

**Table 1 : Cancer Cases and Incidence Rates by County
South Dakota, 2017 and 2013-2017 Average**

IV. CANCER INCIDENCE

South Dakota collected 4,740 new reportable cancer cases in 2017. Data at the county level ranged from a low incidence rate of 107.6 in Sully County to a high of 730.0 in McPherson County. There were ten counties with rates significantly lower than the state incidence rate of 449.6. One county had a significantly higher rate, compared to three counties in 2016.

The United States incidence rate for 2017 was 434.0 and the South Dakota incidence rate was 449.6 per 100,000 persons.

A map displaying the 2017 incidence rates by county can be located on page 14 of this report. On page 15 is a map displaying the mortality rates by county.

County	2017		2013-2017 [^]	
	Cases	Rate	Cases	Rate
South Dakota	4,740	449.6	4,637	455.3
Aurora	22	477.9	20	500.9
Beadle	99	436.1	109	488.5
Bennett	9	271.8	12	379.2
Bon Homme	48	484.7	40	397.8 ▼
Brookings	132	432.2	147	496.3
Brown	195	385.9	215	452.8
Brule	42	644.9	37	532.6
Buffalo	6	441.6	6	403.1
Butte	58	412.1	59	426.2
Campbell	6	311.3	10	437.7
Charles Mix	59	458.8	61	510.5
Clark	32	626.8	25	490.2
Clay	63	535.6	62	512.5
Codington	169	457.4	166	472.9
Corson	15	376.7	12	310.0 ▼
Custer	46	285.4 ▼	53	363.0 ▼
Davison	131	517.6	124	496.8
Day	45	474.9	41	433.8
Deuel	31	479.0	31	492.2
Dewey	23	504.0	24	486.0
Douglas	26	639.3	22	529.3
Edmunds	31	568.8	29	490.6
Fall River	49	337.1 ▼	59	484.2
Faulk	18	464.4	18	476.7
Grant	54	501.2	51	480.7
Gregory	25	377.8	31	470.0
Haakon	12	328.1	15	457.1
Hamlin	38	552.2	33	458.0
Hand	24	516.7	24	479.5
Hanson	11	286.6	18	536.2
Harding	*	111.9 ▼	5	312.8 ▼
Hughes	103	471.3	99	462.2
Hutchinson	56	563.5	48	434.6
Hyde	10	565.5	10	523.6
Jackson	14	412.6	13	384.9
Jerauld	16	381.1	15	441.8
Jones	5	288.0	7	504.8
Kingsbury	46	545.9	47	616.9 ▲
Lake	87	477.2	76	432.1
Lawrence	163	449.8	133	397.7 ▼
Lincoln	258	453.6	223	443.4
Lyman	19	362.2	20	430.5
McCook	39	502.5	39	531.5
McPherson	24	730.0	20	424.0
Marshall	13	180.7 ▼	20	333.7 ▼
Meade	123	365.8 ▼	122	404.2 ▼
Mellette	4	148.3 ▼	9	372.6
Miner	13	442.1	19	547.9
Minnehaha	999	508.7 ▲	987	520.5 ▲
Moody	30	309.2 ▼	31	371.3 ▼
Oglala Lakota	45	464.6	41	422.6
Pennington	596	426.6	551	418.4 ▼
Perkins	15	278.4 ▼	15	330.3 ▼
Potter	16	576.7	20	497.8
Roberts	56	416.4	53	410.7 ▼
Sanborn	19	581.1	16	519.5
Spink	43	471.0	47	533.4 ▲
Stanley	16	363.5	19	461.5
Sully	*	107.6 ▼	4	239.4 ▼
Todd	34	575.4	27	421.5
Tripp	39	503.1	40	454.5
Turner	62	500.7	60	506.2
Union	89	464.5	93	515.9 ▲
Walworth	36	442.8	31	361.5 ▼
Yankton	127	406.0	118	391.6 ▼
Ziebach	3	115.0 ▼	3	109.2 ▼

* Counts less than three are suppressed. Incidence rates with counts less than 20 are generally considered unstable. ▲ Rate significantly higher. ▼ Rate significantly lower.
[^] Number of the cases and rates are averaged over the five-year period.
 Rates per 100,000 age-adjusted to 2000 US standard population and SD 2017 estimated population. Source: South Dakota Department of Health

Table 2: Age-adjusted Incidence Rates by County for Selected Sites, 2017

	Colorectal		Lung and Bronchus		Female Breast		Prostate		Bladder		NHL	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
South Dakota	420	39.9	602	56.0	645	125.0	649	116.5	193	17.3	191	18.3
Aurora	*	44.7	3	72.9	*	81.2	4	190.9	*	22.7	3	75.6
Beadle	8	37.0	5	22.6	10	98.8	18	133.8	3	9.5	7	23.5
Bennett	*	44.3	*	56.2	*	58.6	*	114.2	0	0.0	0	0.0
Bon Homme	4	48.8	3	26.9	5	136.0	5	102.6	4	42.2	4	27.7
Brookings	7	24.7	15	49.0	22	159.9	26	162.2	6	18.5	6	18.5
Brown	24	44.4	26	55.3	24	101.6	28	113.9	7	13.6	6	11.2
Brule	5	68.0	5	90.8	7	256.0	6	170.6	*	22.7	*	28.8
Buffalo	*	145.5	0	0.0	*	268.5	0	0.0	0	0.0	0	0.0
Butte	4	28.4	13	90.1	8	100.9	5	66.8	3	19.3	*	14.0
Campbell	0	0.0	0	0.0	*	135.0	*	162.9	0	0.0	*	135.2
Charles Mix	7	58.0	5	37.2	3	36.6	13	189.4	3	21.0	*	15.3
Clark	*	14.2	3	47.8	6	229.8	*	59.7	*	27.3	*	31.4
Clay	3	31.3	8	62.5	5	86.7	8	145.0	*	6.0	4	41.6
Codington	14	39.7	23	60.0	20	105.0	21	111.0	7	16.4	6	16.2
Corson	*	33.7	0	0.0	*	109.6	3	146.7	0	0.0	*	22.9
Custer	5	35.7	5	26.1	7	99.8	5	45.1	*	11.5	4	21.2
Davison	12	57.0	18	65.3	26	203.8	17	132.6	9	32.2	4	16.7
Day	7	90.4	3	28.6	5	72.3	*	41.7	4	39.5	*	13.5
Deuel	4	49.0	0	0.0	3	95.2	*	34.3	*	26.2	*	11.4
Dewey	*	42.0	4	76.8	4	167.8	5	234.2	0	0.0	0	0.0
Douglas	*	9.9	3	64.8	*	234.9	6	257.7	*	44.5	*	20.2
Edmunds	*	37.4	5	85.0	4	138.1	3	87.1	4	67.6	*	18.7
Fall River	7	49.6	5	30.6	6	88.5	4	53.1	*	12.9	3	24.4
Faulk	4	91.1	*	24.1	*	108.9	5	218.1	*	24.1	0	0.0
Grant	6	46.4	8	71.1	4	69.9	9	160.5	*	17.8	6	66.3
Gregory	*	11.7	4	64.2	4	170.4	5	121.5	*	13.8	0	0.0
Haakon	*	19.4	4	112.3	*	124.6	*	134.4	0	0.0	*	19.4
Hamlin	*	11.7	5	66.6	7	225.6	7	189.3	*	15.3	*	11.7
Hand	*	15.9	3	47.1	*	30.1	5	195.8	*	22.7	0	0.0
Hanson	3	92.5	*	17.2	0	0.0	*	27.2	0	0.0	*	17.2
Harding	*	66.2	0	0.0	0	0.0	*	79.4	0	0.0	0	0.0
Hughes	11	49.9	13	54.4	17	159.8	13	108.5	7	31.9	5	25.4
Hutchinson	14	133.6	7	67.8	5	99.3	7	116.5	*	10.0	4	40.4
Hyde	0	0.0	0	0.0	*	383.6	*	180.0	*	71.3	0	0.0
Jackson	*	55.7	4	105.3	*	42.6	3	153.5	*	24.7	0	0.0
Jerauld	*	27.6	*	22.0	*	73.9	4	194.8	*	31.0	*	27.6
Jones	*	48.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Kingsbury	6	72.7	3	35.8	5	113.1	6	120.0	5	50.5	*	13.0
Lake	8	46.6	7	35.6	13	166.7	19	141.5	4	21.8	*	7.5
Lawrence	14	42.7	20	50.1	28	163.7	22	109.6	3	6.9	4	12.0
Lincoln	20	33.1	32	60.1	34	111.1	40	144.6	8	16.0	9	15.2
Lyman	*	14.7	5	98.9	*	32.9	4	120.9	*	36.6	0	0.0
McCook	4	46.9	5	61.1	6	186.3	6	172.9	*	11.7	*	23.3
McPherson	*	21.8	3	88.8	3	227.6	3	132.7	0	0.0	0	0.0
Marshall	0	0.0	5	67.1	3	83.5	*	45.6	*	10.4	0	0.0
Meade	6	20.2	23	69.4	15	86.7	18	102.7	6	17.1	5	13.8
Mellette	0	0.0	*	51.9	0	0.0	0	0.0	0	0.0	0	0.0
Miner	*	23.8	*	60.6	0	0.0	4	324.3	0	0.0	0	0.0
Minnehaha	62	31.7	125	66.6	132	129.3	132	131.5	32	16.8	42	22.6
Moody	4	42.5	*	20.8	*	39.4	3	60.8	*	9.1	5	50.6
Oglala Lakota	6	65.9	9	100.5	5	87.5	3	46.1	0	0.0	*	9.6
Pennington	44	31.7	84	59.5	96	133.8	52	67.6	28	18.5	23	16.6
Perkins	*	28.2	3	90.8	*	15.7	*	66.4	0	0.0	0	0.0
Potter	*	42.4	*	25.2	*	275.1	*	158.8	*	34.4	*	114.7
Roberts	7	57.1	10	68.5	8	132.2	12	155.0	*	16.4	*	8.2
Sanborn	3	101.7	3	111.2	*	122.7	*	79.4	0	0.0	*	21.2
Spink	7	87.1	5	47.1	7	156.9	3	67.8	*	7.8	3	43.7
Stanley	0	0.0	3	63.4	*	107.4	*	87.5	3	71.5	*	22.5
Sully	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Todd	3	50.4	4	80.6	6	219.1	7	277.7	0	0.0	*	9.7
Tripp	6	87.1	*	24.5	8	232.9	4	89.3	0	0.0	*	37.2
Turner	3	19.5	7	51.6	8	127.4	13	181.9	*	20.2	*	6.5
Union	13	69.8	14	73.5	12	134.4	15	142.1	6	26.2	0	0.0
Walworth	9	97.6	6	70.9	6	187.4	4	103.9	0	0.0	0	0.0
Yankton	16	55.2	13	42.0	17	100.8	19	122.8	4	10.6	6	18.5
Ziebach	*	33.4	0	0.0	0	0.0	*	184.0	0	0.0	0	0.0

Note: * Counts less than 3 are suppressed. Incidence rates with counts less than 20 are generally considered unstable.

Rates per 100,000 age-adjusted to the 2000 US standard population and 2017 SD estimated population.

Source: South Dakota Department of Health.

Table 3: Age-adjusted Incidence Rates by Site, Gender and Race, South Dakota, 2017

	TOTAL		MALE		FEMALE		WHITE		AMERICAN INDIAN	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Total	4,740	449.6	2,464	479.8	2,276	430.2	4,435	453.7	240	482.9
Oral Cavity	138	13.1	93	18.6	45	8.0	130	13.3	7	12.5
Lip	17	1.6	11	2.2	6	1.1	17	1.7	0	0.0
Tongue	33	3.3	24	4.9	9	1.7	31	3.3	1	1.8
Salivary Gland	16	1.5	9	2.0	7	1.2	16	1.6	0	0.0
Floor of Mouth	7	0.7	3	0.4	4	1.0	6	0.6	1	2.0
Gum and Other Mouth	17	1.4	8	1.5	9	1.3	16	1.4	1	1.5
Nasopharynx	5	0.5	4	0.7	1	0.2	5	0.5	0	0.0
Tonsil	25	2.6	21	4.4	4	0.8	22	2.5	3	5.8
Oropharynx	7	0.5	3	0.5	4	0.6	7	0.6	0	0.0
Hypopharynx	3	0.3	3	0.6	0	0.0	3	0.4	0	0.0
Other Oral Cavity & Pharynx	8	0.7	7	1.3	1	0.1	7	0.7	1	1.5
Digestive System	826	77.6	484	95.6	342	60.2	760	76.5	53	109.7
Esophagus	62	5.6	54	10.2	8	1.3	61	5.9	0	0.0
Stomach	52	4.7	37	7.0	15	2.6	46	4.6	4	8.4
Small Intestine	29	3.1	18	4.2	11	2.1	28	3.3	0	0.0
Colorectal	420	39.9	225	45.6	195	34.4	383	39.0	31	66.0
Colon Excluding Rectum	295	27.9	149	30.5	146	25.3	271	27.4	20	42.3
Rectum and Rectosigmoid	125	12.0	76	15.1	49	9.1	112	11.6	11	23.7
Anus, Anal Canal and Anorectum	13	1.3	3	0.7	10	1.8	11	1.2	2	3.1
Liver & Intrahepatic Bile Duct	68	6.4	54	10.6	14	2.5	58	5.9	9	15.4
Gallbladder	10	0.8	2	0.3	8	1.3	10	0.9	0	0.0
Other Biliary	21	2.0	12	2.4	9	1.6	20	2.0	0	0.0
Pancreas	137	12.5	77	14.0	60	10.6	129	12.4	7	16.8
Retroperitoneum	3	0.2	1	0.1	2	0.3	3	0.2	0	0.0
Peritoneum, Omentum and Mesentery	11	1.1	1	0.3	10	1.7	11	1.2	0	0.0
Respiratory	645	59.8	336	66.7	309	55.4	599	59.1	42	86.8
Nose, Nasal Cavity and Middle Ear	4	0.4	2	0.3	2	0.5	3	0.3	1	1.0
Larynx	36	3.2	25	4.6	11	1.9	34	3.2	2	3.9
Lung and Bronchus	602	56.0	306	61.1	296	53.0	560	55.4	38	80.1
Pleura	1	0.1	1	0.2	0	0.0	1	0.1	0	0.0
Mediastinum and Other Resp Organs	2	0.2	2	0.4	0	0.0	1	0.1	1	1.8
Bones and Joints	4	0.4	3	0.7	1	0.3	3	0.4	0	0.0
Soft Tissue (Including Heart)	24	2.3	13	2.7	11	1.9	23	2.4	1	0.7
Skin	291	29.0	175	35.8	116	24.4	285	31.0	3	7.2
Melanomas of the Skin	278	27.8	165	33.8	113	23.7	274	29.9	2	5.5
Other Skin	13	1.3	10	2.0	3	0.7	11	1.1	1	1.7
Breast	648	64.3	3	0.7	645	125.0	608	65.8	34	64.7
Breast, Female	645	125.0			645	125.0	605	128.2	34	117.8
Breast, Male	3	0.7	3	0.7			3	0.7	0	0.0
Female	290	55.7			290	55.7	271	56.5	14	50.8
Vulva	20	3.5			20	3.5	20	3.8	0	0.0
Vagina	2	0.5			2	0.5	2	0.5	0	0.0
Cervix Uteri	34	8.1			34	8.1	30	8.2	4	11.6
Corpus and Uterus, NOS	155	29.3			155	29.3	144	29.3	9	33.3
Corpus Uteri	151	28.7			151	28.7	141	28.8	9	33.3
Uterus, NOS	4	0.7			4	0.7	3	0.5	0	0.0
Ovary	63	11.1			63	11.1	59	11.3	1	5.9
Other Female Genital Organs	16	3.1			16	3.1	16	3.4	0	0.0

Table 3: Age-adjusted Incidence Rates by Site, Gender and Race, South Dakota, 2017 (continued)

	TOTAL		MALE		FEMALE		WHITE		AMERICAN INDIAN	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Male	669	121.4	669	121.4			626	121.3	32	139.1
Penis	3	0.6	3	0.6			3	0.6	0	0.0
Prostate	649	116.5	649	116.5			607	115.9	31	136.4
Testis	17	4.3	17	4.3			16	4.7	1	2.7
Other Male Genital Organs	0	0.0	0	0.0			0	0.0	0	0.0
Urinary	380	35.3	273	53.8	107	20.3	361	36.1	17	38.8
Bladder	193	17.3	155	30.1	38	6.6	188	17.9	5	14.6
Kidney and Renal Pelvis	174	16.8	110	21.9	64	12.8	161	16.9	11	22.8
Ureter	8	0.7	5	1.1	3	0.5	7	0.7	1	1.5
Other Urinary Organs	5	0.5	3	0.6	2	0.4	5	0.6	0	0.0
Eye and Orbit	13	1.1	7	1.2	6	1.1	13	1.2	0	0.0
Brain and CNS	56	5.6	36	7.6	20	3.6	48	5.3	5	7.0
Brain	53	5.3	33	7.0	20	3.6	46	5.1	5	7.0
Meninges and CNS	3	0.3	3	0.6	0	0.0	2	0.2	0	0.0
Endocrine	114	13.3	37	7.7	77	19.3	101	13.1	5	8.4
Thyroid	108	12.6	36	7.4	72	18.1	95	12.4	5	8.4
Other Endocrine	6	0.7	1	0.2	5	1.2	6	0.8	0	0.0
Lymphomas	208	20.2	111	22.5	97	18.2	194	20.5	10	21.7
Hodgkin's Lymphoma	17	1.9	12	2.5	5	1.3	17	2.3	0	0.0
Non-Hodgkin's Lymphoma	191	18.3	99	20.1	92	16.8	177	18.3	10	21.7
Multiple Myeloma	73	6.2	45	8.3	28	4.5	71	6.4	1	3.4
Leukemia	176	17.4	93	19.6	83	15.9	165	17.8	9	19.7
Acute Lymphocytic	20	2.4	11	2.5	9	2.3	15	2.3	3	3.7
Chronic Lymphocytic	80	7.4	47	9.7	33	5.5	78	7.7	2	4.0
Other Lymphocytic	2	0.2	1	0.3	1	0.1	2	0.2	0	0.0
Acute Myeloid	44	4.3	18	3.7	26	5.1	42	4.4	2	5.6
Acute Monocytic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Chronic Myeloid	24	2.6	15	3.2	9	2.1	24	2.9	0	0.0
Other Myeloid/Monocytic	1	0.1	0	0.0	1	0.1	1	0.1	0	0.0
Other Acute Leukemia	2	0.2	1	0.2	1	0.2	1	0.1	1	2.4
Other Leukemia	3	0.3	0	0.0	3	0.4	2	0.2	1	4.0
Myeloproliferative Myelodysplastic	93	8.7	47	9.7	46	7.7	92	9.1	1	1.8
Mesothelioma	6	0.6	3	0.5	3	0.7	6	0.6	0	0.0
Immunoproliferative Diseases	6	0.6	1	0.2	5	0.9	6	0.6	0	0.0
Other Sites	80	7.0	35	6.7	45	7.1	73	6.9	6	11.8

Rates per 100,000 age-adjusted to the 2000 US standard population and 2017 SD estimated population.
Source: South Dakota Department of Health

Table 3 above shows incidence and age-adjusted incidence rates for South Dakota in 2017 by primary sites, gender, and race according to SEER site category recodes (Appendix C).

Table 4: Percentage of Selected Cancers by Age Groups in South Dakota, 2017

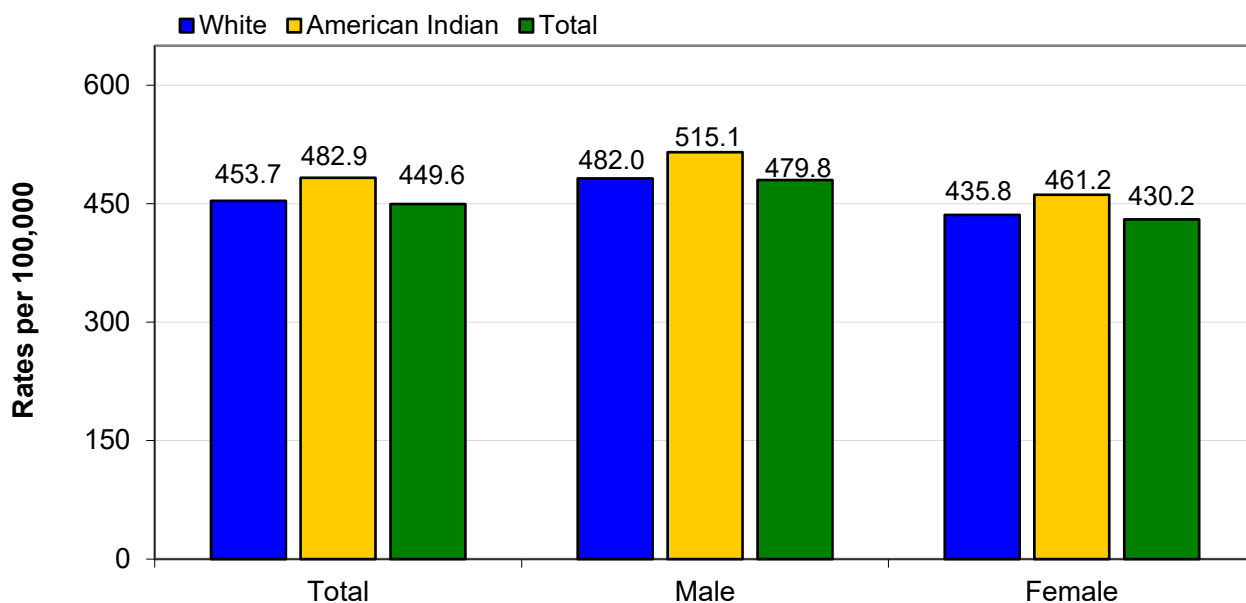
	0-19	20-34	35-49	50-64	65-74	75-84	85+
All Sites	1%	2%	8%	30%	30%	20%	9%
Bladder	0%	1%	1%	28%	33%	25%	13%
Breast, Female	0%	2%	13%	32%	27%	18%	7%
Colorectal	0%	1%	6%	31%	24%	24%	14%
Corpus and Uterus, NOS	0%	1%	14%	38%	30%	10%	6%
Hodgkin's Lymphoma	6%	53%	12%	18%	12%	0%	0%
Kidney and Renal Pelvis	0%	2%	12%	34%	26%	16%	10%
Leukemia	9%	3%	7%	24%	25%	21%	10%
Lung and Bronchus	0%	0%	2%	24%	33%	31%	10%
Melanomas of the Skin	0%	6%	14%	28%	27%	16%	9%
Non-Hodgkin's Lymphoma	2%	1%	9%	27%	30%	18%	12%
Pancreas	0%	1%	4%	24%	39%	21%	11%
Prostate	0%	0%	1%	38%	42%	15%	4%
Thyroid	2%	11%	31%	34%	13%	7%	1%

Source: South Dakota Department of Health

In 2017, 60% of all cancers were diagnosed between ages 50 to 74 (Table 4). Notable were the 14% of corpus and uterus, nos and 14% of melanomas of the skin cancers diagnosed between the ages of 35 to 49. In 2017, 59% of the Hodgkin's lymphoma cases were diagnosed in persons under 35 years old, compared to 38% in 2016.

Figure 1 below shows that incidence rates for American Indians in South Dakota were higher than those for whites in 2017. Of the 4,740 newly diagnosed cases in 2017, 240 or 5.1% were American Indians, 114 males, and 126 females.

Figure 1: All Sites Cancer Incidence Rates by Race and Gender, South Dakota, 2017



Note: Rates per 100,000 age-adjusted to the 2000 US standard population and 2017 SD estimated population.
Source: South Dakota Department of Health