100.0
Myeloma	0	0.0	16	2.5	208	33.1	405	64.4	629	100.0
Leukemia	98	7.4	112	8.5	361	27.2	754	56.9	1,325	100.0
Brain & Other Nervous System (benign & uncertain cases)	44	4.8	145	15.7	365	39.5	369	40.0	923	100.0
Female Breast (in situ cases only)	0	0.0	132	9.0	779	53.0	558	38.0	1,469	100.0

NOTE: Due to rounding, percentages may not sum to 100.0.

TABLE 3: Cancer Incidence
Number of Cases and Rates, All Sites and Top Ten Primary Sites, by Race and Ethnicity
Nebraska (2003-2012)

	White			African-American			Native American			Asian/Pacific Islander			Hispanic		
	Site	Number	Rate	Site	Number	Rate	Site	Number	Rate	Site	Number	Rate	Site	Number	Rate
	All Sites	85,366	461.9	All Sites	2,776	506.0	All Sites	372	340.9	All Sites	546	284.4	All Sites	1,597	273.6
Rank															
1	Female Breast	11,934	123.7	Prostate	459	187.0	Female Breast	58	87.1	Female Breast	76	61.8	Female Breast	196	61.3
2	Prostate	11,850	138.6	Lung & Bronchus	420	82.4	Lung & Bronchus	44	55.3	Colon & Rectum	76	44.7	Prostate	156	72.9
3	Lung & Bronchus	11,472	61.6	Female Breast	375	122.4	Colon & Rectum	39	36.3	Lung & Bronchus	71	39.8	Colon & Rectum	139	28.2
4	Colon & Rectum	9,524	50.4	Colon & Rectum	325	65.8	Kidney & Renal Pelvis	33	26.8	Prostate	42	62.7	Lung & Bronchus	121	29.3
5	Urinary Bladder	3,914	20.7	Kidney & Renal Pelvis	111	20.5	Prostate	24	58.0	Liver & Intrahepatic Bile Duct	32	16.2	Kidney & Renal Pelvis	92	14.9
6	Non-Hodgkin Lymphoma	3,803	20.6	Pancreas	90	17.8	Non-Hodgkin Lymphoma	18	11.5	Thyroid	32	10.0	Thyroid	88	10.3
7	Melanoma	2,984	16.8	Non-Hodgkin Lymphoma	86	14.7	Liver & Intrahepatic Bile Duct	17	15.0	Oral Cavity & Pharynx	25	12.2	Non-Hodgkin Lymphoma	76	12.4
8	Kidney & Renal Pelvis	2,868	15.5	Liver & Intrahepatic Bile Duct	81	12.9	Oral Cavity & Pharynx	11	10.9	Non-Hodgkin Lymphoma	22	10.0	Leukemia	68	6.3
9	Uterine Corpus & Unspecified	2,665	27.1	Myeloma	70	13.5	Leukemia	10	4.8	Kidney & Renal Pelvis	14	8.3	Liver & Intrahepatic Bile Duct	54	10.9
10	Leukemia	2,582	14.0	Urinary Bladder	67	13.6	Ovary	9	16.4	Leukemia	14	5.7	Stomach	53	9.4

Rates are per 100,000 population, excluding gender-specific sites (prostate, female breast, ovary), which are per 100,000 male or female population. All rates are age-adjusted to the 2000 U.S. population.

TABLE 4: Cancer (All Sites) Incidence
Number of Cases and Rates, by County of Residence
Nebraska (2012 and 2008-2012) & U.S. (2012 and 2008-2012)

	2012		2008-2012	
	# Cases	Rate	# Cases	Rate
U.S.	1,529,078	440.3	7,736,682	461.9
NEBRASKA	8,964	433.1	45,291	451.9
COUNTY				
ADAMS	173	460.6	912	493.8△
ANTELOPE	45	466.4	232	482.3
ARTHUR	0	0.0	6	179.0▼
BANNER	*	*	12	203.3▼
BLAINE	3	315.4	12	383.0
BOONE	43	604.1	207	518.5
BOX BUTTE	60	468.1	307	442.2
BOYD	16	416.1	67	385.3
BROWN	21	468.6	94	364.3▽
BUFFALO	209	431.6	1,031	447.4
BURT	53	488.8	267	497.2
BUTLER	46	403.6	240	406.4
CASS	143	478.2	709	482.5
CEDAR	36	255.0▼	225	337.7▼
CHASE	24	423.9	139	469.0
CHERRY	38	497.9	168	404.1
CHEYENNE	51	414.3	269	439.1
CLAY	44	513.5	225	518.9
COLFAX	59	510.1	229	400.8
CUMING	43	314.9▽	252	378.4▼
CUSTER	60	397.4	348	442.5
DAKOTA	87	416.9	412	404.3▽
DAWES	45	409.2	199	378.0▽
DAWSON	96	349.8▽	561	419.3
DEUEL	11	349.2	65	410.6
DIXON	33	391.5	183	447.8
DODGE	234	493.1	1,192	493.6△
DOUGLAS	2,362	459.3	11,865	482.8▲
DUNDY	16	470.2	66	424.2
FILLMORE	43	472.2	188	441.3
FRANKLIN	16	277.6▽	92	342.3▼
FRONTIER	14	361.6	85	462.3
FURNAS	41	593.7	189	498.6
GAGE	144	456.4	737	470.2
GARDEN	18	467.3	80	424.6
GARFIELD	16	444.8	85	490.9
GOSPER	10	315.1	69	441.1
GRANT	4	665.6	17	474.5
GREELEY	16	420.2	88	428.6
HALL	313	476.4	1,556	488.9△
HAMILTON	59	513.0	244	422.4
HARLAN	20	326.0	127	455.5
HAYES	4	199.3▽	24	306.7▽
HITCHCOCK	30	761.3△	120	514.4
HOLT	66	421.6	313	412.3
HOOKER	9	676.7	34	463.9
HOWARD	40	471.3	196	466.5
JEFFERSON	47	396.8	233	387.5▽

TABLE 4 (continued): Cancer (All Sites) Incidence

	2012		2008-2012	
COUNTY	# Cases	Rate	# Cases	Rate
JOHNSON	32	445.0	158	441.8
KEARNEY	38	481.5	195	444.5
KEITH	48	346.6	264	422.9
KEYA PAHA	8	590.3	25	374.0
KIMBALL	26	426.0	124	414.4
KNOX	56	449.8	303	465.8
LANCASTER	1,147	399.4▽	5,910	432.9▽
LINCOLN	231	517.1△	1,046	476.5
LOGAN	4	351.7	27	502.9
LOUP	7	549.9	34	618.5
McPHERSON	*	*	8	197.8▼
MADISON	175	417.3	964	475.7
MERRICK	43	385.1	244	459.7
MORRILL	33	469.1	153	448.3
NANCE	15	253.2▼	112	410.5
NEMAHA	46	506.4	202	421.3
NUCKOLLS	29	429.6	161	432.7
OTOE	86	419.0	428	411.6
PAWNEE	22	469.8	104	427.8
PERKINS	11	283.6	73	328.7▼
PHELPS	46	369.7	259	422.6
PIERCE	39	419.1	205	433.2
PLATTE	148	384.1	806	432.1
POLK	33	419.9	171	413.5
RED WILLOW	65	423.9	337	442.1
RICHARDSON	49	362.3	295	452.4
ROCK	11	541.9	56	504.6
SALINE	90	567.9△	428	532.7▲
SARPY	676	465.1	3,112	471.4
SAUNDERS	113	412.6	569	438.8
SCOTTSBLUFF	161	343.0▼	982	423.2
SEWARD	86	430.8	449	454.9
SHERIDAN	24	296.8▽	145	363.1▼
SHERMAN	16	380.8	103	414.5
SIOUX	6	300.4	20	186.4▼
STANTON	15	196.1▼	81	223.6▼
THAYER	41	449.3	204	445.5
THOMAS	6	649.2	28	504.7
THURSTON	40	590.1	151	455.8
VALLEY	19	327.5	121	347.9▼
WASHINGTON	113	444.8	524	438.3
WAYNE	38	388.5	194	392.2▽
WEBSTER	21	365.5	155	503.7
WHEELER	7	502.4	24	375.9
YORK	80	430.7	366	398.3▽

*Number and rate are not shown if based on fewer than three cases
Rates are per 100,000 population and are age-adjusted to the 2000 U.S. population

▽county rate is significantly lower than the state rate (95% confidence level)
▼county rate is significantly lower than the state rate (99% confidence level)
△county rate is significantly higher than the state rate (95% confidence level)
▲county rate is significantly higher than the state rate (99% confidence level)

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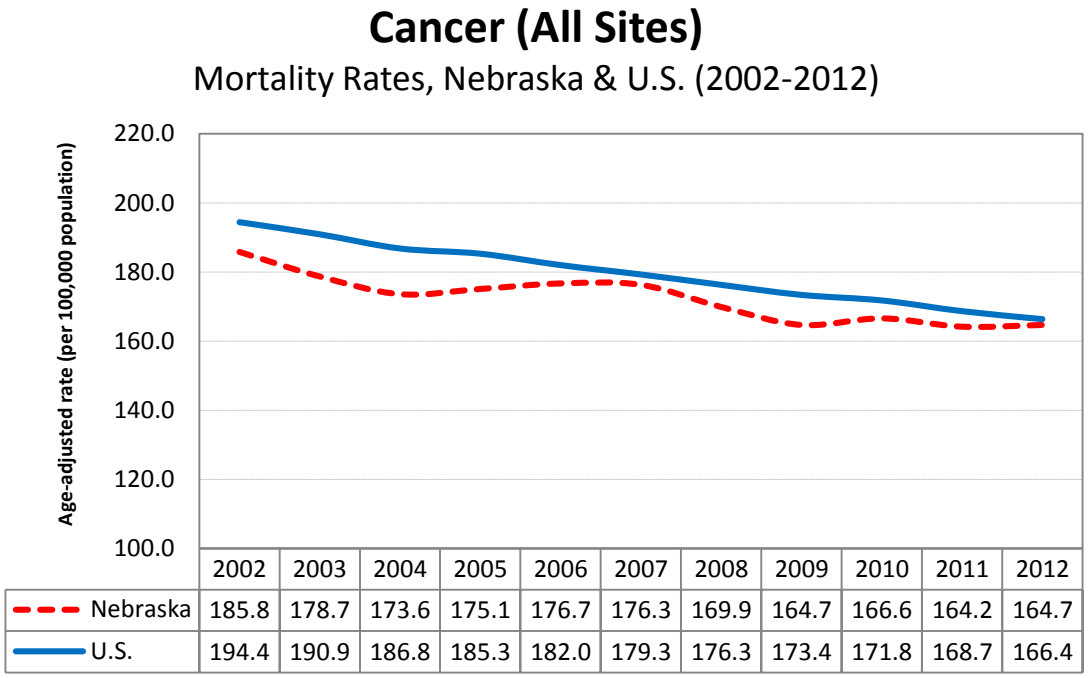
CANCER MORTALITY IN NEBRASKA

In 2012, 3,481 Nebraska residents died from cancer, a number that translates into a rate of 164.7 cancer deaths per 100,000 population. These figures represent an increase from the state's 2011 figures of 3,403 (cancer deaths) and 164.2 (cancer mortality rate). For the fourth consecutive year, cancer was the leading cause of mortality among Nebraska residents in 2012, surpassing heart disease by 176 deaths. By primary site, cancers of the lung, breast, prostate, colon and rectum accounted for just under half (48.2%) of Nebraska's cancer deaths in 2012.

Table 5 presents the number and rate of cancer deaths that occurred among Nebraska residents during 2012 and 2008-2012, for all sites combined and for specific sites. The most recent U.S. cancer mortality rates, which cover the years 2008 through 2012, are also included. Comparison of the most recent state and national mortality rates for the past five years shows significant differences ($p<.01$) for cancers of the stomach, lung, and female breast (Nebraska rates lower than the U.S.) and for brain and central nervous system tumors (Nebraska rates higher than the U.S.). Table 6 presents the number of Nebraska cancer deaths during 2008-2012 by age at death. Table 7 presents Nebraska cancer mortality data by race and ethnicity for the years 2003-2012. Table 8 presents the number of cancer deaths and mortality rates for 2012 and 2008-2012 by county of residence, with comparable state and U.S. rates included. The graph below shows the annual mortality rates for cancer for Nebraska and the U.S. since 2002.



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	185.8	178.7	173.6	175.1	176.7	176.3	169.9	164.7	166.6	164.2	164.7
U.S.	194.4	190.9	186.8	185.3	182.0	179.3	176.3	173.4	171.8	168.7	166.4

TABLE 5: Cancer Mortality
Number of Deaths and Rates, by Selected Primary Site and Gender
Nebraska (2012 and 2008-2012) & U.S. (2008-2012)

Site	NEBRASKA 2012						NEBRASKA 2008-2012						U.S. 2008-2012		
	Male		Female		Total		Male		Female		Total		Male	Female	Total
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	Rate	Rate	Rate
All Sites	1,832	198.3	1,649	140.7	3,481	164.7	8,943	200.8	8,091	140.7	17,034	165.9	207.9	145.4	171.2
Oral Cavity & Pharynx	31	3.1	16	1.3	47	2.1	163	3.5	94	1.6	257	2.5	3.8	1.4	2.5
Esophagus	83	8.6	18	1.4	101	4.7	384	8.3	90	1.6	474	4.6	7.5	1.5	4.2
Stomach	30	3.2	13	1.1	43	2.0	156	3.4	90	1.5	246	2.4	4.6	2.4	3.4
Colon & Rectum (Colorectal)	163	17.6	178	14.4	341	15.9	887	19.8	876	14.6	1,763	16.9	18.6	13.1	15.5
Liver & Intrahepatic Bile Duct	66	6.7	32	3.0	98	4.6	313	6.6	158	2.8	471	4.6	8.8	3.5	6.0
Pancreas	143	15.1	102	8.7	245	11.6	546	12.0	544	9.4	1,090	10.6	12.6	9.6	10.9
Lung & Bronchus	486	52.6	419	36.3	905	43.3	2,468	55.4	1,995	35.5	4,463	44.1	59.8	37.8	47.2
Melanoma of the Skin	42	4.7	25	2.3	67	3.4	192	4.3	123	2.2	315	3.1	4.1	1.7	2.7
Breast	1	0.1	245	21.2	246	11.7	9	0.2	1,118	19.7	1,127	10.9	0.3	21.9	12.2
Uterine Cervix	---	---	17	1.8	---	---	---	---	94	1.9	---	---	---	2.3	---

TABLE 5 (continued): Cancer Mortality

Site	NEBRASKA 2012						NEBRASKA 2008-2012						U.S. 2008-2012		
	Male		Female		Total		Male		Female		Total		Male	Female	Total
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	Rate	Rate	Rate
Uterine Corpus & Unspecified	---	---	52	4.7	---	---	---	---	247	4.3	---	---	---	4.4	---
Ovary	---	---	74	6.7	---	---	---	---	392	7.0	---	---	---	7.7	---
Prostate	190	21.4	---	---	---	---	930	22.0	---	---	---	---	21.4	---	---
Kidney & Renal Pelvis	55	5.8	34	2.7	89	4.1	300	6.5	160	2.7	460	4.4	5.7	2.5	3.9
Urinary Bladder	60	6.7	28	2.2	88	4.0	299	7.0	127	2.0	426	4.0	7.7	2.2	4.4
Brain & Other Nervous System	56	6.2	41	3.5	97	4.8	274	6.1	228	4.2	502	5.1	5.3	3.5	4.3
Thyroid	6	0.6	10	0.7	16	0.7	29	0.6	28	0.4	57	0.5	0.5	0.5	0.5
Hodgkin Lymphoma	1	0.1	4	0.3	5	0.2	30	0.7	14	0.2	44	0.5	0.5	0.3	0.4
Non-Hodgkin Lymphoma	68	7.5	48	3.8	116	5.4	346	7.9	307	5.0	653	6.3	7.9	4.8	6.2
Leukemia	95	10.7	72	6.0	167	8.1	417	9.5	311	5.3	728	7.1	9.4	5.2	7.0
Myeloma	51	5.5	31	2.5	82	3.8	196	4.4	153	2.5	349	3.3	4.2	2.7	3.3

Total rates are per 100,000 population and are age-adjusted to the 2000 U.S. population
Gender-specific rates are per 100,000 male or female population and are age-adjusted to the 2000 U.S. population

TABLE 6: Cancer Mortality
Number of Deaths and Percentage Distribution, by Selected Primary Site and Age at Death
Nebraska (2008-2012)

	0-17 Yrs.		18-44 Yrs.		45-64 Yrs.		65+ Yrs		TOTAL	
	Number	%	Number	%	Number	%	Number	%	Number	%
All Sites	66	0.4	421	2.5	4,242	24.9	12,305	72.2	17,034	100.0
Oral Cavity & Pharynx	0	0.0	7	2.7	90	35.0	160	62.3	257	100.0
Esophagus	0	0.0	8	1.7	157	33.1	309	65.2	474	100.0
Stomach	0	0.0	12	4.9	76	30.9	158	64.2	246	100.0
Colon & Rectum (Colorectal)	0	0.0	29	1.6	417	23.7	1,317	74.7	1,763	100.0
Liver & Intrahepatic Bile Duct	0	0.0	13	2.8	181	38.4	277	58.8	471	100.0
Pancreas	0	0.0	8	0.7	267	24.5	815	74.8	1,090	100.0
Lung & Bronchus	0	0.0	32	0.7	1,121	25.1	3,310	74.2	4,463	100.0
Melanoma of the Skin	0	0.0	30	9.5	111	35.2	174	55.2	315	100.0
Female Breast	0	0.0	53	4.7	348	30.9	726	64.4	1127	100.0
Uterine Cervix	0	0.0	23	24.5	43	45.7	28	29.8	94	100.0
Uterine Corpus & Unspecified	0	0.0	5	2.0	64	25.9	178	72.1	247	100.0
Ovary	0	0.0	13	3.3	130	33.2	249	63.5	392	100.0
Prostate	0	0.0	2	0.2	81	8.7	847	91.1	930	100.0
Kidney & Renal Pelvis	3	0.7	7	1.5	150	32.6	300	65.2	460	100.0
Urinary Bladder	0	0.0	2	0.5	49	11.5	375	88.0	426	100.0
Brain & Other Nervous System	23	4.6	52	10.4	159	31.7	268	53.4	502	100.0
Thyroid	0	0.0	1	1.8	13	22.8	43	75.4	57	100.0
Hodgkin Lymphoma	0	0.0	5	11.4	19	43.2	20	45.5	44	100.0
Non-Hodgkin Lymphoma	3	0.5	25	3.8	106	16.2	519	79.5	653	100.0
Leukemia	15	2.1	31	4.3	139	19.1	543	74.6	728	100.0
Myeloma	0	0.0	1	0.3	72	20.6	276	79.1	349	100.0

NOTE: Due to rounding, percentages may not sum to 100.0.

TABLE 7: Cancer Mortality
Number of Deaths and Rates, All Sites and Top Ten Primary Sites, by Race and Ethnicity
Nebraska (2003-2012)

	White			African-American			Native American			Asian/Pacific Islander			Hispanic		
	Site	Number	Rate	Site	Number	Rate	Site	Number	Rate	Site	Number	Rate	Site	Number	Rate
	All Sites	32,332	169.0	All Sites	1,134	231.4	All Sites	156	176.7	All Sites	178	110.5	All Sites	477	105.0
Rank															
1	Lung & Bronchus	8,518	45.3	Lung & Bronchus	335	69.4	Lung & Bronchus	45	59.1	Lung & Bronchus	42	24.6	Lung & Bronchus	77	19.6
2	Colon & Rectum	3,446	17.6	Colon & Rectum	129	29.1	Colon & Rectum	16	14.4	Liver & Intrahepatic Bile Duct	30	14.0	Female Breast	39	14.9
3	Female Breast	2,204	20.8	Female Breast	85	28.7	Female Breast	11	18.6	Colon & Rectum	17	11.9	Colon & Rectum	37	8.4
4	Pancreas	1,943	10.2	Pancreas	74	15.3	Kidney & Renal Pelvis	8	10.0	Pancreas	11	7.4	Liver & Intrahepatic Bile Duct	33	8.1
5	Prostate	1,797	23.0	Prostate	63	37.8	Ovary	7	13.7	Female Breast	10	9.2	Prostate	26	20.4
6	Leukemia	1,382	7.2	Liver & Intrahepatic Bile Duct	52	8.5	Liver & Intrahepatic Bile Duct	7	5.0	Non-Hodgkin Lymphoma	10	7.1	Stomach	25	4.5
7	Non-Hodgkin Lymphoma	1,336	6.9	Myeloma	40	8.5	Pancreas	7	4.1	Stomach	8	3.3	Kidney & Renal Pelvis	22	4.1
8	Brain & ONS	926	5.1	Esophagus	32	5.9	Prostate	5	10.9	Myeloma	5	3.2	Leukemia	21	3.5
9	Kidney & Renal Pelvis	859	4.5	Leukemia	31	5.7	Oral Cavity & Pharynx	5	8.5	Leukemia	5	2.9	Pancreas	20	5.1
10	Esophagus	840	4.4	Stomach	27	5.0	Stomach	5	4.8	Brain & ONS	5	2.6	Non-Hodgkin Lymphoma	20	4.8

Rates are per 100,000 population, excluding gender-specific sites (prostate, female breast, ovary), which are per 100,000 male or female population. All rates are age-adjusted to the 2000 U.S. population.
Abbreviation: ONS, other nervous system

TABLE 8: Cancer (All Sites) Mortality
Number of Deaths and Rates, by County of Residence
Nebraska (2012 and 2008-2012) & U.S. (2012 and 2008-2012)

	2012		2008-2012	
	# Deaths	Rate	# Deaths	Rate
U.S.	582,607	166.4	2,867,104	171.2
NEBRASKA	3,481	164.7	17,034	165.9
COUNTY				
ADAMS	62	151.4	306	154.4
ANTELOPE	16	139.0	83	149.3
ARTHUR	0	0.0	*	*
BANNER	0	0.0	3	51.1▼
BLAINE	*	*	7	192.7
BOONE	13	184.0	77	171.9
BOX BUTTE	26	180.7	108	145.7
BOYD	9	207.0	27	133.1
BROWN	12	179.3	41	135.4
BUFFALO	85	182.8	393	172.8
BURT	29	235.7	123	208.3△
BUTLER	22	186.7	99	160.3
CASS	48	150.5	290	191.6△
CEDAR	17	101.1▽	94	124.8▼
CHASE	8	131.2	50	156.2
CHERRY	18	186.4	69	152.5
CHEYENNE	11	87.9▼	93	138.8
CLAY	12	117.6	85	175.9
COLFAX	24	213.7	108	181.0
CUMING	24	171.3	103	143.7
CUSTER	22	136.1	145	163.9
DAKOTA	34	163.8	165	164.9
DAWES	7	54.2▼	92	156.8
DAWSON	50	170.1	202	145.2
DEUEL	*	*	17	100.4▽
DIXON	16	175.4	78	177.7
DODGE	91	175.1	473	180.4
DOUGLAS	915	183.4△	4,356	181.7▲
DUNDY	7	202.5	27	142.0
FILLMORE	18	167.9	84	163.1
FRANKLIN	4	65.0▼	31	107.6▼
FRONTIER	3	62.9▼	29	145.8
FURNAS	15	185.1	61	142.2
GAGE	67	187.3	300	172.3
GARDEN	7	152.2	30	145.7
GARFIELD	3	71.2▽	24	118.1
GOSPER	5	145.5	32	193.4
GRANT	*	*	5	130.5
GREELEY	5	97.9	39	164.8
HALL	106	154.0	552	167.1
HAMILTON	13	105.5	95	155.8
HARLAN	13	211.0	74	235.7△
HAYES	4	206.9	16	202.3
HITCHCOCK	10	185.0	46	179.7
HOLT	27	159.6	134	160.4
HOOKER	3	186.0	10	116.8
HOWARD	19	204.0	76	166.3
JEFFERSON	30	224.2	127	187.6

TABLE 8 (continued): Cancer Mortality

	2012		2008-2012	
COUNTY	# Deaths	Rate	# Deaths	Rate
JOHNSON	14	178.6	58	151.6
KEARNEY	13	145.2	60	126.3▽
KEITH	16	114.9	102	157.0
KEYA PAHA	*	*	11	134.6
KIMBALL	16	233.7	66	216.5
KNOX	28	189.8	118	162.8
LANCASTER	444	159.0	2,077	154.3▽
LINCOLN	67	144.2	382	166.3
LOGAN	*	*	3	52.3▼
LOUP	*	*	5	98.7
McPHERSON	*	*	6	143.4
MADISON	51	117.6▽	344	163.6
MERRICK	22	197.6	98	179.5
MORRILL	14	200.1	39	109.8▼
NANCE	9	164.5	45	153.9
NEMAHA	21	205.9	90	175.2
NUCKOLLS	11	129.4	71	152.6
OTOE	36	157.4	174	152.0
PAWNEE	13	267.7	45	174.1
PERKINS	10	198.8	37	151.6
PHELPS	22	162.6	113	169.7
PIERCE	20	184.5	88	174.9
PLATTE	60	154.2	269	140.2▼
POLK	13	154.5	77	174.1
RED WILLOW	27	166.4	141	170.0
RICHARDSON	31	197.3	150	205.3△
ROCK	6	255.6	19	146.4
SALINE	35	204.0	158	181.8
SARPY	219	167.0	1011	167.8
SAUNDERS	47	173.6	240	186.0
SCOTTS BLUFF	64	129.1	392	159.7
SEWARD	31	140.9	164	157.7
SHERIDAN	14	138.6	71	150.8
SHERMAN	7	156.3	55	206.4
SIOUX	4	191.6	13	119.0
STANTON	11	147.2	53	148.1
THAYER	17	150.3	76	137.6
THOMAS	0	0.0	*	*
THURSTON	11	187.8	64	194.7
VALLEY	14	170.3	69	181.3
WASHINGTON	39	158.2	196	164.8
WAYNE	20	191.3	75	146.3
WEBSTER	11	160.8	57	165.1
WHEELER	*	*	7	110.5
YORK	33	159.7	163	162.7

*Number and rate are not shown if based on fewer than three deaths
Rates are per 100,000 population and are age-adjusted to the 2000 U.S. population

▽county rate is significantly lower than the state rate (95% confidence level)
▼county rate is significantly lower than the state rate (99% confidence level)
△county rate is significantly higher than the state rate (95% confidence level)
▲county rate is significantly higher than the state rate (99% confidence level)

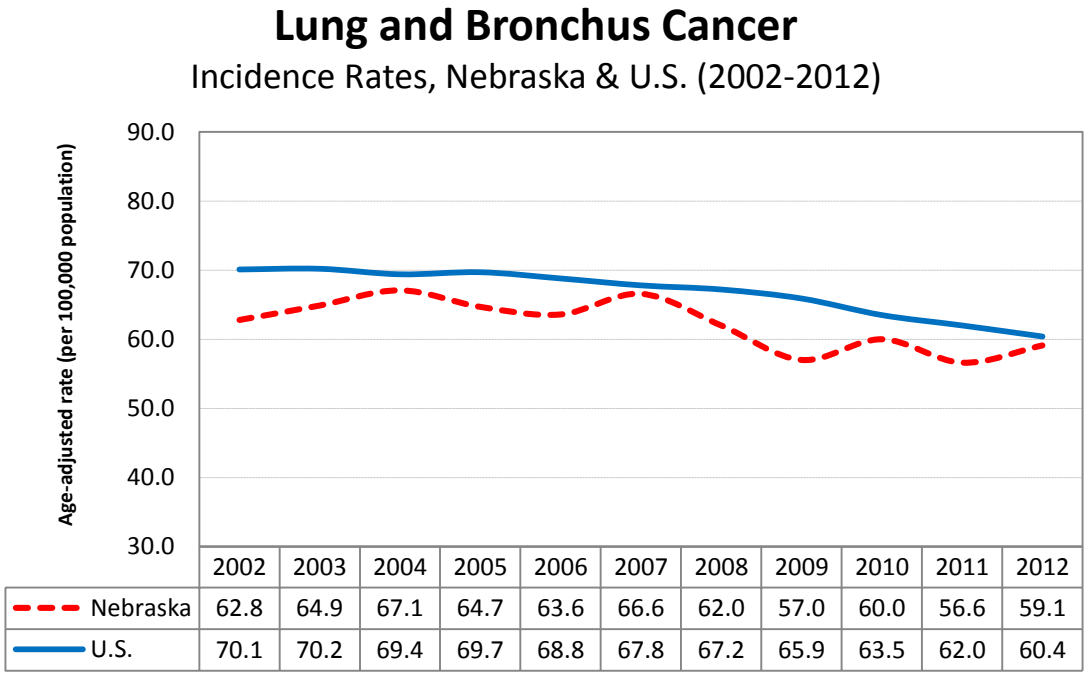
INCIDENCE AND MORTALITY FOR SELECTED PRIMARY SITES

Lung and Bronchus

Although lung cancer was only the second most frequently diagnosed cancer among Nebraska residents in 2012, it was the year's leading cause of cancer mortality, accounting for 25% of the state's cancer deaths. During the past five years (2008-2012), lung cancer has averaged about 1,200 diagnoses and 900 deaths in Nebraska per year. Although lung cancer is more likely to strike men than women, there has been a 30% drop in the rate of lung cancer deaths among Nebraska men since 1990, but a slight increase in the rate for Nebraska women. The large number of lung cancer deaths is due to the small number of cases that are detected at an early stage: as a result, the 5-year relative survival rate for people lung cancer cases is less than 20%.

Cigarette smoking is the major risk factor for lung cancer and causes about 85% of lung cancer deaths. People who smoke two or more packs of cigarettes per day are 15 to 25 times more likely to die from lung cancer than non-smokers. Quitting smoking reduces the risk of lung cancer, although it takes 10-15 years for an ex-smoker's risk to drop to the level of a lifelong non-smoker. People who do not smoke but who breathe the smoke of others may also have a higher risk. The ACS has recently endorsed screening for lung cancer, using low-dose helical computed tomography, but only for people 55-74 years of age who currently smoke or who have quit within the past 15 years, are in good health, and have at least a 30 pack-year smoking history. They also emphasize that screening should not be considered as an alternative to smoking cessation.

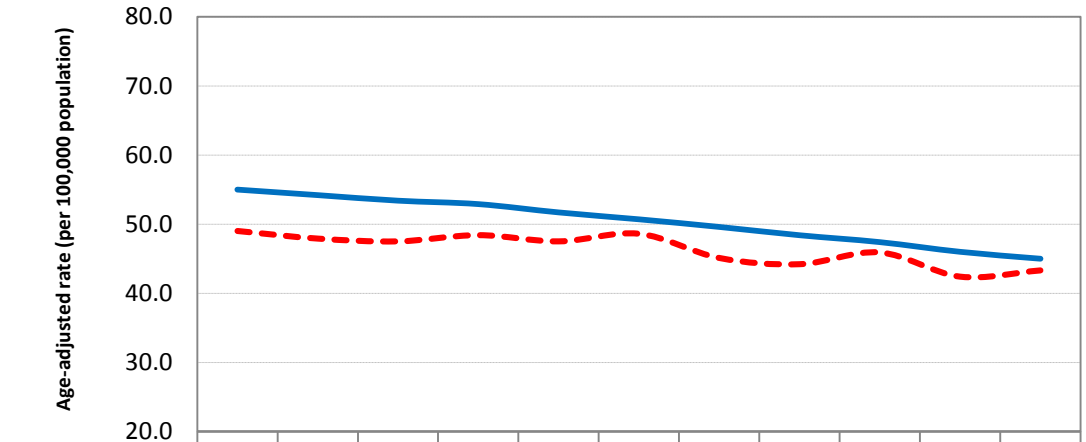
Incidence and mortality statistics by county of residence for cancers of the lung and bronchus are presented in Appendix I (Table 9 [pp. 45-46]).



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	62.8	64.9	67.1	64.7	63.6	66.6	62.0	57.0	60.0	56.6	59.1
U.S.	70.1	70.2	69.4	69.7	68.8	67.8	67.2	65.9	63.5	62.0	60.4

Lung and Bronchus Cancer

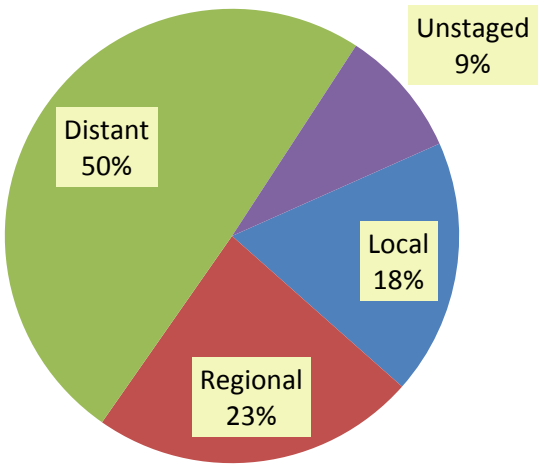
Mortality Rates, Nebraska & U.S. (2002-2012)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	49.0	47.9	47.5	48.4	47.5	48.6	45.1	44.2	45.9	42.4	43.3
U.S.	55.0	54.2	53.4	52.9	51.7	50.7	49.6	48.4	47.4	46.0	45.0

Lung and Bronchus Cancer

Percentage of Cases, by Stage of Disease at Diagnosis
Nebraska, 2008-2012



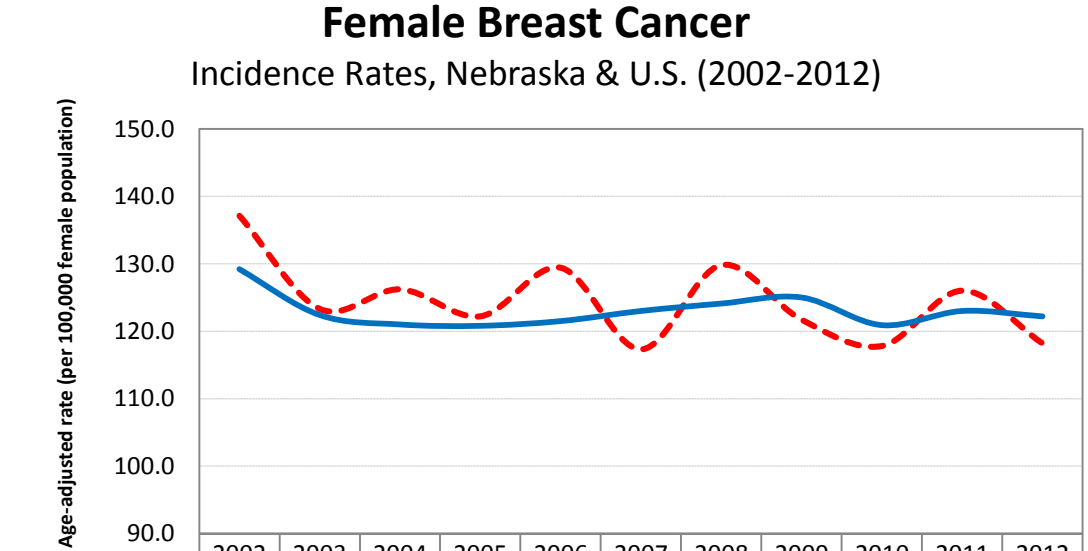
Breast (Female only)

Breast cancer is the most common type of cancer among women and the second most frequent cause of female cancer deaths. Between 2008 and 2012, 6,415 Nebraska women were diagnosed with invasive breast cancer (and another 1,469 were diagnosed with in situ breast cancer) and 1,118 women died from breast cancer. Since 1990, the rate of breast cancer deaths in Nebraska and the U.S. has declined significantly. Recent declines in the rate of breast cancer diagnoses have been attributed to the decreasing use of post-menopausal hormone replacement therapy.

Age is an important risk factor for breast cancer, with 80% of all cases occurring among women age 50 and older. Other risk factors include genetic mutations, a personal or family history of breast cancer, some forms of benign breast disease, early menstruation, late menopause, never having children or having a first child after age 30, and for post-menopausal women, obesity and long-term hormone replacement therapy.

Screening for breast cancer is known to save lives, although opinion varies on how and when to screen. The ACS recommends that women 40 and older have an annual mammogram, but the U.S. Preventive Services Task Force (USPSTF) recommends mammography only for women 50-74 on an every other year schedule. The ACS guidelines also include a clinical breast exam every three years for women in their 20s and 30s and every year for women 40 and older, while the USPSTF does not include clinical breast exams in its recommendations. For women 30 and older who have an increased risk of breast cancer, the ACS recommends annual magnetic resonance imaging (MRI) as an additional screening test. Breast self-exam is also another preventive option for women beginning in their 20s.

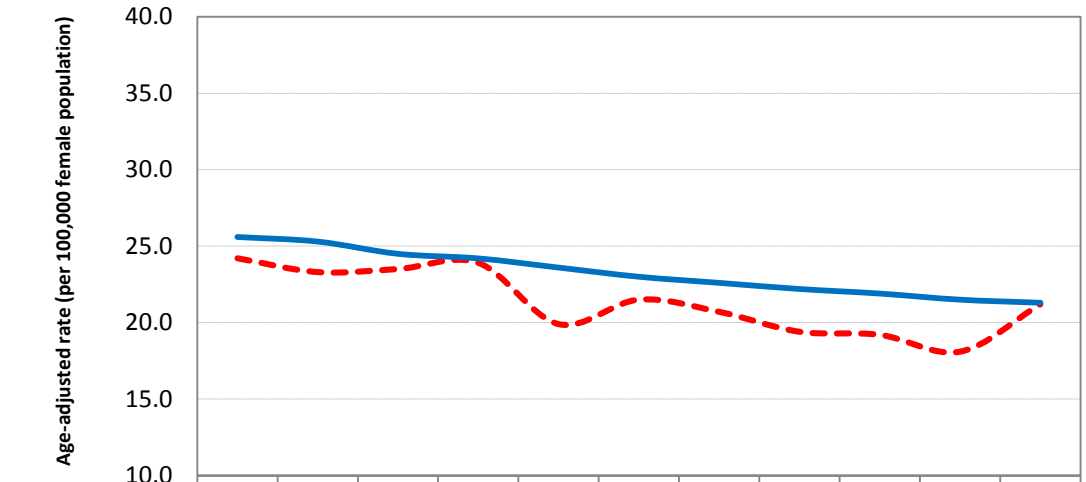
Incidence and mortality statistics by county of residence for cancer of the female breast are presented in Appendix II (Table 10 [pp. 47-48]).



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	137.1	123.3	126.2	122.2	129.4	117.3	129.8	121.7	117.8	126.0	118.2
U.S.	129.2	122.4	121.0	120.8	121.5	123.0	124.1	125.0	120.9	123.0	122.2

Female Breast Cancer

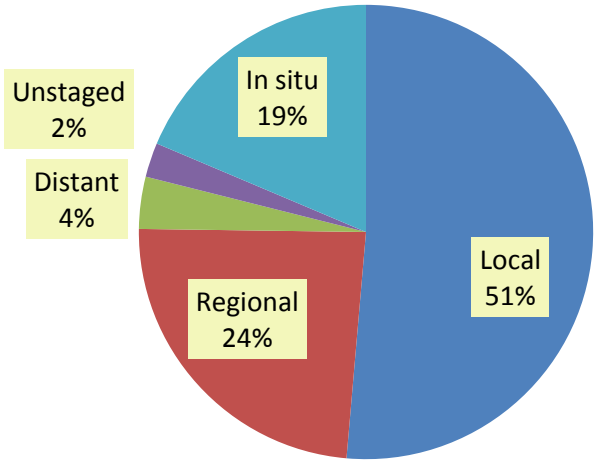
Mortality Rates, Nebraska & U.S. (2002-2012)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	24.2	23.3	23.5	23.9	19.9	21.5	20.7	19.4	19.2	18.1	21.2
U.S.	25.6	25.3	24.5	24.2	23.6	23.0	22.6	22.2	21.9	21.5	21.3

Female Breast Cancer

Percentage of Cases, by Stage of Disease at Diagnosis
Nebraska, 2008-2012



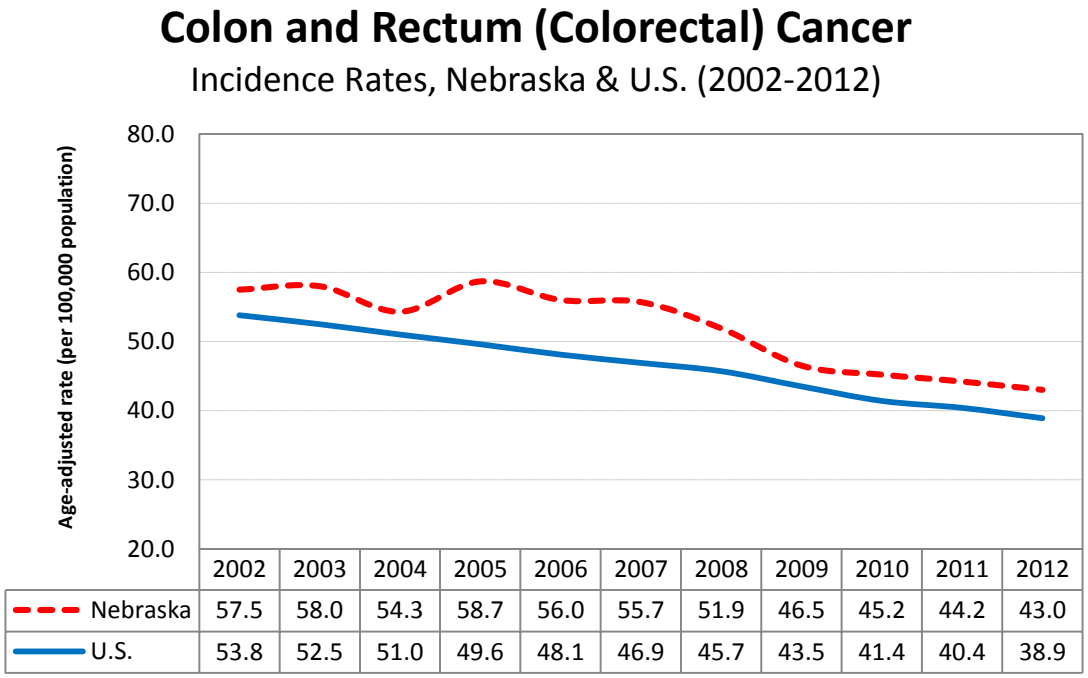
Colon and Rectum (Colorectal)

In 2012, colorectal cancer was the fourth most frequently diagnosed cancer among Nebraska residents, accounting for 885 new cases. It was also the second leading cause of cancer mortality in the state, accounting for 341 deaths.

The risk of developing colorectal cancer increases with age. About two-thirds (65.5%) of all colorectal cancer cases that occurred in Nebraska during 2008-2012 were 65 or older at diagnosis. Other risk factors include a personal or family history of colorectal cancer or polyps, a personal history of chronic inflammatory bowel disease, and certain hereditary colorectal cancer syndromes. Modifiable risk factors include physical inactivity, obesity, smoking, a high-fat diet (especially fat from animal sources), and heavy alcohol use.

Screening for asymptomatic polyps and tumors is known to prevent colorectal cancer cases and deaths. The USPSTF recommends that people between the ages of 50 and 75 follow one of these schedules: 1) an annual high-sensitivity fecal occult blood test (FOBT), 2) sigmoidoscopy every 5 years combined with a high-sensitivity FOBT every 3 years, or 3) colonoscopy every 10 years. People at increased risk (i.e., a personal or family history of colorectal cancer or polyps, a personal history of chronic inflammatory bowel disease, or a family history of hereditary colorectal cancer syndromes) may be advised to begin screening before age 50 and/or be screened more often. Other screening tests that are included in the most recent ACS guidelines include double contrast barium enema (every 5 years), virtual colonoscopy (every 5 years), the fecal immunochemical test (FIT) (every year), and the stool DNA test (every 3 years).

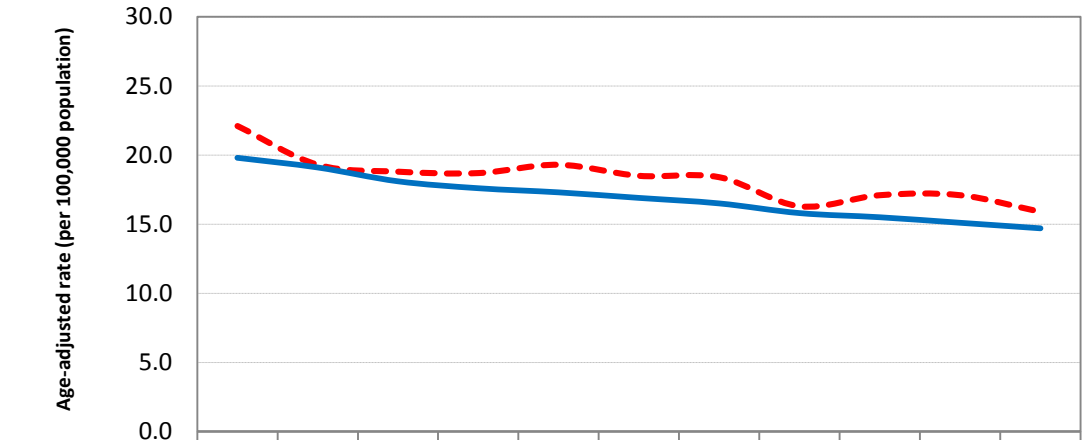
Incidence and mortality statistics by county of residence for cancers of the colon and rectum are presented in Appendix III (Table 11 [pp. 49-50]).



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	57.5	58.0	54.3	58.7	56.0	55.7	51.9	46.5	45.2	44.2	43.0
U.S.	53.8	52.5	51.0	49.6	48.1	46.9	45.7	43.5	41.4	40.4	38.9

Colon and Rectum (Colorectal) Cancer

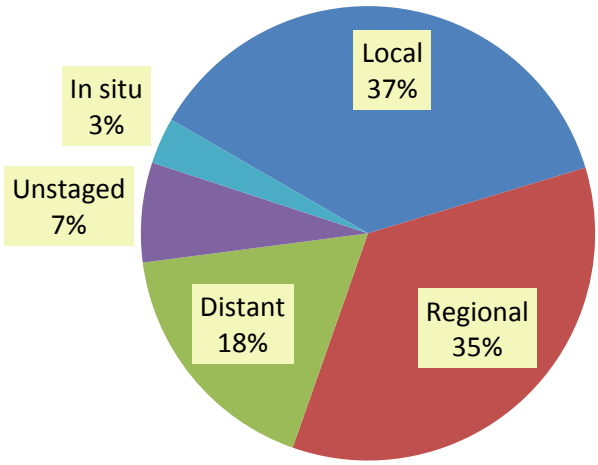
Mortality Rates, Nebraska & U.S. (2002-2012)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	22.1	19.3	18.8	18.7	19.3	18.5	18.4	16.3	17.1	17.1	15.9
U.S	19.8	19.1	18.1	17.6	17.3	16.9	16.5	15.8	15.5	15.1	14.7

Colon and Rectum (Colorectal) Cancer

Percentage of Cases, by Stage of Disease at Diagnosis
Nebraska, 2008-2012



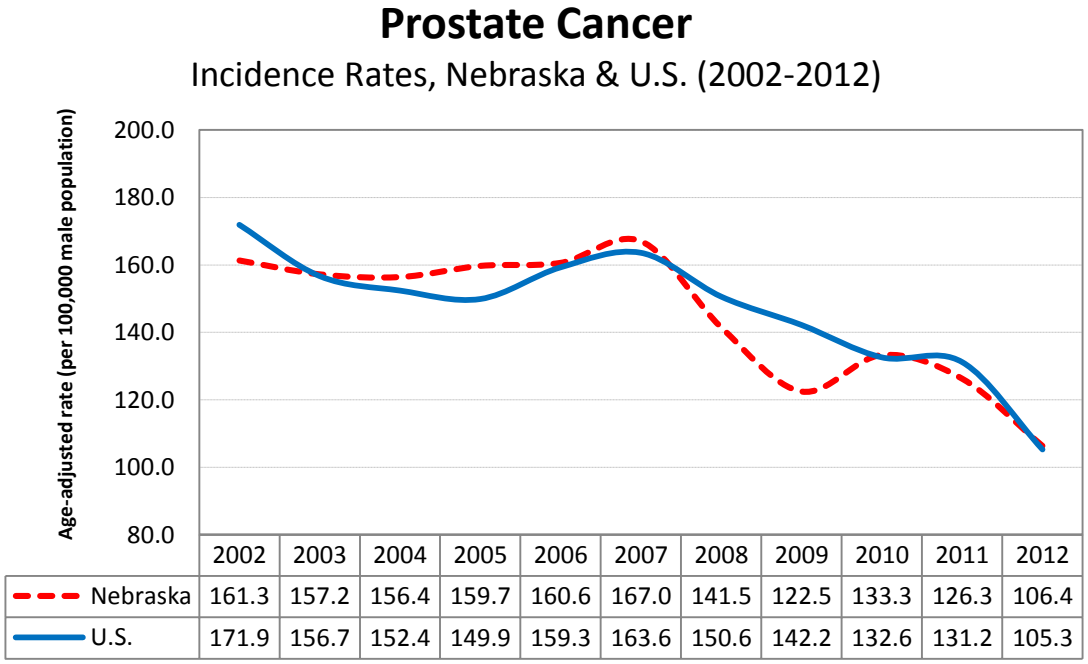
Prostate

With 1,068 diagnoses in 2012, prostate cancer was the most common cancer among Nebraska men, accounting for just over 25% of all new cancers. During the past five years (2008-2012), it has also been the second leading cause of cancer deaths among Nebraska men, accounting for 930 deaths. Since the mid-1990s, prostate cancer death rates have declined substantially, both in Nebraska and throughout the United States.

Little is known about what causes prostate cancer. Risk increases with age (about 60% of Nebraska men diagnosed with prostate cancer during 2008-2012 were 65 or older) and is significantly greater among African-Americans. During the past decade (2003-2012), the incidence of prostate cancer among African-American men in Nebraska has been 35% higher than among whites. Men with a close relative (father, brother, or son) who have had prostate cancer, especially at a young age, are also at increased risk.

Current ACS guidelines recommend that men make an informed decision with their health care provider about whether to be screened for prostate cancer. This discussion should take place at age 50 for men who are at average risk of prostate cancer and have a life expectancy of at least 10 years. This discussion should take place at age 45 for men at high risk (African-Americans and men with a father, brother, or son diagnosed with prostate cancer before age 65) and at age 40 for men of higher risk (men with several first-degree relatives diagnosed before age 65). For men who choose to be screened, the ACS recommends the prostate-specific antigen (PSA) test and an optional digital rectal exam. By contrast, the US Preventive Services Task Force does not recommend PSA-based screening for prostate cancer.

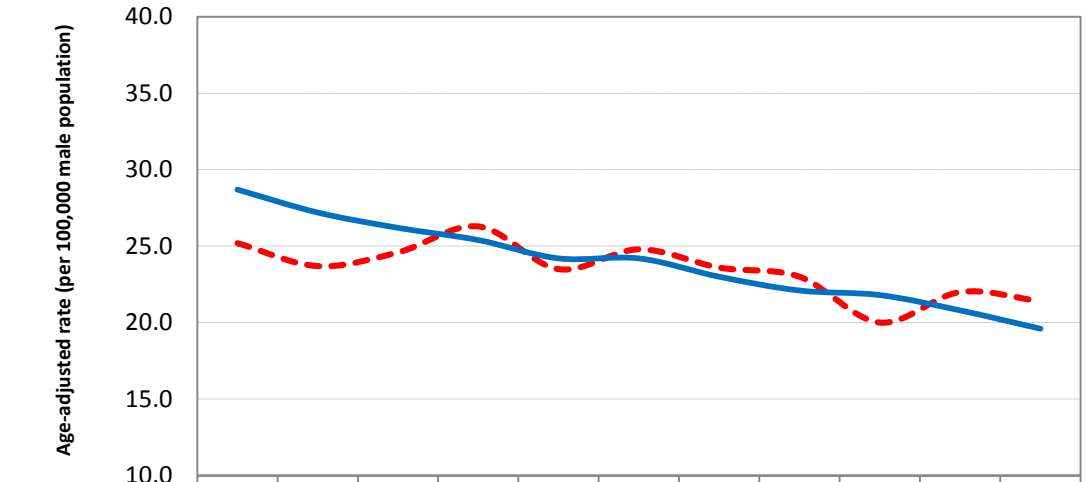
Incidence and mortality statistics by county of residence for cancer of the prostate are presented in Appendix IV (Table 12 [pp. 51-52]).



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	161.3	157.2	156.4	159.7	160.6	167.0	141.5	122.5	133.3	126.3	106.4
U.S.	171.9	156.7	152.4	149.9	159.3	163.6	150.6	142.2	132.6	131.2	105.3

Prostate Cancer

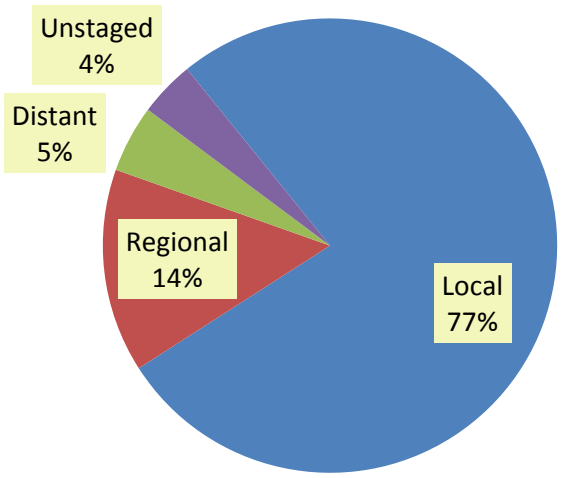
Mortality Rates, Nebraska & U.S. (2002-2012)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	25.2	23.7	24.6	26.3	23.5	24.8	23.6	23.0	20.0	22.0	21.4
U.S.	28.7	27.2	26.2	25.4	24.2	24.2	23.0	22.1	21.8	20.8	19.6

Prostate Cancer

Percentage of Cases, by Stage of Disease at Diagnosis
Nebraska, 2008-2012

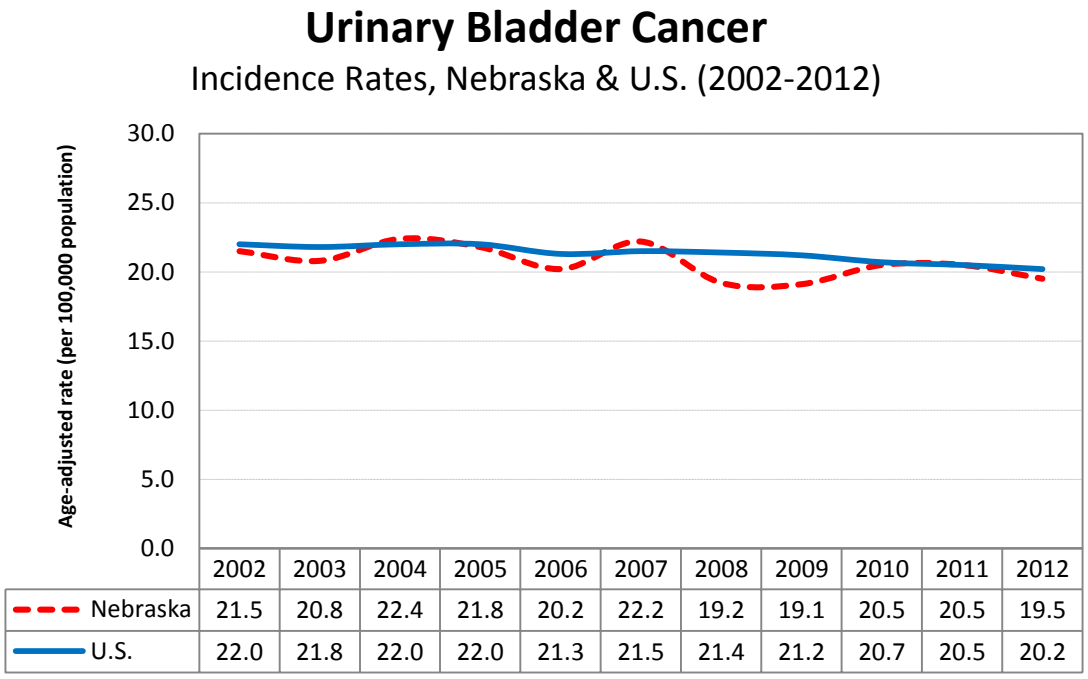


Urinary Bladder

Between 2008 and 2012, 1,996 Nebraska residents were diagnosed with bladder cancer. Bladder cancer occurs much more frequently among men than women (by about a 3-to-1 ratio), and it now ranks as the fourth most common site of cancer diagnoses among Nebraska men. However, deaths from bladder cancer occur far less often (426 Nebraska residents died from it during 2008-2012), which is the result of a high percentage of early-stage diagnoses and the existence of effective treatments. Survival prospects have improved considerably in recent decades, to the point where the most current national data show that the five-year relative survival rate for all bladder cancer patients is about 80%.

Cigarette smoking is the most important known risk factor for bladder cancer. Smokers develop bladder cancer two to three times more often than non-smokers, and about one-third of all cases are attributable to smoking. Risk factors also include occupational exposures to certain chemicals used to make dyes (benzidine and beta-naphthylamine), as well as working in the manufacture of rubber and leather. Like most cancers, the risk of bladder cancer increases with age: more than 75% of the cases that occurred in Nebraska during 2008-2012 were at least 65 years old when diagnosed.

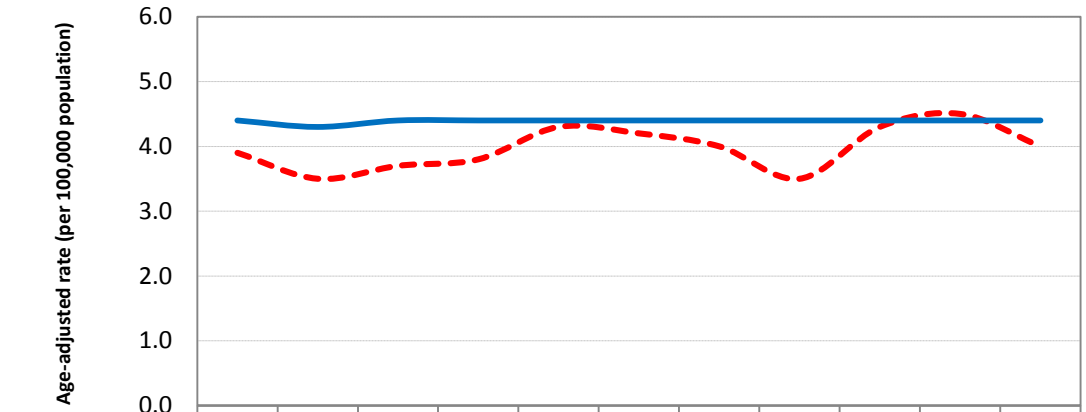
Incidence and mortality statistics by county of residence for cancer of the urinary bladder are presented in Appendix V (Table 13 [pp. 53-54]).



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	21.5	20.8	22.4	21.8	20.2	22.2	19.2	19.1	20.5	20.5	19.5
U.S.	22.0	21.8	22.0	22.0	21.3	21.5	21.4	21.2	20.7	20.5	20.2

Urinary Bladder Cancer

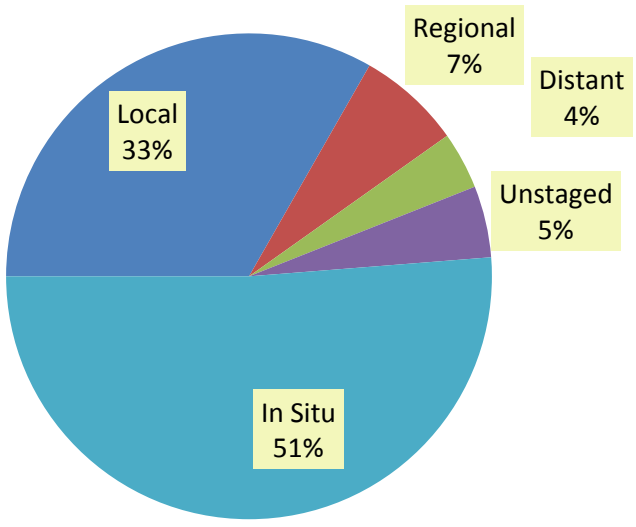
Mortality Rates, Nebraska & U.S. (2002-2012)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	3.9	3.5	3.7	3.8	4.3	4.2	4.0	3.5	4.3	4.5	4.0
U.S.	4.4	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4

Urinary Bladder Cancer

Percentage of Cases, by Stage of Disease at Diagnosis
Nebraska, 2008-2012

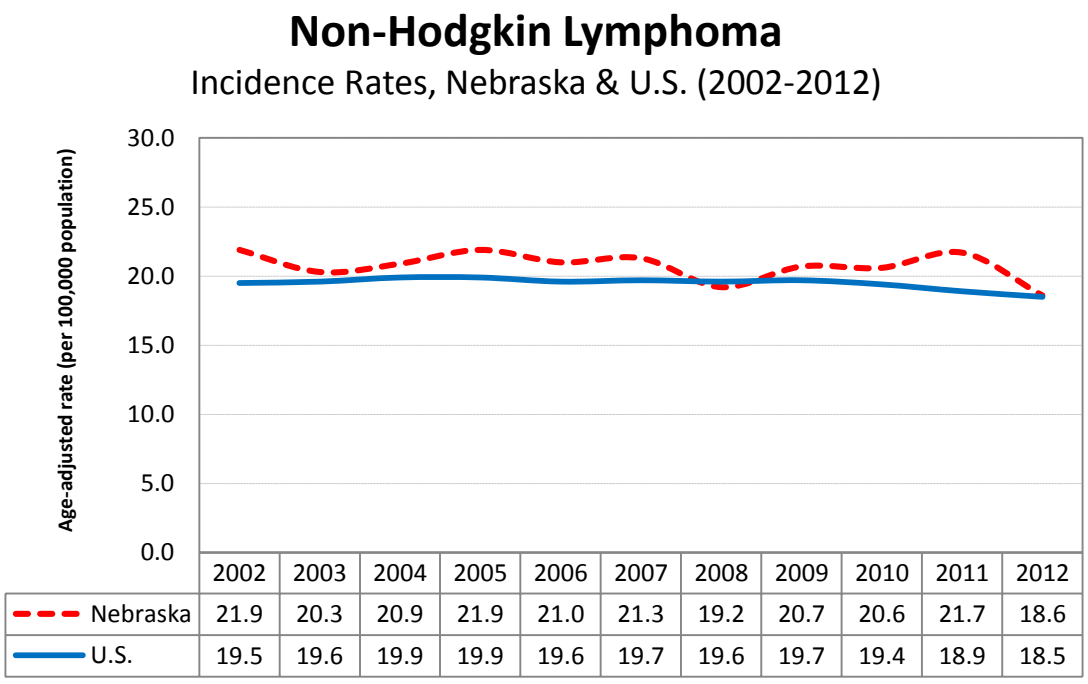


Non-Hodgkin Lymphoma

Lymphomas are cancers that affect the white blood cells of the immune system, and are usually classified as either Hodgkin or Non-Hodgkin lymphoma. Non-Hodgkin lymphoma is by far the more common disorder of the two, accounting for 2,016 diagnoses and 653 deaths among Nebraska residents between 2008 and 2012 (for Hodgkin lymphoma, the comparable figures are 286 diagnoses and 44 deaths). National statistics indicate that the incidence rate for Non-Hodgkin lymphoma has increased by about 80% since the mid-1970s, and some of this increase is related to the appearance of AIDS. However, both state and national data show that Non-Hodgkin lymphoma deaths have been increasing since at least 1950, which indicates that factors other than AIDS are also responsible.

The causes of Non-Hodgkin lymphoma are unknown, although there is evidence that viral exposures and reduced immune function are associated with the disease. People whose immune systems have been suppressed by drugs, particularly those who have received an organ transplant, are at high risk of Non-Hodgkin lymphoma, and it also occurs more frequently among people with congenital and acquired immunologic disorders, including AIDS. The increased incidence of the disease among people with congenital disorders of the immune system suggests that hereditary factors may increase risk. Some studies have found that occupational exposure to certain herbicides is a risk factor as well.

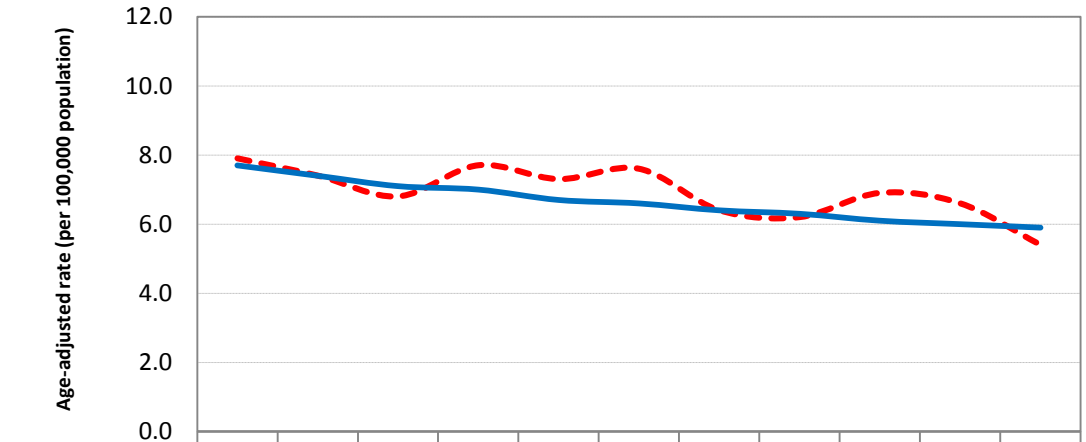
Incidence and mortality statistics by county of residence for Non-Hodgkin lymphoma are presented in Appendix VI (Table 14 [pp. 55-56]).



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	21.9	20.3	20.9	21.9	21.0	21.3	19.2	20.7	20.6	21.7	18.6
U.S.	19.5	19.6	19.9	19.9	19.6	19.7	19.6	19.7	19.4	18.9	18.5

Non-Hodgkin Lymphoma

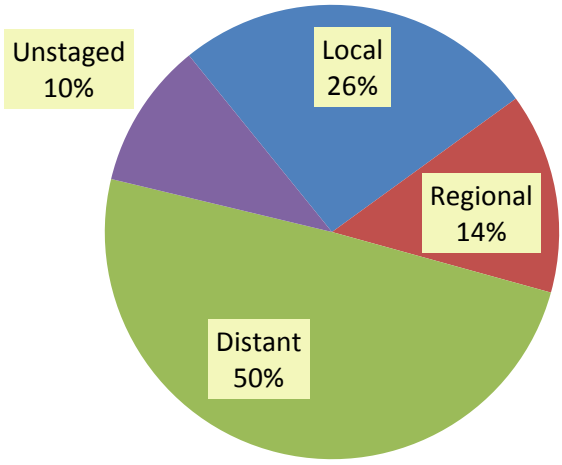
Mortality Rates, Nebraska & U.S. (2002-2012)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	7.9	7.4	6.8	7.7	7.3	7.6	6.4	6.2	6.9	6.6	5.4
U.S.	7.7	7.4	7.1	7.0	6.7	6.6	6.4	6.3	6.1	6.0	5.9

Non-Hodgkin Lymphoma

Percentage of Cases, by Stage of Disease at Diagnosis
Nebraska, 2008-2012

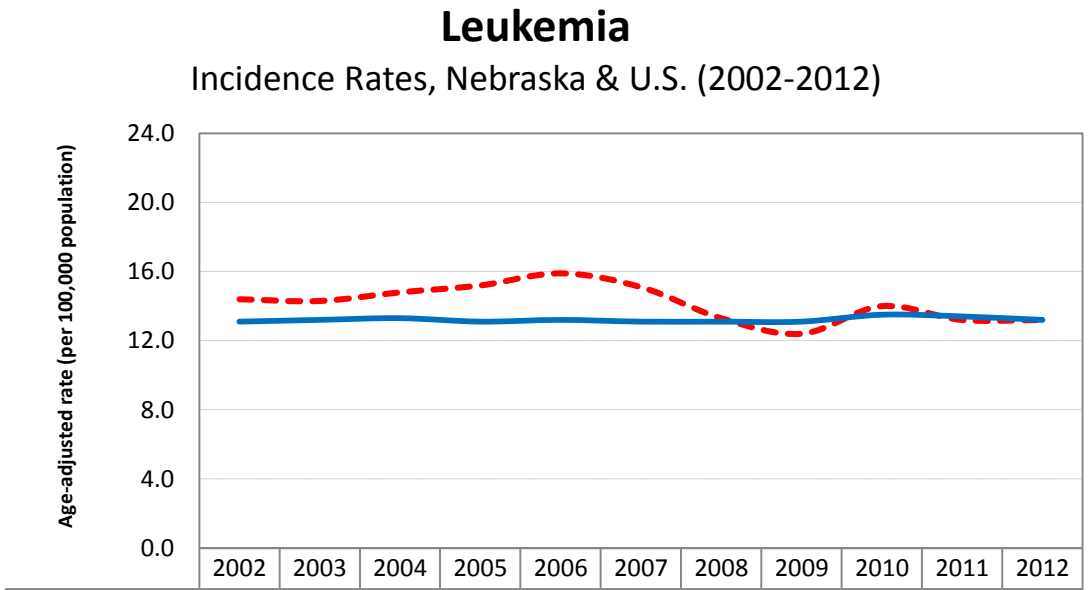


Leukemia

Between 2008 and 2012, leukemia accounted for 1,325 diagnoses and 728 deaths among Nebraska residents. Although leukemia is one of the most common types of cancer diagnosed among children and adolescents, over half (56%) of the leukemia cases that occurred in Nebraska between 2008 and 2012 were 65 years of age or older at diagnosis. There are many different types of leukemia: acute lymphocytic leukemia is the most frequently diagnosed among children, while acute myeloid and chronic lymphocytic are the most common types among adults. Survival times vary widely by type: overall, the relative five-year survival rate for all leukemia patients in the United States is almost 60%.

The major causes of most types of leukemia are unknown. Nevertheless, several risk factors have been identified, and include genetic abnormalities (such as Down's syndrome), exposure to ionizing radiation, and workplace exposure to benzene and other related solvents. Adult T-cell leukemia is strongly associated with infection by a retrovirus, the human T-cell lymphotropic virus, type I (HTLV-I). Cigarette smoking is a risk factor for acute myeloid leukemia, while people who have a family history of chronic lymphocytic leukemia carry an increased risk of the disease themselves.

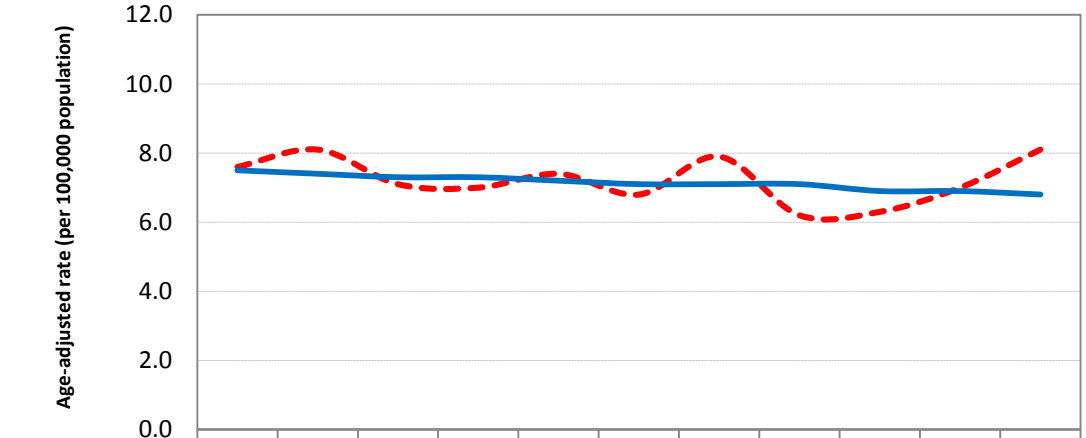
Incidence and mortality statistics by county of residence for leukemia are presented in Appendix VII (Table 15 [pp. 57-58]).



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	14.4	14.3	14.8	15.2	15.9	15.1	13.3	12.4	14.0	13.2	13.2
U.S.	13.1	13.2	13.3	13.1	13.2	13.1	13.1	13.1	13.5	13.4	13.2

Leukemia

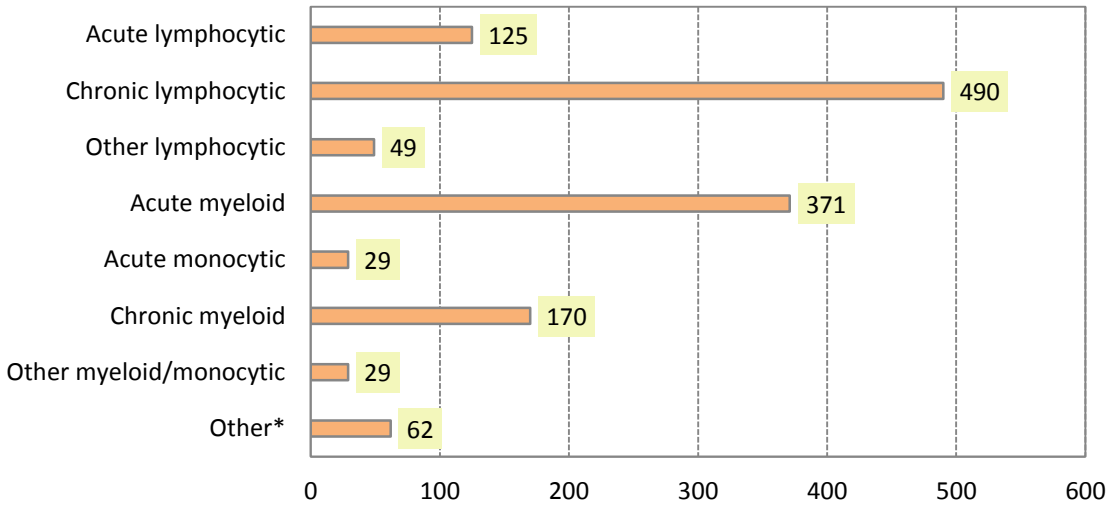
Mortality Rates, Nebraska & U.S. (2002-2012)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	7.6	8.1	7.1	7.0	7.4	6.8	7.9	6.2	6.3	7.0	8.1
U.S.	7.5	7.4	7.3	7.3	7.2	7.1	7.1	7.1	6.9	6.9	6.8

Leukemia

Number of Cases by Histologic Type, Nebraska, 2008-2012



* includes plasma cell leukemia (8 cases); acute biphenotypic leukemia (1 case); aggressive NK-cell leukemia (1 case); T-cell large granular lymphocytic leukemia (2 cases); adult T-cell leukemia (1 case); hypereosinophilic syndrome (3 cases); acute leukemia, NOS (22 cases); leukemia, NOS (24 cases)

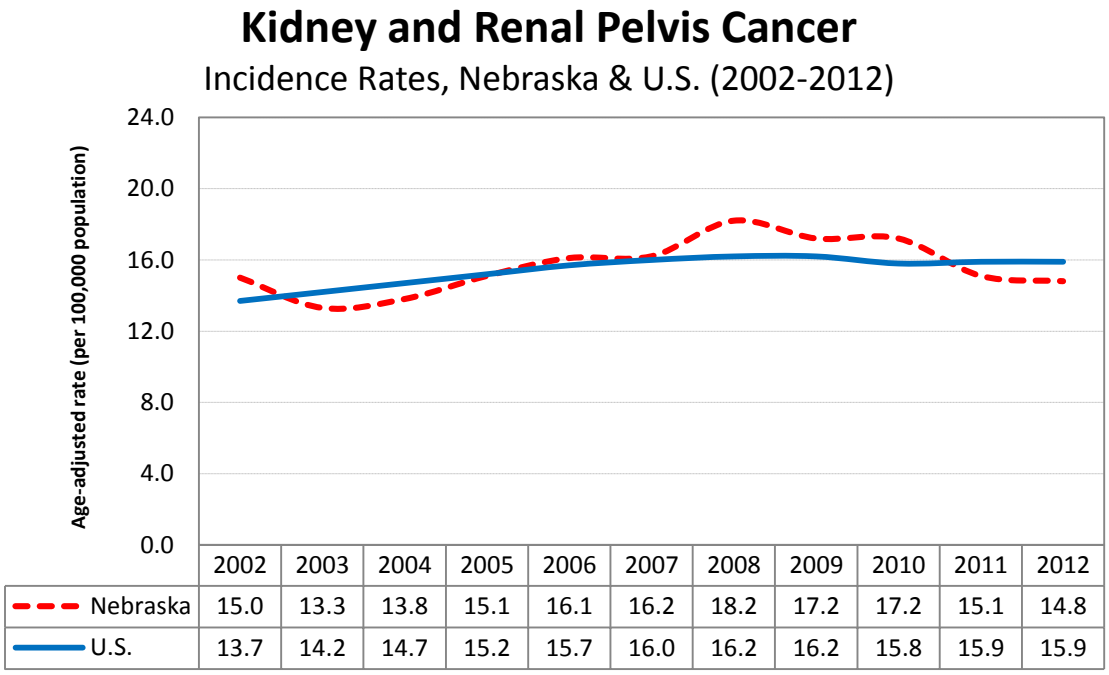
Abbreviation: NOS, not otherwise specified

Kidney and Renal Pelvis

Cancers of the kidney and renal pelvis accounted for 1,656 diagnoses in Nebraska between 2008 and 2012, and also accounted for 460 deaths in Nebraska during the same years. State and national trends since 1990 show a significant increase in the rate of diagnosis of these cancers, but little change in the mortality rate. The chances of survival for people with kidney cancer are relatively high, with the most current national statistics showing that the five-year relative survival rate for cancers of the kidney and renal pelvis is now over 70%.

Preventable risk factors for cancer of the kidney include cigarette smoking and obesity. Current estimates indicate that cigarette smoking is responsible for about one-third of all kidney cancer deaths. Kidney cancer is more likely to strike at younger ages than most other types; in Nebraska, almost half (49.6%) of all cases that were diagnosed during 2008-2012 were under the age of 65. Other non-preventable risk factors for cancer of the kidney include a family history of kidney cancer and high blood pressure. However, since people with high blood pressure are often treated with drugs, it is unclear whether their increased risk is related to their high blood pressure or the drugs. Nevertheless, people who need drugs to lower their blood pressure should take them.

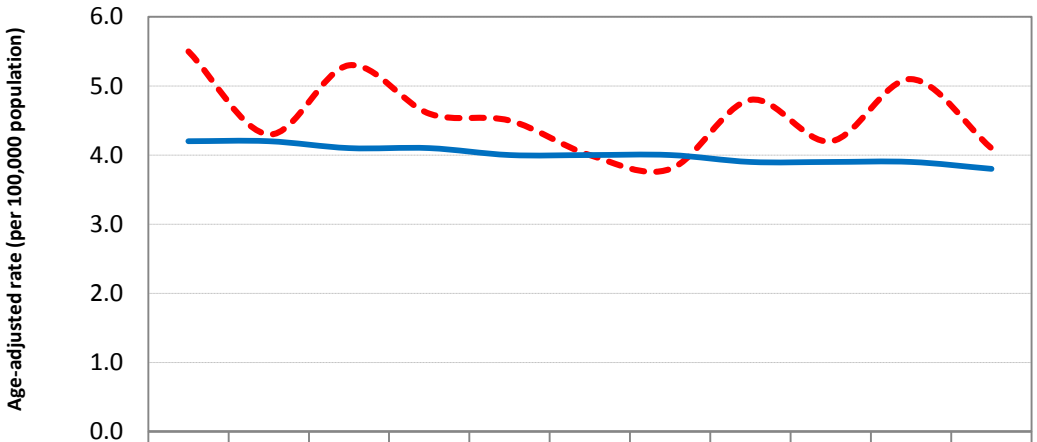
Incidence and mortality statistics by county of residence for cancers of the kidney and renal pelvis are presented in Appendix VIII (Table 16 [pp. 59-60]).



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	15.0	13.3	13.8	15.1	16.1	16.2	18.2	17.2	17.2	15.1	14.8
U.S.	13.7	14.2	14.7	15.2	15.7	16.0	16.2	16.2	15.8	15.9	15.9

Kidney and Renal Pelvis Cancer

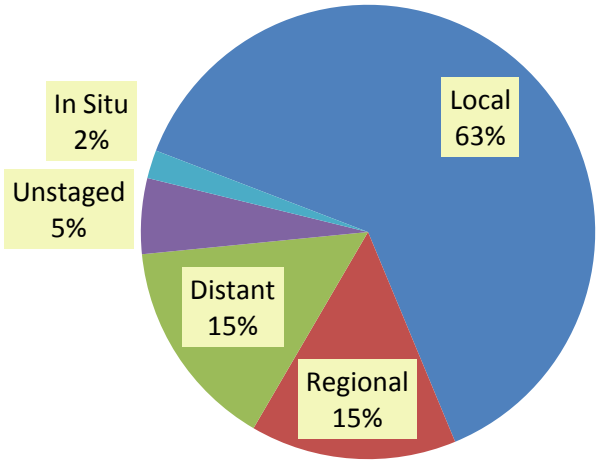
Mortality Rates, Nebraska & U.S. (2002-2012)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	5.5	4.3	5.3	4.6	4.5	4.0	3.8	4.8	4.2	5.1	4.1
U.S.	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8

Kidney and Renal Pelvis Cancer

Percentage of Cases, by Stage of Disease at Diagnosis
Nebraska, 2008-2012



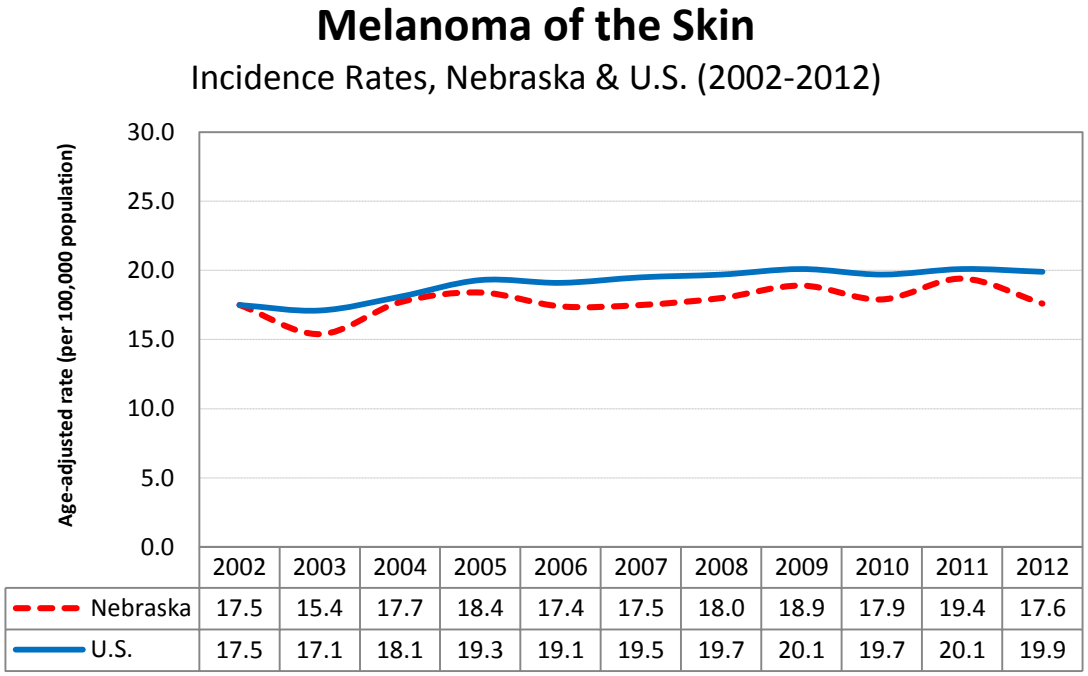
Melanoma of the Skin

There are several different types of skin cancer, but melanomas are the most serious. Nationally, melanomas comprise only about 5% of all skin cancer diagnoses but about 80% of all skin cancer deaths. In Nebraska, melanomas of the skin accounted for 1,781 diagnoses and 315 deaths between 2008 and 2012. The incidence of melanoma continues to increase significantly in Nebraska and throughout the United States. Because most melanomas are discovered early in their development and can be surgically removed, the relative five-year survival rate is now over 90%.

Melanoma is related to exposure to ultraviolet radiation (most of which comes from the sun), particularly exposures during childhood that resulted in severe sunburns. The risk of developing melanoma is particularly high among people with light skin. Sun exposure is not the only risk factor. Family history of melanoma and the presence of numerous dysplastic nevi (large moles with irregular coloration and shape) also increase a person's risk of the disease.

Skin melanomas are among the most preventable and treatable of all cancers. Wearing protective clothing and using sunscreen are the best methods for preventing the disease, and children in particular should have such protection. In addition, early detection can greatly reduce the risk of melanoma mortality. Recognition of changes in skin growths or the appearance of new growths is the best way to find melanomas early in their development. The ACS suggests that adults practice skin self-examination on a monthly basis, and that suspicious lesions should be evaluated promptly by a physician.

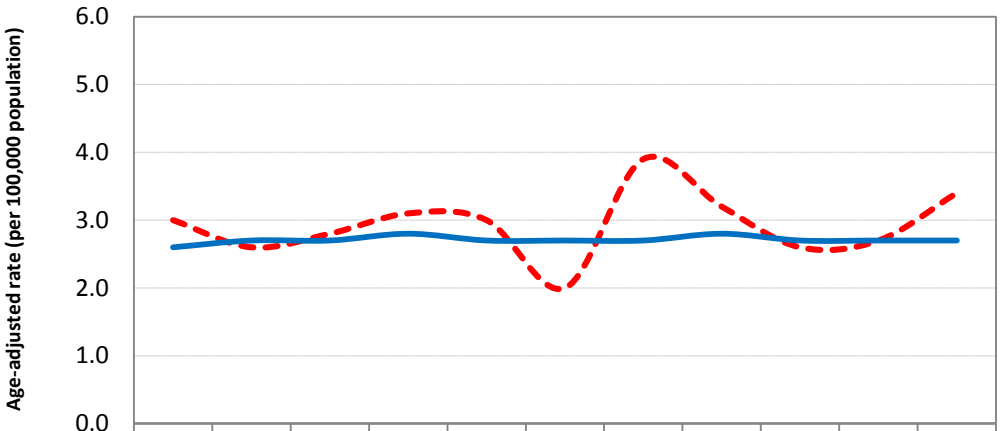
Incidence and mortality statistics by county of residence for melanoma of the skin are presented in Appendix IX (Table 17 [pp. 61-62]).



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	17.5	15.4	17.7	18.4	17.4	17.5	18.0	18.9	17.9	19.4	17.6
U.S.	17.5	17.1	18.1	19.3	19.1	19.5	19.7	20.1	19.7	20.1	19.9

Melanoma of the Skin

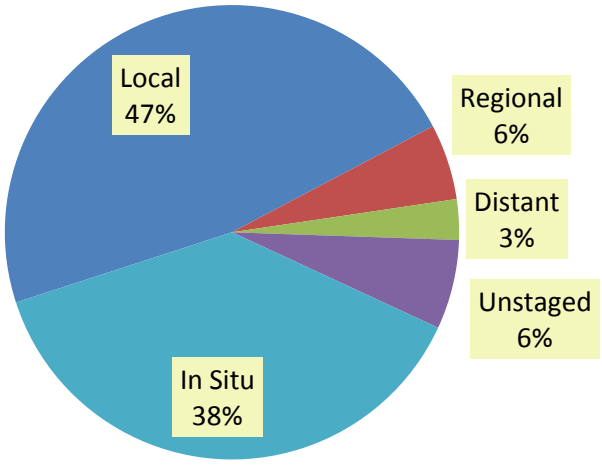
Mortality Rates, Nebraska & U.S. (2002-2012)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	3.0	2.6	2.8	3.1	3.0	2.0	3.9	3.2	2.6	2.7	3.4
U.S.	2.6	2.7	2.7	2.8	2.7	2.7	2.7	2.8	2.7	2.7	2.7

Melanoma of the Skin

Percentage of Cases, by Stage of Disease at Diagnosis
Nebraska, 2008-2012

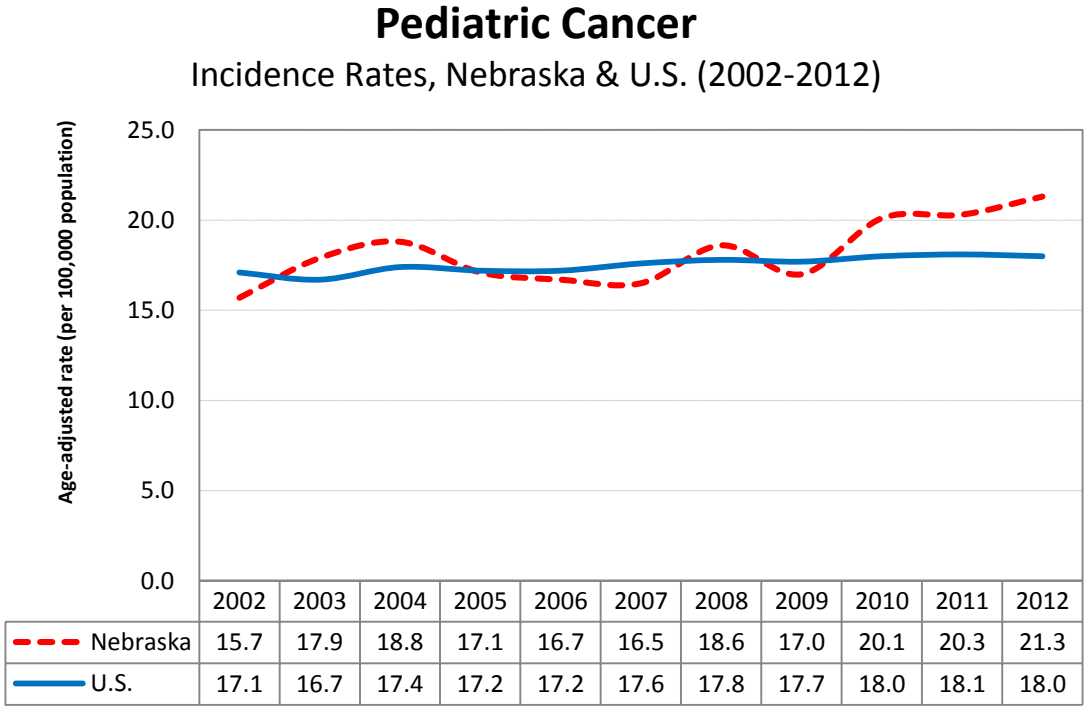


Pediatric Cancer

Pediatric cancer refers to those cancers diagnosed among anyone under 20 years of age. In Nebraska, 503 invasive pediatric cancers were diagnosed among Nebraska residents between 2008 and 2012, along with 57 benign tumors of the central nervous system (brain and spinal cord). During this same period, 74 Nebraska children and adolescents died from cancer. The two most common pediatric cancer diagnoses, central nervous system tumors and leukemia, accounted for about half of all Nebraska's pediatric cancer cases during 2008-2012. Nebraska data also show that leukemia is the most common type of cancer among children under five years of age; central nervous system tumors are the most common among children 5-14 years of age, and lymphomas predominate among those 15-19 years of age. Little is known about the causes of pediatric cancer: a few environmental factors, such as radiation exposure, have been linked with some types of pediatric cancer, and inherited genetic mutations can increase the risk for some types as well. Since the 1970s, survival has increased substantially for most types of pediatric cancer, particularly the leukemias: overall, the relative five-year survival rate for pediatric cancer for the entire U.S. is estimated at over 80%.

National data show that the incidence of pediatric cancer has increased significantly in recent decades, but with improvements in survival, pediatric cancer deaths have declined significantly at the same time. Nebraska and U.S. incidence data show much the same trend during the past decade, although Nebraska's rates have increased more sharply in recent years and have begun to pull ahead of U.S. rates. In fact, the incidence rate in Nebraska for the years 2010-2012 combined (20.5) is significantly higher than the U.S. incidence rate for the same period (18.0), for reasons that are presently unclear.

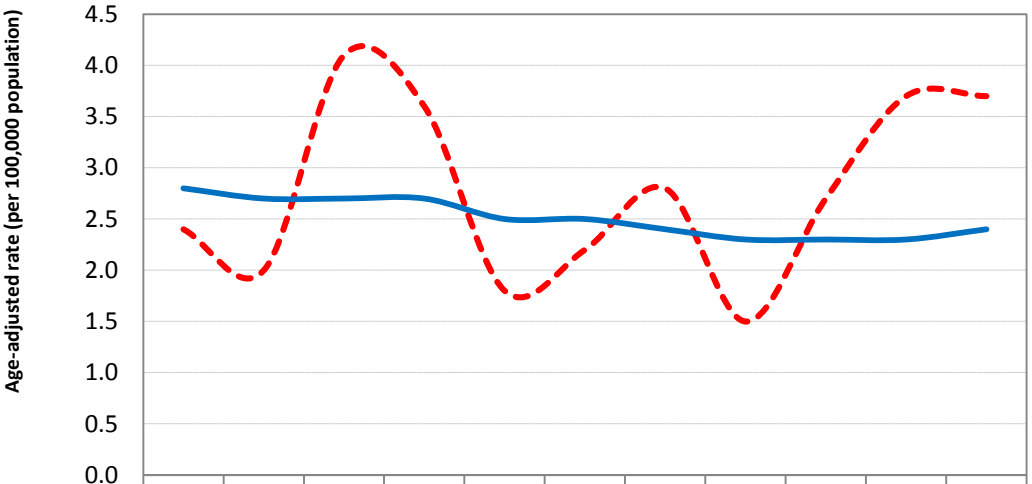
Pediatric cancer incidence and mortality statistics by county of residence are presented in Appendix X (Table 18 [pp. 63-64]).



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	15.7	17.9	18.8	17.1	16.7	16.5	18.6	17.0	20.1	20.3	21.3
U.S.	17.1	16.7	17.4	17.2	17.2	17.6	17.8	17.7	18.0	18.1	18.0

Pediatric Cancer

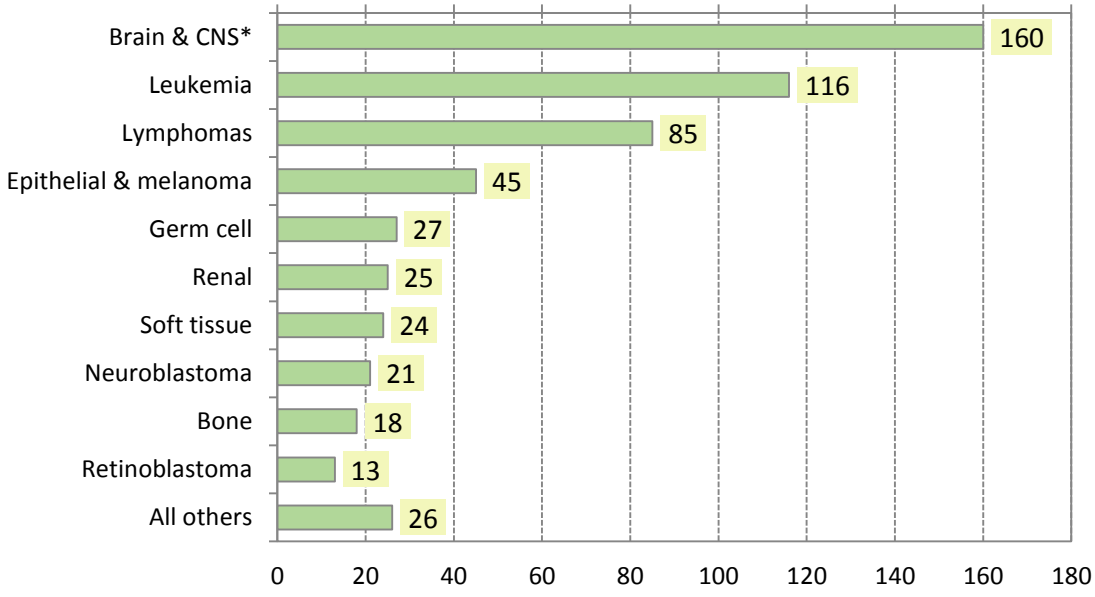
Mortality Rates, Nebraska & U.S. (2002-2012)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nebraska	2.4	2.0	4.1	3.6	1.8	2.2	2.8	1.5	2.7	3.7	3.7
U.S.	2.8	2.7	2.7	2.7	2.5	2.5	2.4	2.3	2.3	2.3	2.4

Pediatric Cancer

Number of Cases, by Primary Site at Diagnosis
Nebraska, 2008-2012



*includes invasive and benign brain and central nervous system (CNS) tumors

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APPENDICES

TABLE 9: Lung and Bronchus Cancer Incidence and Mortality
Number of Cases, Deaths, and Rates, by County of Residence
Nebraska (2008-2012) & U.S. (2008-2012)

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
U.S.	1,065,703	63.7	789,297	47.2
NEBRASKA	5,928	58.9	4,463	44.1
COUNTY				
ADAMS	121	63.1	89	45.4
ANTELOPE	32	59.2	21	38.5
ARTHUR	0	0.0	0	0.0
BANNER	*	*	*	*
BLAINE	3	71.6	*	*
BOONE	21	53.1	15	32.1
BOX BUTTE	33	49.0	26	37.6
BOYD	13	62.1	11	55.1
BROWN	11	39.0	9	28.1
BUFFALO	118	51.7	97	43.2
BURT	30	54.6	31	57.7
BUTLER	23	40.3∇	20	33.5
CASS	101	68.5	78	51.3
CEDAR	23	32.3▼	20	29.4∇
CHASE	24	81.6	13	40.8
CHERRY	20	45.1	20	42.9
CHEYENNE	37	57.1	32	47.7
CLAY	31	67.6	22	47.3
COLFAX	27	45.9	23	39.1
CUMING	30	42.9	25	33.7
CUSTER	48	55.1	42	48.5
DAKOTA	68	66.2	51	51.2
DAWES	23	41.4	15	24.7▼
DAWSON	61	44.5∇	49	35.1
DEUEL	6	35.6	3	17.5∇
DIXON	30	68.1	18	39.1
DODGE	190	73.8△	143	54.8△
DOUGLAS	1,658	69.6▲	1,210	51.5▲
DUNDY	4	28.3∇	5	27.9
FILLMORE	23	46.3	19	38.3
FRANKLIN	13	49.7	11	45.2
FRONTIER	11	61.5	12	68.3
FURNAS	28	70.9	13	32.1
GAGE	97	59.6	63	38.2
GARDEN	10	48.7	5	23.8
GARFIELD	11	56.1	7	35.9
GOSPER	12	75.2	8	48.7
GRANT	*	*	*	*
GREELEY	10	44.1	10	42.5
HALL	189	58.8	129	39.5
HAMILTON	29	47.8	22	34.9
HARLAN	14	42.8	14	45.6
HAYES	6	69.7	6	70.4
HITCHCOCK	23	88.8	17	64.3
HOLT	46	56.5	41	49.7
HOOKER	7	69.1	3	26.4
HOWARD	24	51.8	20	43.5
JEFFERSON	31	47.9	26	39.8

TABLE 9 (continued): Lung and Bronchus Cancer Incidence and Mortality

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
COUNTY				
JOHNSON	26	73.4	15	40.2
KEARNEY	24	53.8	19	40.1
KEITH	31	44.1	32	46.4
KEYA PAHA	0	0	*	*
KIMBALL	16	52.3	14	44.3
KNOX	47	67.2	35	47.0
LANCASTER	738	56.1	536	40.7
LINCOLN	131	59.2	99	43.5
LOGAN	4	83.7	*	*
LOUP	5	94.5	*	*
McPHERSON	0	0	0	0
MADISON	140	68.3	92	44.2
MERRICK	39	68.5	28	49.1
MORRILL	21	59.7	10	29.9
NANCE	13	43.8	15	52.3
NEMAHA	26	53.4	16	30.6
NUCKOLLS	26	61.8	16	37.0
OTOE	59	53.9	47	41.6
PAWNEE	13	52.7	10	38.2
PERKINS	12	51.0	10	44.4
PHELPS	32	48.1	28	42.8
PIERCE	31	62.7	26	50.8
PLATTE	93	48.6	73	38.9
POLK	26	62.0	20	45.0
RED WILLOW	45	57.7	39	47.9
RICHARDSON	43	60.2	40	57.0
ROCK	5	37.1	0	0.0
SALINE	55	68.3	40	50.2
SARPY	383	64.5	285	47.4
SAUNDERS	91	68.1	65	48.4
SCOTTS BLUFF	112	46.5∇	92	37.1
SEWARD	41	39.9▼	38	37.2
SHERIDAN	16	34.2▼	15	31.3
SHERMAN	13	48.9	17	65.6
SIOUX	*	*	*	*
STANTON	8	23.2▼	12	34.1
THAYER	23	53.3	16	34.0
THOMAS	*	*	*	*
THURSTON	20	61.3	20	60.6
VALLEY	13	34.0∇	12	29.1
WASHINGTON	65	53.2	51	42.2
WAYNE	18	33.0▼	18	33.2
WEBSTER	22	65.4	15	41.5
WHEELER	0	0.0	0	0.0
YORK	26	27.8▼	22	24.4▼

*Number and rate are not shown if based on fewer than three events
Rates are per 100,000 population and are age-adjusted to the 2000 U.S. population

∇county rate is significantly lower than the state rate (95% confidence level)
▼county rate is significantly lower than the state rate (% confidence level)
△county rate is significantly higher than the state rate (95% confidence level)
▲county rate is significantly higher than the state rate (99% confidence level)

TABLE 10: Female Breast Cancer Incidence and Mortality
Number of Cases, Deaths, and Rates, by County of Residence
Nebraska (2008-2012) & U.S. (2008-2012)

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
U.S.	1,097,719	123.0	204,342	21.9
NEBRASKA	6,415	122.7	1,118	19.7
COUNTY				
ADAMS	127	138.0	22	22.2
ANTELOPE	26	130.4	7	24.4
ARTHUR	0	0.0	0	0.0
BANNER	*	*	0	0.0
BLAINE	0	0	0	0.0
BOONE	25	112.9	6	24.2
BOX BUTTE	43	117.2	9	20.1
BOYD	8	126.7	0	0.0
BROWN	8	61.5▼	*	*
BUFFALO	163	133.0	33	26.0
BURT	37	148.1	7	24.9
BUTLER	35	128.4	8	26.2
CASS	93	123.4	13	17.1
CEDAR	26	66.9▼	5	11.7
CHASE	14	96.9	4	24.0
CHERRY	28	129.2	6	23.1
CHEYENNE	42	137.4	7	21.9
CLAY	30	136.7	3	9.9
COLFAX	37	132.2	9	32.4
CUMING	31	105.5	*	4.4▼
CUSTER	48	126.8	8	18.3
DAKOTA	48	87.4▽	7	12.4
DAWES	28	117.5	6	16.9
DAWSON	65	96.4	10	15.6
DEUEL	15	164.1	0	0.0
DIXON	23	108.3	5	22.0
DODGE	176	147.2	27	18.3
DOUGLAS	1,796	133.8△	304	22.0
DUNDY	8	80.1	3	18.5
FILLMORE	31	132.5	*	*
FRANKLIN	17	152.7	*	*
FRONTIER	6	75.3	*	*
FURNAS	30	164.8	*	*
GAGE	111	134.6	21	22.4
GARDEN	10	98.1	4	28.2
GARFIELD	8	78.9	*	*
GOSPER	6	77.0	*	*
GRANT	*	*	0	0.0
GREELEY	9	87.0	3	22.3
HALL	178	107.8	34	18.1
HAMILTON	36	115.2	6	19.2
HARLAN	12	130.8	6	37.1
HAYES	*	*	0	0.0
HITCHCOCK	9	65.3▽	*	*
HOLT	30	83.3▽	7	13.2
HOOKER	*	*	*	*
HOWARD	25	127.8	8	39.8
JEFFERSON	32	90.6	7	17.5

TABLE 10 (continued): Female Breast Cancer Incidence and Mortality

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
COUNTY				
JOHNSON	16	95.5	6	24.6
KEARNEY	24	93.8	3	14.9
KEITH	33	101.8	7	20.6
KEYA PAHA	3	89.5	*	*
KIMBALL	17	120.3	3	17.4
KNOX	33	114.3	3	6.2▼
LANCASTER	929	127.8	120	15.6▽
LINCOLN	126	111.4	36	29.4
LOGAN	*	*	0	0.0
LOUP	3	130.0	0	0.0
McPHERSON	*	*	*	*
MADISON	136	130.5	32	27.3
MERRICK	39	135.7	6	17.7
MORRILL	18	113.3	*	*
NANCE	16	117.4	*	*
NEMAHA	27	120.5	*	*
NUCKOLLS	15	91.3	3	12.3
OTOE	62	105.8	8	12.9
PAWNEE	9	69.1▽	3	20.4
PERKINS	6	45.3▼	3	14.9
PHELPS	35	105.6	5	12.9
PIERCE	12	45.7▼	3	8.3▽
PLATTE	111	115.2	18	17.4
POLK	26	117.0	7	35.6
RED WILLOW	43	108.0	9	20.8
RICHARDSON	30	93.6	9	14.3
ROCK	3	47.6▼	0	0.0
SALINE	60	147.5	9	14.6
SARPY	464	125.3	70	20.4
SAUNDERS	71	105.5	19	28.5
SCOTTS BLUFF	154	123.7	34	26.4
SEWARD	63	123.5	13	21.9
SHERIDAN	18	100.5	*	*
SHERMAN	16	149.8	4	43.4
SIOUX	3	63.0	0	0.0
STANTON	16	81.4	4	21.5
THAYER	20	90.2	*	*
THOMAS	5	200.9	0	0.0
THURSTON	26	149.6	6	37.7
VALLEY	12	76.1▽	5	20.0
WASHINGTON	81	128.9	17	25.4
WAYNE	28	122.7	5	27.4
WEBSTER	18	116.8	*	*
WHEELER	*	*	0	0.0
YORK	48	95.7	17	28.7

*Number and rate are not shown if based on fewer than three events
Rates are per 100,000 female population and are age-adjusted to the 2000 U.S. population

▽county rate is significantly lower than the state rate (95% confidence level)
▼county rate is significantly lower than the state rate (99% confidence level)
△county rate is significantly higher than the state rate (95% confidence level)
▲county rate is significantly higher than the state rate (99% confidence level)

TABLE 11: Colon & Rectum (Colorectal) Cancer Incidence and Mortality
Number of Cases, Deaths, and Rates, by County of Residence
Nebraska (2008-2012) & U.S. (2008-2012)

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
U.S.	699,930	41.9	260,049	15.5
NEBRASKA	4,667	46.1	1,763	16.9
COUNTY				
ADAMS	108	54.6	34	17.2
ANTELOPE	26	51.4	9	14.2
ARTHUR	*	*	*	*
BANNER	*	*	0	0.0
BLAINE	*	*	*	*
BOONE	21	51.7	11	24.1
BOX BUTTE	31	46.1	13	18.1
BOYD	11	50.8	0	8.8
BROWN	15	53.5	5	16.6
BUFFALO	108	45.6	46	19.8
BURT	29	47.7	10	14.0
BUTLER	32	48.3	9	12.7
CASS	73	48.1	33	21.6
CEDAR	28	37.4	11	11.7
CHASE	11	35.8	6	17.9
CHERRY	22	47.6	7	17.8
CHEYENNE	20	31.2	7	10.6
CLAY	20	41.7	12	24.6
COLFAX	17	29.7▽	14	22.4
CUMING	29	40.0	13	17.5
CUSTER	38	49.2	16	17.4
DAKOTA	51	51.9	20	20.6
DAWES	19	37.4	9	14.2
DAWSON	77	56.2	26	18.3
DEUEL	4	23.5	*	*
DIXON	22	55.9	9	20.2
DODGE	121	49.2	48	18.7
DOUGLAS	1,117	46.7	397	16.4
DUNDY	9	52.2	3	12.1
FILLMORE	19	44.2	8	16.9
FRANKLIN	16	54.0	4	12.3
FRONTIER	15	72.5	4	19.1
FURNAS	25	63.6	9	18.7
GAGE	77	47.5	46	25.5△
GARDEN	7	53.4	3	15.8
GARFIELD	7	31.9	3	11.8
GOSPER	7	51.3	4	23.2
GRANT	*	*	0	0.0
GREELEY	13	60.0	4	16.2
HALL	177	53.6	65	19.7
HAMILTON	19	28.8▽	9	13.2
HARLAN	20	66.5	16	51.9▲
HAYES	*	*	0	0.0
HITCHCOCK	9	36.6	*	*
HOLT	45	56.6	13	15.1
HOOKER	6	85.2	*	*
HOWARD	19	43.0	9	19.3
JEFFERSON	25	44.1	13	19.4

TABLE 11 (continued): Colon & Rectum (Colorectal) Cancer Incidence and Mortality

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
COUNTY				
JOHNSON	24	63.0	7	17.7
KEARNEY	31	69.7	7	12.3
KEITH	38	61.3	13	19.8
KEYA PAHA	5	68.4	3	37.2
KIMBALL	12	38.5	6	18.5
KNOX	31	44.1	12	15.4
LANCASTER	543	40.1∇	191	14.1∇
LINCOLN	90	40.7	29	12.1
LOGAN	3	60.0	0	0.0
LOUP	5	90.2	0	0.0
McPHERSON	*	*	*	*
MADISON	112	53.7	45	21.5
MERRICK	18	33.0	15	26.9
MORRILL	17	48.7	7	19.5
NANCE	16	53.6	8	26.2
NEMAHA	20	40.8	6	12.4
NUCKOLLS	25	67.1	7	14.0
OTOE	44	41.9	14	12.6
PAWNEE	12	43.3	3	7.8
PERKINS	8	41.9	4	15.8
PHELPS	31	48.9	12	18.2
PIERCE	33	63.5	11	19.0
PLATTE	90	48.6	29	16.0
POLK	22	53.4	8	14.7
RED WILLOW	28	34.9	14	15.8
RICHARDSON	40	57.6	18	23.4
ROCK	9	77.2	*	*
SALINE	61	73.3▲	17	18.3
SARPY	281	45.0	101	18.0
SAUNDERS	60	45.8	27	21.1
SCOTTS BLUFF	94	41.4	40	16.2
SEWARD	52	50.5	15	14.2
SHERIDAN	24	60.8	12	23.2
SHERMAN	7	28.8	*	*
SIOUX	*	*	*	*
STANTON	12	32.2	6	17.0
THAYER	26	51.7	9	14.3
THOMAS	*	*	0	0.0
THURSTON	21	62.8	4	11.4
VALLEY	18	49.3	11	30.4
WASHINGTON	57	48.8	19	16.0
WAYNE	23	44.3	8	14.1
WEBSTER	22	59.6	12	32.1
WHEELER	3	47.2	*	*
YORK	24	23.3▼	19	20.2

*Number and rate are not shown if based on fewer than three events
Rates are per 100,000 population and are age-adjusted to the 2000 U.S. population

∇county rate is significantly lower than the state rate (95% confidence level)
▼county rate is significantly lower than the state rate (99% confidence level)
△county rate is significantly higher than the state rate (95% confidence level)
▲county rate is significantly higher than the state rate (99% confidence level)

TABLE 12: Prostate Cancer Incidence and Mortality
Number of Cases, Deaths, and Rates, by County of Residence
Nebraska (2008-2012) & U.S. (2008-2012)

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
U.S.	1,048,487	131.9	140,333	21.4
NEBRASKA	5,954	125.7	930	22.0
COUNTY				
ADAMS	99	111.7	14	17.0
ANTELOPE	42	168.2	4	15.9
ARTHUR	*	*	0	0.0
BANNER	0	0.0	0	0.0
BLAINE	*	*	*	*
BOONE	39	194.9△	6	27.6
BOX BUTTE	44	133.6	7	24.3
BOYD	12	130.2	*	*
BROWN	19	146.8	*	*
BUFFALO	133	124.8	15	16.1
BURT	45	172.6	5	18.5
BUTLER	41	140.4	5	16.9
CASS	80	106.5	9	17.0
CEDAR	34	106.5	7	19.8
CHASE	21	152.8	4	27.7
CHERRY	25	117.8	*	*
CHEYENNE	41	140.7	7	24.6
CLAY	34	147.5	7	33.8
COLFAX	36	137.2	9	34.8
CUMING	48	146.5	*	*
CUSTER	44	108.8	12	31.1
DAKOTA	60	124.5	9	26.7
DAWES	28	101.8	9	33.2
DAWSON	75	114.5	20	33.3
DEUEL	11	133.1	*	22.5
DIXON	30	147.5	4	22.2
DODGE	161	140.8	24	20.9
DOUGLAS	1424	127.2	222	24.6
DUNDY	8	98.5	0	0.0
FILLMORE	20	95.4	*	*
FRANKLIN	16	118.0	*	*
FRONTIER	16	162.8	*	*
FURNAS	17	91.4	*	*
GAGE	85	112.4	17	22.6
GARDEN	13	136.4	*	*
GARFIELD	12	141.8	*	*
GOSPER	14	180.7	*	*
GRANT	4	180.6	0	0.0
GREELEY	14	130.2	0	0.0
HALL	227	152.0△	27	19.8
HAMILTON	30	107.2	9	33.5
HARLAN	19	127.9	5	32.4
HAYES	5	141.4	0	0.0
HITCHCOCK	13	110.4	4	34.6
HOLT	55	149.8	12	30.6
HOOKER	4	132.8	*	*
HOWARD	41	190.6△	4	18.4
JEFFERSON	23	79.6▽	11	35.1

TABLE 12 (continued): Prostate Cancer Incidence and Mortality

	Incidence		Mortality	
COUNTY	# Cases	Rate	# Deaths	Rate
JOHNSON	20	120.2	3	19.8
KEARNEY	21	98.8	4	19.7
KEITH	32	99.6	6	20.6
KEYA PAHA	*	*	*	*
KIMBALL	15	103.0	3	21.9
KNOX	49	151.4	5	15.2
LANCASTER	697	108.7▼	115	21.3
LINCOLN	122	114.6	17	17.6
LOGAN	6	207.2	*	*
LOUP	9	340.4	*	*
McPHERSON	0	0.0	0	0.0
MADISON	160	171.4▲	22	23.9
MERRICK	44	164.6	4	17.0
MORRILL	26	149.5	*	*
NANCE	11	83.0	3	25.2
NEMAHA	24	100.7	10	45.9
NUCKOLLS	26	131.3	6	24.9
OTOE	49	98.0	16	30.9
PAWNEE	15	126.5	7	54.9
PERKINS	8	74.7	*	*
PHELPS	37	122.2	10	31.5
PIERCE	28	115.7	4	17.1
PLATTE	136	154.2	11	13.1
POLK	16	86.0	*	*
RED WILLOW	37	104.5	5	14.4
RICHARDSON	32	98.2	7	20.4
ROCK	13	223.6	3	49.6
SALINE	53	134.0	9	24.5
SARPY	399	128.2	45	21.7
SAUNDERS	95	146.3	13	24.2
SCOTTS BLUFF	133	121.5	17	15.8
SEWARD	70	142.9	6	13.2
SHERIDAN	25	124.0	7	29.0
SHERMAN	12	95.8	5	35.3
SIOUX	5	84.6	0	0.0
STANTON	8	46.8▼	5	28.2
THAYER	28	129.0	8	30.5
THOMAS	6	216.6	0	0.0
THURSTON	15	103.5	*	*
VALLEY	19	108.4	3	15.6
WASHINGTON	74	128.7	10	20.9
WAYNE	31	128.8	6	24.7
WEBSTER	27	184.2	3	19.6
WHEELER	6	188.8	0	0.0
YORK	49	111.4	12	28.3

*Number and rate are not shown if based on fewer than three events
Rates are per 100,000 male population and are age-adjusted to the 2000 U.S. population

▽county rate is significantly lower than the state rate (95% confidence level)
▼county rate is significantly lower than the state rate (99% confidence level)
△county rate is significantly higher than the state rate (95% confidence level)
▲county rate is significantly higher than the state rate (99% confidence level)

TABLE 13: Urinary Bladder Cancer Incidence and Mortality
Number of Cases, Deaths, and Rates, by County of Residence
Nebraska (2008-2012) & U.S. (2008-2012)

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
U.S.	345,536	20.8	73,226	4.4
NEBRASKA	1,996	19.8	426	4.0
COUNTY				
ADAMS	31	15.0	6	2.4
ANTELOPE	8	15.5	*	*
ARTHUR	0	0.0	0	0.0
BANNER	0	0.0	0	0.0
BLAINE	0	0.0	0	0.0
BOONE	8	17.3	3	5.4
BOX BUTTE	13	18.0	3	3.5
BOYD	*	*	*	*
BROWN	4	11.5	3	8.1
BUFFALO	41	17.7	11	5.1
BURT	11	17.1	4	6.0
BUTLER	15	23.9	4	5.9
CASS	27	17.7	5	3.3
CEDAR	13	21.8	0	0.0
CHASE	14	40.3	5	14.3
CHERRY	3	6.0▼	*	*
CHEYENNE	16	25.6	0	0.0
CLAY	7	14.2	*	*
COLFAX	6	9.5▽	*	*
CUMING	12	15.9	3	2.5
CUSTER	20	24.0	4	4.2
DAKOTA	13	12.7	6	6.4
DAWES	14	24.2	*	*
DAWSON	33	23.4	6	3.9
DEUEL	*	*	*	*
DIXON	*	*	0	0.0
DODGE	56	22.6	9	3.1
DOUGLAS	524	22.3	113	4.9
DUNDY	3	13.6	*	*
FILLMORE	5	8.7▽	*	*
FRANKLIN	4	12.8	0	0.0
FRONTIER	4	17.3	0	0.0
FURNAS	12	27.4	3	6.0
GAGE	35	20.6	12	6.1
GARDEN	5	22.9	*	*
GARFIELD	8	36.4	*	*
GOSPER	7	42.6	0	0.0
GRANT	0	0.0	0	0.0
GREELEY	5	20.6	*	*
HALL	68	20.8	18	5.4
HAMILTON	17	28.9	5	8.5
HARLAN	6	18.4	*	*
HAYES	*	*	*	*
HITCHCOCK	*	*	*	*
HOLT	11	13.0	3	3.8
HOOKER	3	36.4	0	0.0
HOWARD	*	*	*	*
JEFFERSON	13	20.1	5	7.0

TABLE 13 (continued): Urinary Bladder Cancer Incidence and Mortality

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
COUNTY				
JOHNSON	5	13.2	0	0.0
KEARNEY	7	14.4	4	8.2
KEITH	18	27.6	4	6.1
KEYA PAHA	*	*	*	*
KIMBALL	8	25.4	*	*
KNOX	17	21.1	*	*
LANCASTER	229	17.6	58	4.5
LINCOLN	63	27.7△	9	3.9
LOGAN	*	*	0	0.0
LOUP	3	49.5	0	0.0
McPHERSON	*	*	*	*
MADISON	34	16.1	6	2.6
MERRICK	11	21.3	*	*
MORRILL	8	21.1	*	*
NANCE	3	9.9	0	0.0
NEMAHA	13	24.7	3	4.8
NUCKOLLS	3	8.1▽	*	*
OTOE	24	22.1	*	*
PAWNEE	3	9.1	0	0.0
PERKINS	6	21.1	*	*
PHELPS	8	15.4	3	4.9
PIERCE	10	19.4	*	*
PLATTE	31	15.4	8	3.8
POLK	6	13.3	*	*
RED WILLOW	16	20.5	5	6.2
RICHARDSON	8	11.3	*	*
ROCK	*	*	0	0.0
SALINE	17	20.5	3	4.1
SARPY	124	20.0	24	4.3
SAUNDERS	21	16.5	4	2.9
SCOTTS BLUFF	59	24.1	8	3.0
SEWARD	23	22.7	*	*
SHERIDAN	4	5.9▼	*	*
SHERMAN	6	17.9	0	0.0
SIOUX	*	*	*	*
STANTON	4	10.9	*	*
THAYER	12	24.0	3	4.0
THOMAS	*	*	0	0.0
THURSTON	7	21.1	*	*
VALLEY	7	19.1	4	7.4
WASHINGTON	24	20.6	*	*
WAYNE	10	19.2	*	*
WEBSTER	7	19.3	*	*
WHEELER	*	*	0	0.0
YORK	24	23.3	*	*

*Number and rate are not shown if based on fewer than three events
Rates are per 100,000 population and are age-adjusted to the 2000 U.S. population

▽county rate is significantly lower than the state rate (95% confidence level)
▼county rate is significantly lower than the state rate (99% confidence level)
△county rate is significantly higher than the state rate (95% confidence level)
▲county rate is significantly higher than the state rate (99% confidence level)

TABLE 14: Non-Hodgkin Lymphoma Incidence and Mortality
Number of Cases, Deaths, and Rates, by County of Residence
Nebraska (2008-2012) & U.S. (2008-2012)

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
U.S.	317,712	19.2	101,756	6.2
NEBRASKA	2,016	20.1	653	6.3
COUNTY				
ADAMS	38	21.6	11	5.3
ANTELOPE	11	20.0	5	7.9
ARTHUR	0	0.0	0	0.0
BANNER	0	0.0	*	*
BLAINE	0	0.0	0	0.0
BOONE	15	39.7	3	9.9
BOX BUTTE	17	24.3	3	4.1
BOYD	*	*	0	0.0
BROWN	5	16.2	4	15.3
BUFFALO	50	21.8	13	5.6
BURT	12	21.7	3	4.4
BUTLER	7	11.3	7	9.7
CASS	38	25.5	13	9.3
CEDAR	5	5.9▼	3	2.6▽
CHASE	4	11.6	*	*
CHERRY	10	29.4	3	7.0
CHEYENNE	17	27.9	3	3.9
CLAY	17	40.6△	7	16.0
COLFAX	11	19.0	6	10.2
CUMING	12	16.3	4	5.3
CUSTER	15	18.2	6	6.6
DAKOTA	13	12.8	4	4.1
DAWES	6	9.9▽	*	*
DAWSON	14	10.9▼	*	*
DEUEL	4	35.3	0	0.0
DIXON	8	17.5	5	13.5
DODGE	49	19.0	21	7.4
DOUGLAS	516	21.1	153	6.4
DUNDY	*	*	*	*
FILLMORE	8	16.6	5	8.4
FRANKLIN	*	*	3	8.6
FRONTIER	5	25.0	0	0.0
FURNAS	7	15.3	5	9.9
GAGE	36	21.8	14	7.9
GARDEN	4	30.3	*	*
GARFIELD	5	25.3	0	0.0
GOSPER	*	*	0	0.0
GRANT	*	*	0	0.0
GREELEY	3	14.7	3	11.7
HALL	85	26.3	20	6.0
HAMILTON	17	31.1	7	13.1
HARLAN	6	21.3	3	9.7
HAYES	*	*	*	*
HITCHCOCK	6	25.7	*	*
HOLT	12	17.0	5	5.0
HOOKER	0	0.0	0	0.0
HOWARD	15	34.7	*	*
JEFFERSON	7	10.3▽	3	4.0

TABLE 14 (continued): Non-Hodgkin Lymphoma Incidence and Mortality

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
COUNTY				
JOHNSON	15	38.8	3	6.5
KEARNEY	7	14.4	3	6.2
KEITH	15	24.9	*	*
KEYA PAHA	*	*	*	*
KIMBALL	6	20.7	4	14.4
KNOX	20	25.6	9	10.4
LANCASTER	232	17.4	87	6.6
LINCOLN	58	25.5	12	4.7
LOGAN	0	0.0	0	0.0
LOUP	*	*	0	0.0
McPHERSON	*	*	0	0.0
MADISON	38	17.9	15	8.1
MERRICK	5	8.5▼	0	0.0
MORRILL	*	*	*	*
NANCE	6	20.9	*	*
NEMAHA	12	26.8	6	13.0
NUCKOLLS	6	17.2	4	8.6
OTOE	18	15.5	5	3.4
PAWNEE	4	15.3	*	*
PERKINS	3	13.4	0	0.0
PHELPS	12	17.7	3	4.1
PIERCE	6	15.9	4	7.4
PLATTE	35	19.4	4	1.9▼
POLK	10	26.7	4	9.3
RED WILLOW	13	16.3	7	8.1
RICHARDSON	20	27.5	7	8.9
ROCK	*	*	4	30.9
SALINE	17	20.8	9	8.8
SARPY	145	22.1	36	6.4
SAUNDERS	25	20.3	10	7.6
SCOTTS BLUFF	43	18.3	16	6.0
SEWARD	25	24.9	7	6.6
SHERIDAN	7	15.9	*	*
SHERMAN	4	15.5	3	9.9
SIOUX	*	*	0	0.0
STANTON	0	0.0	0	0.0
THAYER	6	10.5▽	4	5.9
THOMAS	3	47.0	0	0.0
THURSTON	6	16.0	*	*
VALLEY	4	8.5▽	*	*
WASHINGTON	27	22.3	5	4.0
WAYNE	11	21.4	4	6.8
WEBSTER	8	25.4	4	11.3
WHEELER	0	0.0	0	0.0
YORK	15	18.1	5	5.1

*Number and rate are not shown if based on fewer than three events
Rates are per 100,000 population and are age-adjusted to the 2000 U.S. population

▽county rate is significantly lower than the state rate (95% confidence level)
▼county rate is significantly lower than the state rate (99% confidence level)
△county rate is significantly higher than the state rate (95% confidence level)
▲county rate is significantly higher than the state rate (99% confidence level)

TABLE 15: Leukemia Incidence and Mortality
Number of Cases, Deaths, and Rates, by County of Residence
Nebraska (2008-2012) & U.S. (2008-2012)

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
U.S.	216,581	13.3	114,295	7.0
NEBRASKA	1,325	13.2	728	7.1
COUNTY				
ADAMS	32	16.9	15	7.5
ANTELOPE	7	13.7	3	5.1
ARTHUR	0	0.0	0	0.0
BANNER	0	0.0	0	0.0
BLAINE	0	0.0	0	0.0
BOONE	10	22.2	4	7.4
BOX BUTTE	5	9.5	6	6.8
BOYD	*	*	*	*
BROWN	0	0.0	0	0.0
BUFFALO	29	12.5	22	9.7
BURT	15	24.9	12	24.2△
BUTLER	5	8.1	*	*
CASS	22	16.1	12	7.7
CEDAR	6	8.8	4	5.6
CHASE	3	13.8	0	0.0
CHERRY	5	11.2	*	*
CHEYENNE	7	11.6	6	10.2
CLAY	5	13.0	4	8.7
COLFAX	10	19.4	5	8.2
CUMING	6	8.6	3	4.4
CUSTER	8	10.2	5	4.6
DAKOTA	12	11.6	5	4.7
DAWES	3	5.2▽	3	5.2
DAWSON	12	9.5	7	5.4
DEUEL	*	*	*	*
DIXON	7	15.8	8	17.1
DODGE	27	11.5	19	6.7
DOUGLAS	340	13.5	167	7.0
DUNDY	*	*	0	0.0
FILLMORE	6	16.8	3	6.2
FRANKLIN	*	*	*	*
FRONTIER	*	*	0	0.0
FURNAS	5	14.7	4	8.8
GAGE	25	15.1	12	6.5
GARDEN	5	26.8	*	*
GARFIELD	4	32.1	*	*
GOSPER	*	*	3	17.8
GRANT	0	0.0	0	0.0
GREELEY	7	31.8	*	*
HALL	51	16.1	17	4.9
HAMILTON	10	16.4	5	8.3
HARLAN	4	20.7	*	*
HAYES	0	0.0	*	*
HITCHCOCK	4	24.7	*	*
HOLT	12	19.4	6	8.6
HOOKER	0	0.0	0	0.0
HOWARD	4	9.4	5	10.0
JEFFERSON	10	15.2	6	8.0

TABLE 15 (continued): Leukemia Incidence and Mortality

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
COUNTY				
JOHNSON	6	17.7	3	7.7
KEARNEY	5	12.0	*	*
KEITH	9	13.3	4	7.8
KEYA PAHA	*	*	0	0.0
KIMBALL	*	*	4	12.7
KNOX	6	11.3	6	11.6
LANCASTER	184	13.7	99	7.3
LINCOLN	31	13.9	21	8.7
LOGAN	0	0.0	0	0.0
LOUP	*	*	0	0.0
McPHERSON	*	*	*	*
MADISON	16	7.9▽	4	1.9▼
MERRICK	9	16.2	3	5.7
MORRILL	*	*	*	*
NANCE	3	7.9	*	*
NEMAHA	5	9.7	5	8.8
NUCKOLLS	6	12.9	3	6.1
OTOE	10	11.0	7	7.0
PAWNEE	4	21.0	*	*
PERKINS	*	*	*	*
PHELPS	7	11.5	7	11.1
PIERCE	5	11.4	*	*
PLATTE	22	12.0	7	4.0
POLK	4	11.8	3	6.3
RED WILLOW	14	18.2	9	11.6
RICHARDSON	5	7.7	4	6.3
ROCK	*	*	*	*
SALINE	10	11.2	7	7.4
SARPY	84	12.7	43	7.0
SAUNDERS	20	15.6	10	7.9
SCOTTS BLUFF	33	14.0	26	10.3
SEWARD	13	12.4	6	5.8
SHERIDAN	4	14.1	4	8.2
SHERMAN	7	23.1	4	12.1
SIOUX	*	*	*	*
STANTON	*	*	3	8.3
THAYER	7	12.1	*	*
THOMAS	3	57.0	0	0.0
THURSTON	6	18.5	3	10.8
VALLEY	4	13.2	3	9.7
WASHINGTON	13	10.8	9	8.1
WAYNE	7	18.1	4	8.9
WEBSTER	3	11.1	*	*
WHEELER	0	0.0	0	0.0
YORK	13	14.5	14	13.4

*Number and rate are not shown if based on fewer than three events
Rates are per 100,000 population and are age-adjusted to the 2000 U.S. population

▽county rate is significantly lower than the state rate (95% confidence level)
▼county rate is significantly lower than the state rate (99% confidence level)
△county rate is significantly higher than the state rate (95% confidence level)
▲county rate is significantly higher than the state rate (99% confidence level)

TABLE 16: Kidney and Renal Pelvis Cancer Incidence and Mortality
Number of Cases, Deaths, and Rates, by County of Residence
Nebraska (2008-2012) & U.S. (2008-2012)

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
U.S.	268,316	16.0	66,186	3.9
NEBRASKA	1,656	16.5	460	4.4
COUNTY				
ADAMS	23	13.0	9	4.9
ANTELOPE	10	19.5	4	8.1
ARTHUR	*	*	0	0.0
BANNER	0	0.0	0	0.0
BLAINE	*	*	*	*
BOONE	4	10.2	3	8.1
BOX BUTTE	16	24.5	*	*
BOYD	4	36.2	*	*
BROWN	3	11.3	*	*
BUFFALO	31	13.3	12	5.4
BURT	10	23.2	7	11.4
BUTLER	9	16.2	5	9.1
CASS	30	21.0	6	3.8
CEDAR	14	21.3	3	3.5
CHASE	*	*	0	0.0
CHERRY	5	13.5	*	*
CHEYENNE	10	17.5	0	0.0
CLAY	8	16.7	3	7.1
COLFAX	9	16.2	3	5.8
CUMING	12	19.2	5	7.7
CUSTER	13	16.2	*	*
DAKOTA	16	15.3	3	2.6
DAWES	*	*	3	5.2
DAWSON	21	15.8	6	4.4
DEUEL	*	*	*	*
DIXON	*	*	0	0.0
DODGE	56	23.4	14	5.3
DOUGLAS	455	18.5	122	5.1
DUNDY	*	*	*	*
FILLMORE	9	20.7	3	7.0
FRANKLIN	5	17.9	*	*
FRONTIER	*	*	0	0.0
FURNAS	7	18.5	*	*
GAGE	30	21.3	6	3.6
GARDEN	*	*	0	0.0
GARFIELD	*	*	*	*
GOSPER	*	*	0	0.0
GRANT	*	*	*	*
GREELEY	0	0.0	0	0.0
HALL	67	21.4	16	5.0
HAMILTON	10	16.7	6	9.7
HARLAN	4	12.3	*	*
HAYES	4	49.1	0	0.0
HITCHCOCK	4	15.5	0	0.0
HOLT	8	9.6	*	*
HOOKER	4	52.4	0	0.0
HOWARD	4	10.8	*	*
JEFFERSON	9	17.2	*	*

TABLE 16 (continued): Kidney and Renal Pelvis Cancer Incidence and Mortality

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
COUNTY				
JOHNSON	4	11.3	*	*
KEARNEY	6	13.8	0	0.0
KEITH	9	12.7	3	4.2
KEYA PAHA	*	*	0	0.0
KIMBALL	4	12.9	0	0.0
KNOX	7	10.0	*	*
LANCASTER	215	15.2	61	4.5
LINCOLN	34	15.7	10	4.0
LOGAN	*	*	0	0.0
LOUP	0	0.0	0	0.0
McPHERSON	0	0.0	0	0.0
MADISON	30	15.3	3	1.2▼
MERRICK	13	25.6	7	12.2
MORRILL	6	16.0	*	*
NANCE	4	20.5	0	0.0
NEMAHA	10	21.6	4	7.5
NUCKOLLS	3	7.9	0	0.0
OTOE	14	12.2	6	5.2
PAWNEE	8	33.4	*	*
PERKINS	3	14.0	*	*
PHELPS	10	16.4	4	6.7
PIERCE	3	6.0▼	*	*
PLATTE	23	12.0	10	5.0
POLK	9	17.2	5	10.1
RED WILLOW	9	10.4	4	3.9
RICHARDSON	15	21.2	*	*
ROCK	*	*	*	*
SALINE	9	12.3	3	3.3
SARPY	128	19.2	22	3.2
SAUNDERS	16	12.4	9	6.7
SCOTTS BLUFF	32	13.2	8	3.0
SEWARD	16	17.2	8	7.6
SHERIDAN	3	7.0▽	0	0.0
SHERMAN	3	12.2	*	*
SIOUX	0	0.0	0	0.0
STANTON	*	*	*	*
THAYER	10	20.2	6	12.0
THOMAS	*	*	0	0.0
THURSTON	6	17.9	*	*
VALLEY	6	17.8	*	*
WASHINGTON	14	12.3	7	6.1
WAYNE	5	9.9	*	*
WEBSTER	4	12.8	0	0.0
WHEELER	*	*	0	0.0
YORK	15	16.1	5	4.4

*Number and rate are not shown if based on fewer than three events
Rates are per 100,000 population and are age-adjusted to the 2000 U.S. population

▽county rate is significantly lower than the state rate (95% confidence level)
▼county rate is significantly lower than the state rate (99% confidence level)
△county rate is significantly higher than the state rate (95% confidence level)
▲county rate is significantly higher than the state rate (99% confidence level)

TABLE 17: Melanoma of the Skin Incidence and Mortality
Number of Cases, Deaths, and Rates, by County of Residence
Nebraska (2008-2012) & U.S. (2008-2012)

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
U.S.	327,884	19.9	45,355	2.7
NEBRASKA	1,781	18.4	315	3.1
COUNTY				
ADAMS	55	33.6▲	14	7.8△
ANTELOPE	11	25.5	3	5.5
ARTHUR	0	0.0	0	0.0
BANNER	*	*	0	0.0
BLAINE	*	*	0	0.0
BOONE	10	33.1	0	0.0
BOX BUTTE	15	21.2	*	*
BOYD	*	*	0	0.0
BROWN	3	13.5	*	*
BUFFALO	30	13.5	10	4.3
BURT	11	25.3	*	*
BUTLER	10	18.4	5	8.1
CASS	35	24.3	10	6.4
CEDAR	10	15.4	*	*
CHASE	5	17.5	0	0.0
CHERRY	3	6.1▼	*	*
CHEYENNE	10	16.0	*	*
CLAY	7	18.8	3	6.1
COLFAX	12	21.6	3	5.0
CUMING	7	12.4	3	5.6
CUSTER	12	16.4	4	4.5
DAKOTA	9	9.3▽	8	8.5
DAWES	7	16.4	*	*
DAWSON	19	13.8	3	2.3
DEUEL	*	*	0	0.0
DIXON	11	31.8	*	*
DODGE	27	11.4▼	7	2.5
DOUGLAS	475	19.0	70	2.9
DUNDY	8	59.8	0	0.0
FILLMORE	7	19.0	3	8.7
FRANKLIN	*	*	0	0.0
FRONTIER	4	20.7	0	0.0
FURNAS	6	18.7	0	0.0
GAGE	20	14.5	5	2.6
GARDEN	*	*	*	*
GARFIELD	*	*	0	0.0
GOSPER	*	*	0	0.0
GRANT	*	*	0	0.0
GREELEY	3	23.7	0	0.0
HALL	44	14.3	*	*
HAMILTON	8	15.7	0	0.0
HARLAN	6	18.7	*	*
HAYES	0	0.0	0	0.0
HITCHCOCK	6	27.9	*	*
HOLT	9	11.8	*	*
HOOKER	0	0.0	0	0.0
HOWARD	6	13.4	*	*
JEFFERSON	10	17.8	6	8.7

TABLE 17 (continued): Melanoma of the Skin Incidence and Mortality

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
COUNTY				
JOHNSON	*	*	0	0.0
KEARNEY	8	22.0	*	*
KEITH	5	12.4	*	*
KEYA PAHA	*	*	0	0.0
KIMBALL	*	*	0	0.0
KNOX	16	30.5	*	*
LANCASTER	254	18.5	38	2.8
LINCOLN	34	16.8	7	3.2
LOGAN	*	*	0	0.0
LOUP	0	0.0	0	0.0
McPHERSON	0	0.0	0	0.0
MADISON	47	25.4	*	*
MERRICK	7	14.2	0	0.0
MORRILL	6	15.9	0	0.0
NANCE	4	11.9	*	*
NEMAHA	7	14.2	3	5.3
NUCKOLLS	10	32.1	*	*
OTOE	12	12.9	3	3.1
PAWNEE	4	16.0	*	*
PERKINS	4	18.2	*	*
PHELPS	8	14.0	4	6.7
PIERCE	8	19.1	*	*
PLATTE	34	19.4	8	4.2
POLK	4	12.7	*	*
RED WILLOW	13	17.9	*	*
RICHARDSON	6	8.6▽	*	*
ROCK	*	*	0	0.0
SALINE	17	22.9	4	5.0
SARPY	149	21.7	17	2.5
SAUNDERS	18	14.8	4	3.5
SCOTTS BLUFF	39	18.2	5	2.6
SEWARD	18	17.8	3	2.9
SHERIDAN	3	9.9	3	8.2
SHERMAN	4	14.7	*	*
SIOUX	0	0.0	*	*
STANTON	7	20.9	*	*
THAYER	8	15.9	3	4.8
THOMAS	0	0.0	0	0.0
THURSTON	*	*	*	*
VALLEY	5	13.7	*	*
WASHINGTON	27	24.3	4	3.7
WAYNE	10	21.0	*	*
WEBSTER	8	25.4	*	*
WHEELER	0	0.0	0	0.0
YORK	19	23.2	5	4.5

*Number and rate are not shown if based on fewer than three events
Rates are per 100,000 population and are age-adjusted to the 2000 U.S. population

▽county rate is significantly lower than the state rate (95% confidence level)
▼county rate is significantly lower than the state rate (99% confidence level)
△county rate is significantly higher than the state rate (95% confidence level)
▲county rate is significantly higher than the state rate (99% confidence level)

TABLE 18: Pediatric Cancer
Number of Cases, Deaths, and Rates, by County of Residence
Nebraska (2008-2012) & U.S. (2008-2012)

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
U.S.	74,464	17.9	9,845	2.4
NEBRASKA	503	19.5	74	2.9
COUNTY				
ADAMS	12	27.5	*	*
ANTELOPE	*	*	0	0.0
ARTHUR	0	0.0	0	0.0
BANNER	0	0.0	0	0.0
BLAINE	0	0.0	0	0.0
BOONE	4	56.8	0	0.0
BOX BUTTE	*	*	0	0.0
BOYD	*	*	0	0.0
BROWN	*	*	0	0.0
BUFFALO	9	13.4	3	47.4
BURT	*	*	0	0.0
BUTLER	*	*	0	0.0
CASS	7	20.7	*	*
CEDAR	5	39.8	*	*
CHASE	*	*	0	0.0
CHERRY	*	*	0	0.0
CHEYENNE	*	*	0	0.0
CLAY	*	*	0	0.0
COLFAX	*	*	0	0.0
CUMING	*	*	*	*
CUSTER	3	21.4	0	0.0
DAKOTA	5	14.8	*	*
DAWES	0	0.0	0	0.0
DAWSON	6	15.8	*	*
DEUEL	0	0.0	*	*
DIXON	*	*	0	0
DODGE	14	28.3	*	*
DOUGLAS	157	21.1	21	28.1
DUNDY	0	0.0	0	0.0
FILLMORE	0	0.0	0	0.0
FRANKLIN	*	*	0	0.0
FRONTIER	*	*	0	0.0
FURNAS	3	52.2	*	*
GAGE	7	25.2	*	*
GARDEN	*	*	0	0.0
GARFIELD	*	*	0	0.0
GOSPER	0	0.0	0	0.0
GRANT	0	0.0	0	0.0
GREELEY	*	*	0	0.0
HALL	16	17.8	3	33.1
HAMILTON	5	39.1	4	291.7
HARLAN	*	*	0	0.0
HAYES	0	0.0	0	0.0
HITCHCOCK	0	0.0	0	0.0
HOLT	4	30.6	0	0.0
HOOKER	0	0.0	0	0.0
HOWARD	5	58.6	0	0.0
JEFFERSON	*	*	*	*

TABLE 18 (continued): Pediatric Cancer

	Incidence		Mortality	
	# Cases	Rate	# Deaths	Rate
COUNTY				
JOHNSON	*	*	0	0.0
KEARNEY	3	35.0	0	0.0
KEITH	0	0.0	*	*
KEYA PAHA	0	0.0	0	0.0
KIMBALL	*	*	0	0.0
KNOX	*	*	*	*
LANCASTER	56	14.2	11	27.9
LINCOLN	10	20.4	*	*
LOGAN	0	0.0	0	0.0
LOUP	0	0.0	0	0.0
McPHERSON	0	0.0	0	0.0
MADISON	7	14.5	*	*
MERRICK	*	*	0	0.0
MORRILL	*	*	0	0.0
NANCE	*	*	0	0.0
NEMAHA	*	*	0	0.0
NUCKOLLS	0	0.0	0	0.0
OTOE	4	19.8	*	*
PAWNEE	*	*	*	*
PERKINS	0	0.0	0	0.0
PHELPS	*	*	0	0.0
PIERCE	5	49.4	*	*
PLATTE	13	27.5	*	*
POLK	0	0.0	0	0.0
RED WILLOW	4	27.2	*	*
RICHARDSON	*	*	0	0.0
ROCK	0	0.0	0	0.0
SALINE	*	*	0	0.0
SARPY	50	20.6	5	20.2
SAUNDERS	10	34.4	*	*
SCOTTS BLUFF	6	11.6	*	*
SEWARD	3	11.0	0	0.0
SHERIDAN	0	0.0	0	0.0
SHERMAN	0	0.0	0	0.0
SIOUX	0	0.0	0	0.0
STANTON	0	0.0	0	0.0
THAYER	0	0.0	0	0.0
THOMAS	0	0.0	0	0.0
THURSTON	5	37.7	0	0.0
VALLEY	*	*	0	0.0
WASHINGTON	5	15.8	0	0.0
WAYNE	3	12.9	0	0.0
WEBSTER	*	*	0	0.0
WHEELER	0	0.0	0	0.0
YORK	3	17.0	0	0.0

*Number and rate are not shown if based on fewer than three events
Rates are per 100,000 population 0-19 years of age and are age-adjusted to the 2000 U.S. population

▽county rate is significantly lower than the state rate (95% confidence level)
▼county rate is significantly lower than the state rate (99% confidence level)
△county rate is significantly higher than the state rate (95% confidence level)
▲county rate is significantly higher than the state rate (99% confidence level)

TABLE 19: Cancer Incidence
Number of Cases and Rates, All Sites and Selected Primary Sites, by Place of Residence
Nebraska and Public Health Department Regions (2008-2012)

	All Sites		Lung & Bronchus		Female Breast		Colon & Rectum		Prostate	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NEBRASKA	45,291	451.9	5,928	58.9	6,415	122.7	4,667	46.1	5,954	125.7
Central	2,044	475.8	257	58.7	253	112.6	214	47.6	301	147.0△
Dakota County	412	404.3▽	68	66.2	48	87.4▽	51	51.9	60	124.5
Douglas County	11,865	482.8▲	1,658	69.6▲	1,796	133.8△	1,117	46.7	1,424	127.2
East Central	1,354	435.0	154	48.0▽	189	119.2	144	46.1	222	150.5△
Elkhorn Logan Valley	1,564	434.4	208	56.5	220	122.3	182	48.1	261	153.8△
Four Corners	1,226	422.3▽	116	39.2▼	172	114.5	130	41.7	176	124.3
Lincoln/Lancaster County	5,910	432.9▽	738	56.1	929	127.8	543	40.1▽	697	108.7▼
Loup Basin	1,011	435.5	127	49.9	123	113.1	112	46.5	159	133.7
North Central	1,463	430.8	205	55.2	151	94.2▼	197	53.5	244	143.5
Northeast	753	396.6▼	91	45.4▽	103	107.0	94	47.8	110	121.4
Panhandle	1,391	404.3▼	167	46.1▼	197	117.9	137	39.7	212	124.1
Public Health Solutions	1,790	465.4	229	57.1	254	127.1	208	52.5	209	111.8
Sarpy Cass County	3,821	472.6△	484	65.2	557	125.0	354	45.8	479	123.9
Scotts Bluff County	982	423.2	112	46.5▽	154	123.7	94	41.4	133	121.5
South Heartland	1,453	492.2▲	200	64.0	190	130.7	175	54.5	186	128.2
Southeast	1,187	428.0	167	57.6	144	102.0▽	140	48.2	140	104.0▽
Southwest	1,297	440.7	184	59.4	150	100.2▽	144	47.2	157	110.0
Three Rivers	2,285	464.7	346	67.6△	328	130.4	238	47.9	330	138.4
Two Rivers	2,334	432.6	274	49.4▽	322	116.0	290	52.4	315	121.1
West Central	1,149	471.3	143	58.1	135	108.1	103	42.1	139	117.6

TABLE 19 (continued): Cancer Incidence

	Urinary Bladder		Non-Hodgkin Lymphoma		Leukemia		Kidney & Renal Pelvis		Melanoma of the Skin		Pediatric	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NEBRASKA	1,996	19.8	2,016	20.1	1,325	13.2	1,656	16.5	1,781	18.4	503	19.5
Central	96	22.0	107	24.6	70	16.3	90	21.4	59	14.5	22	19.7
Dakota County	13	12.7	13	12.8	12	11.6	16	15.3	9	9.3▽	5	14.8
Douglas County	524	22.3	516	21.1	340	13.5	455	18.5	475	19.0	157	21.1
East Central	48	14.4▽	67	22.0	45	14.5	40	12.9	60	20.7	20	26.1
Elkhorn Logan Valley	61	15.9	62	16.7	39	10.8	54	15.9	72	22.5	11	13.9
Four Corners	68	21.8	57	20.1	35	12.1	49	16.8	51	18.9	7	11.4
Lincoln/Lancaster County	229	17.6	232	17.4	184	13.7	215	15.2	254	18.5	56	14.2
Loup Basin	51	19.8	47	19.2	35	15.0	30	13.0	33	15.1	13	32.9
North Central	57	14.5▽	70	20.5	40	13.2	42	12.6	55	18.1	17	28.9
Northeast	31	16.6	30	14.9	26	14.4	27	14.0	33	18.4	15	29.5
Panhandle	70	18.8	66	19.4	30	9.3	46	14.1	51	15.3	8	11.4
Public Health Solutions	82	19.6	74	18.3	58	14.2	67	18.7	62	17.8	10	14.3
Sarpy Cass County	151	19.7	183	22.8	106	13.3	158	19.4	184	22.0	57	20.4
Scotts Bluff County	59	24.1	43	18.3	33	14.0	32	13.2	39	18.2	6	11.6
South Heartland	48	14.3▽	69	24.0	46	15.5	38	13.1	80	30.9▲	16	25.9
Southeast	53	17.9	69	23.2	30	11.4	51	17.5	31	11.8▽	11	22.9
Southwest	76	23.1	55	18.4	41	14.3	39	12.4	51	19.2	10	20.5
Three Rivers	101	20.4	101	20.2	60	12.3	86	17.5	72	15.8	29	27.1
Two Rivers	106	19.1	93	17.1	60	11.4	79	14.5	74	14.2▽	23	16.8
West Central	72	28.3△	62	24.4	35	14.2	42	17.3	36	16.1	10	18.9

▽regional rate is significantly lower than the state rate (95% confidence level)
▼regional rate is significantly lower than the state rate (99% confidence level)
△regional rate is significantly higher than the state rate (95% confidence level)
▲regional rate is significantly higher than the state rate (99% confidence level)

Rates are per 100,000 population (excluding gender-specific sites, which are per 100,000 male or female population, and pediatric cancers, which are per 100,000 population 0-19 years of age) and are age-adjusted to the 2000 U.S. population

TABLE 20: Cancer Mortality
Number of Deaths and Rates, All Sites and Selected Primary Sites, by Place of Residence
Nebraska and Public Health Department Regions (2008-2012)

	All Sites		Lung & Bronchus		Female Breast		Colon & Rectum		Prostate	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NEBRASKA	17,034	165.9	4,463	44.1	1,118	19.7	1,763	16.9	930	22.0
Central	745	166.6	179	40.1	46	18.3	89	19.6	40	21.4
Dakota County	165	164.9	51	51.2	7	12.4	20	20.6	9	26.7
Douglas County	4,356	181.7▲	1,210	51.5▲	304	22.0	397	16.4	222	24.6
East Central	499	152.9	126	39.3	35	20.4	62	19.3	29	20.4
Elkhorn Logan Valley	623	164.1	160	42.6	45	22.1	74	19.3	34	19.6
Four Corners	503	161.8	100	33.6▼	45	26.5	51	16.0	24	16.9
Lincoln/Lancaster County	2,077	154.3▽	536	40.7	120	15.6▽	191	14.1▽	115	21.3
Loup Basin	427	166.1	111	43.4	30	25.4	47	17.5	27	22.6
North Central	590	156.1	164	43.1	28	12.3▽	64	16.3	35	20.4
Northeast	311	154.4	76	38.1	21	23.4	32	14.4	19	20.7
Panhandle	537	143.5▼	125	34.0▼	32	15.4	59	15.6	38	22.4
Public Health Solutions	745	171.0	164	40.2	39	15.5	93	20.7	47	24.1
Sarpy Cass County	1,301	172.7	363	48.1	83	19.7	134	18.7	54	20.8
Scotts Bluff County	392	159.7	92	37.1	34	26.4	40	16.2	17	15.8
South Heartland	519	158.3	142	44.2	29	17.5	65	19.6	30	21.0
Southeast	517	169.8	128	42.9	28	14.1	48	15.4	43	31.7
Southwest	509	158.1	147	46.3	31	17.6	55	16.1	23	16.1
Three Rivers	909	177.3	259	50.0	63	22.7	94	18.6	47	21.1
Two Rivers	905	162.2	226	40.6	60	20.4	115	20.1	58	24.0
West Central	404	158.3	104	41.1	38	28.0	33	12.4	19	17.0

TABLE 20 (continued): Cancer Mortality

	Urinary Bladder		Non-Hodgkin Lymphoma		Leukemia		Kidney & Renal Pelvis		Melanoma of the Skin		Pediatric	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NEBRASKA	426	4.0	653	6.3	728	7.1	460	4.4	315	3.1	74	2.9
Central	24	5.3	27	6.1	25	5.4	29	6.6	1	0.2▼	7	6.4
Dakota County	6	6.4	4	4.1	5	4.7	3	2.6	8	8.5	*	*
Douglas County	113	4.9	153	6.4	167	7.0	122	5.1	70	2.9	21	2.8
East Central	13	3.6	14	4.4	17	5.4	16	5.0	13	3.9	*	*
Elkhorn Logan Valley	14	3.2	22	6.3	22	6.2	17	4.6	7	2.1	3	3.9
Four Corners	9	2.9	23	7.1	24	7.6	23	7.2	14	4.4	0	0.0
Lincoln/Lancaster County	58	4.5	87	6.6	99	7.3	61	4.5	38	2.8	11	2.8
Loup Basin	12	4.1	14	5.7	21	7.6	8	3.0	8	3.1	0	0.0
North Central	14	3.3	35	8.5	22	6.6	12	4.2	9	3.0	3	5.2
Northeast	2	1.0▼	13	6.2	19	9.8	6	2.6	5	2.3	*	*
Panhandle	11	2.7	18	4.7	29	7.6	7	1.7▼	11	3.2	*	*
Public Health Solutions	25	5.4	35	7.4	30	6.5	19	4.5	21	4.9	3	4.4
Sarpy Cass County	29	4.2	49	7.1	55	7.2	28	3.4	27	3.3	6	2.1
Scotts Bluff County	8	3.0	16	6.0	26	10.3	8	3.0	5	2.6	*	*
South Heartland	9	2.2	26	7.8	23	6.9	12	4.2	21	7.2△	*	*
Southeast	7	2.0▽	23	7.1	20	6.8	14	4.6	10	3.5	*	*
Southwest	22	6.4	19	5.6	20	6.8	10	3.3	4	1.2▽	4	7.9
Three Rivers	14	2.5	36	6.8	38	7.2	30	5.7	15	3.1	*	*
Two Rivers	26	4.7	27	4.8	44	8.1	25	4.6	21	3.8	4	3.0
West Central	10	3.8	12	4.2	22	8.3	10	3.6	7	3.0	*	*

*Number and rate are not shown if based on fewer than three deaths

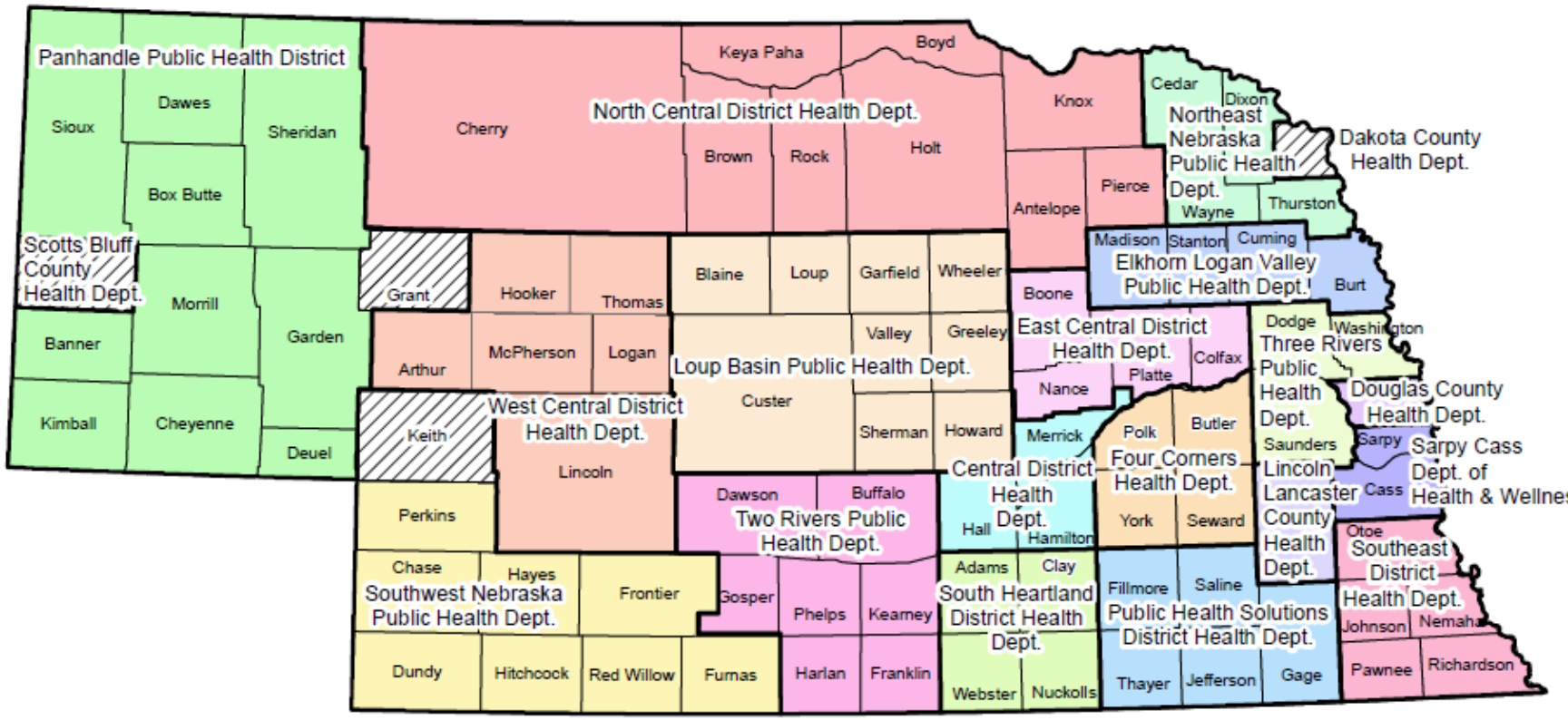
▽regional rate is significantly lower than the state rate (95% confidence level)
▼regional rate is significantly lower than the state rate (99% confidence level)
△regional rate is significantly higher than the state rate (95% confidence level)
▲regional rate is significantly higher than the state rate (99% confidence level)

Rates are per 100,000 population (excluding gender-specific sites, which are per 100,000 male or female population, and pediatric cancers, which are per 100,000 population 0-19 years of age) and are age-adjusted to the 2000 U.S. population

Public Health Department Regions in Nebraska

#	Public Health Department	Jurisdiction, by County
1	Central	Hall, Hamilton, Merrick
2	Dakota County	Dakota
3	Douglas County	Douglas
4	East Central	Boone, Colfax, Nance, Platte
5	Elkhorn Logan Valley	Burt, Cuming, Madison, Stanton
6	Four Corners	Butler, Polk, Seward, York
7	Lincoln-Lancaster County	Lancaster
8	Loup Basin	Blaine, Custer, Garfield, Greeley, Howard, Loup, Sherman, Valley, Wheeler
9	North Central	Antelope, Boyd, Brown, Cherry, Holt, Keya Paha, Knox, Pierce, Rock
10	Northeast Nebraska	Cedar, Dixon, Thurston, Wayne
11	Panhandle	Banner, Box Butte, Cheyenne, Dawes, Deuel, Garden, Grant, Kimball, Morrill, Sheridan, Sioux
12	Public Health Solutions	Fillmore, Gage, Jefferson, Saline, Thayer
13	Sarpy Cass	Cass, Sarpy
14	Scotts Bluff County	Scotts Bluff
15	South Heartland	Adams, Clay, Nuckolls, Webster
16	Southeast	Johnson, Nemaha, Otoe, Pawnee, Richardson
17	Southwest Nebraska	Chase, Dundy, Frontier, Furnas, Hayes, Hitchcock, Keith, Perkins, Red Willow
18	Three Rivers	Dodge, Saunders, Washington
19	Two Rivers	Buffalo, Dawson, Franklin, Gosper, Harlan, Kearney, Phelps
20	West Central	Arthur, Hooker, Lincoln, Logan, McPherson, Thomas

Nebraska Local Health Departments



Legend

Local Health Departments that do not Qualify for LB 692* Funding

*LB 692 passed during the 2001 Legislative Session and provides funds to qualifying local public health departments.

Source: Nebraska Department of Health and Human Services

Map updated by:
Public Health GIS Analyst
DHHS GIS 2/15

Department of Health & Human Services
DHHS
NEBRASKA

REFERENCES

American Cancer Society. Cancer Facts and Figures 2015. Atlanta, GA: American Cancer Society, 2015. Available at: http://www.cancer.org/acs/groups/content/@editorial/documents/document/acspc-044552.pdf

American Cancer Society. Learn About Cancer: Cancer in Children. Available at: http://www.cancer.org/cancer/cancerinchildren/index

Fritz A, Percy C, Jack A, Shanmugaratnam K, Sobin L, Parkin DM, Whelan S. International Classification of Diseases for Oncology, 3rd edition (U.S. interim version 2000). Geneva, Switzerland: World Health Organization, 2000.

Harras A, editor. Cancer Rates and Risks, 4th edition. Bethesda, MD: National Cancer Institute, 1996; NIH Publication #96-691.

Howlader N, Noone AM, Krapcho M, Garshell J, Miller D, et. al. (eds.). SEER Cancer Statistics Review, 1975-2011. Bethesda, MD: National Cancer Institute, 2014. Available at: http://seer.cancer.gov/csr/1975_2011/

Kolata G. Reversing Trend, Big Drop Is Seen in Breast Cancer. The New York Times, December 15, 2007.

Nebraska Department of Health and Human Services. Nebraska 2012 Vital Statistics Report. Lincoln, NE: Nebraska Department of Health and Human Services, 2013.

United States Cancer Statistics: 1999-2011 Incidence, WONDER On-line Database. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute, 2014. Available at: http://wonder.cdc.gov/cancer-v2011.html

United States Cancer Statistics: 1999-2011 Mortality, CDC WONDER On-line Database. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2014. Available at: http://wonder.cdc.gov/CancerMort-v2011.html

U.S. Preventive Services Task Force. Final Recommendation Statement: Breast Cancer: Screening. December 2014. Available at: http://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/breast-cancer-screening

U.S. Preventive Services Task Force. Final Recommendation Statement: Colorectal Cancer: Screening. October 2014. Available at: http://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/colorectal-cancer-screening

World Health Organization. Manual of the International Statistical Classification of Diseases and Related Health Problems, 10th revision. Geneva, Switzerland: World Health Organization, 1992.

REPORTING FACILITIES

Ainsworth--Brown County Hospital
Albion--Boone County Health Center
Alliance--Box Butte General Hospital
Alma--Harlan County Health System
Atkinson--West Holt Memorial Hospital, Inc.
Auburn--Nemaha County Hospital
Aurora--Memorial Hospital
Bassett--Rock County Hospital
Beatrice--Beatrice Community Hosp. & Hlth. Ctr., Inc.
Benkelman--Dundy County Hospital
Blair--Memorial Community Hospital
Bridgeport--Morrill County Community Hospital
Broken Bow--Jennie Melham Memorial Medical Ctr.
Callaway--Callaway District Hospital
Cambridge--Tri Valley Health System
Central City--Litzenberg Memorial County Hospital
Chadron--Chadron Community Hosp. & Hlth. Svcs.
Columbus--Columbus Community Hospital, Inc.
Cozad--Cozad Community Hospital
Creighton--Creighton Area Health Services
Crete--Crete Area Medical Center
David City--Butler County Health Care Center
Fairbury--Jefferson Community Health Center, Inc.
Falls City--Community Medical Center, Inc.
Franklin--Franklin County Memorial Hospital
Fremont--Fremont Area Medical Center
Friend--Warren Memorial Hospital
Geneva--Fillmore County Hospital
Genoa--Genoa Community Hospital/LTC
Gordon--Gordon Memorial Hospital District
Gothenburg--Gothenburg Memorial Hospital
Grand Island—CHI Health St. Francis
Grant--Perkins County Health Services
Hastings--Mary Lanning Memorial Hospital
Hebron--Thayer County Health Services
Henderson--Henderson Health Care Services
Holdrege--Phelps Memorial Health Center
Imperial--Chase County Community Hospital
Kearney—CHI Health Good Samaritan
Kearney—CHI Health Good Samaritan Pathology
Kimball--Kimball Health Services & Hospital
Lexington--Tri-County Area Hospital District
Lincoln--Bryan-LGH Medical Center East & West
Lincoln—CHI Health Saint Elizabeth
Lincoln--Pathology Medical Services
Lincoln--Williamsburg Radiation Center
Lincoln—CHI Health Nebraska Heart
Lincoln - UNMC College of Dentistry
Lynch--Niobrara Valley Hospital Corp.
McCook--Community Hospital
Minden--Kearney County Health Services
Nebraska City—CHI Health St. Mary's
Neligh--Antelope Memorial Hospital
Norfolk--Faith Regional Health Services East & West
North Platte--Great Plains Regional Medical Center
North Platte--Pathology Services
Oakland--Oakland Memorial Hospital
Offutt AFB--Ehrling Berquist Hospital
Ogallala--Ogallala Community Hospital
Omaha—CHI Health Bergan Mercy
Omaha—CHI Health Immanuel
Omaha--Children's Hospital
Omaha--Methodist Hospital Pathology Center
Omaha--Nebraska Medical Center
Omaha--Nebraska Methodist Hospital
Omaha—CHI Health Creighton University Medical Ctr.
Omaha--Boys Town National Research Hospital
Omaha—CHI Health Lakeside
Omaha—CHI Health Bergan Mercy Pathology
Omaha--Bishop Clarkson Hospital Pathology
Omaha--Creighton Pathology Associates
Omaha--Physicians Lab
O'Neill--Avera St. Anthony's Hospital
Ord--Valley County Hospital
Osceola--Annie Jeffrey Memorial County Health Ctr.
Oshkosh--Garden County Health Services
Osmond--Osmond General Hospital
Papillion—CHI Health Midlands
Pawnee City--Pawnee County Memorial Hospital
Pender--Pender Community Hospital
Plainview—CHI Health Plainview
Red Cloud--Webster County Community Hospital
Schuyler—CHI Health Schuyler
Scottsbluff--Regional West Medical Center
Scottsbluff--Western Pathology Consultants
Seward--Memorial Hospital
Sidney--Memorial Health Center
St. Paul--Howard County Community Hospital
Superior--Brodstone Memorial Hospital
Syracuse--Community Memorial Hospital
Tecumseh--Johnson County Hospital
Tilden--Tilden Community Hospital
Valentine--Cherry County Hospital
Wahoo--Saunders County Health Services
Wayne--Providence Medical Center
West Point--St. Francis Memorial Hospital
Winnebago--USPHS Indian Hospital
York--York General Hospital

Other States:
Sioux City, IA--Mercy Medical Center

State cancer registries of Alaska, Arizona, Arkansas, Colorado, Iowa, Kansas, Missouri, North Dakota, Oklahoma, South Dakota, and Wyoming

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