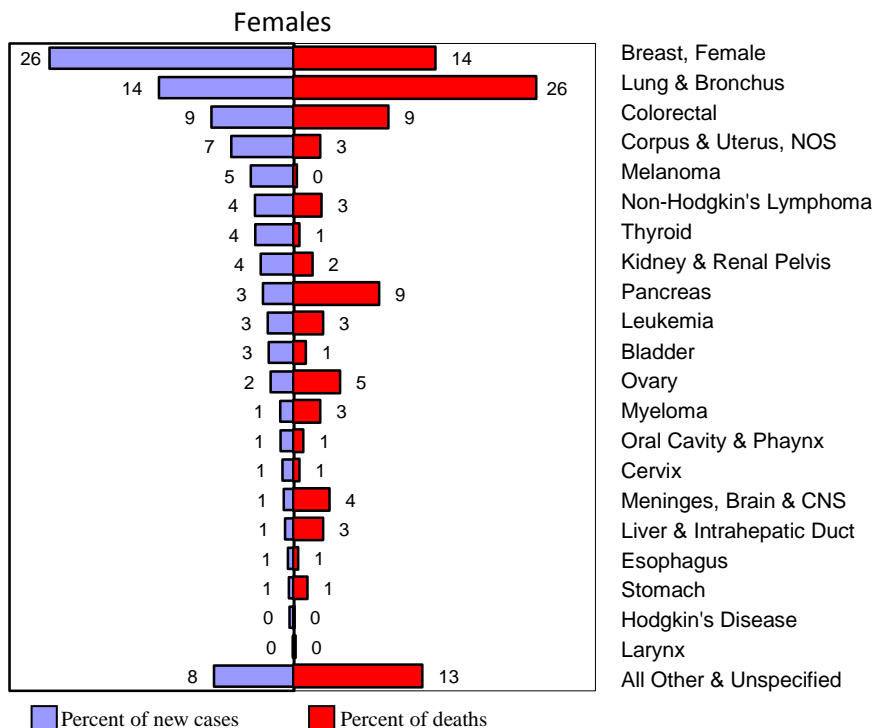
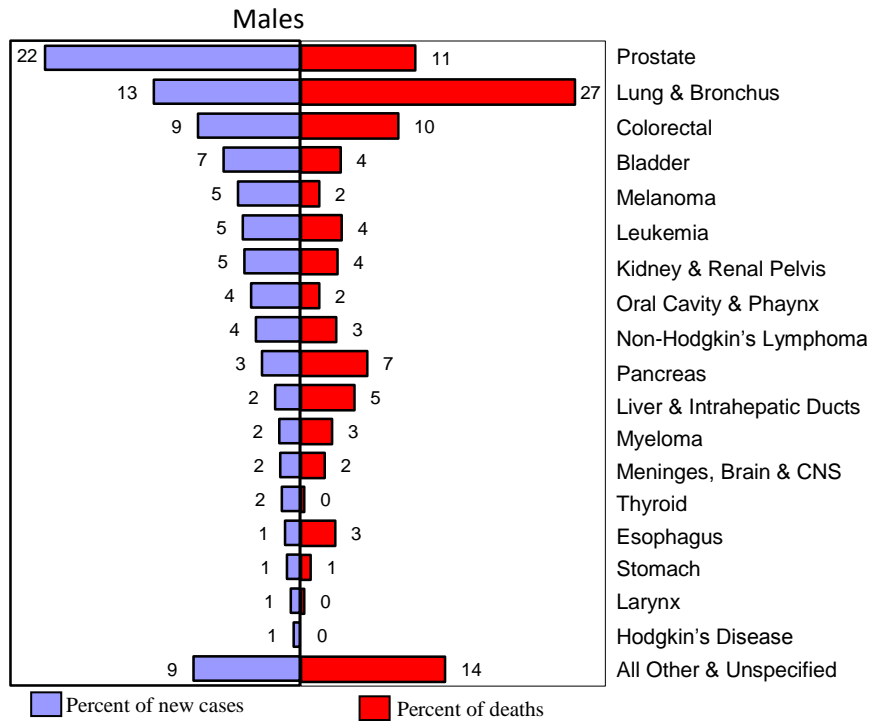


## V. CANCER CASES AND DEATHS BY RANK

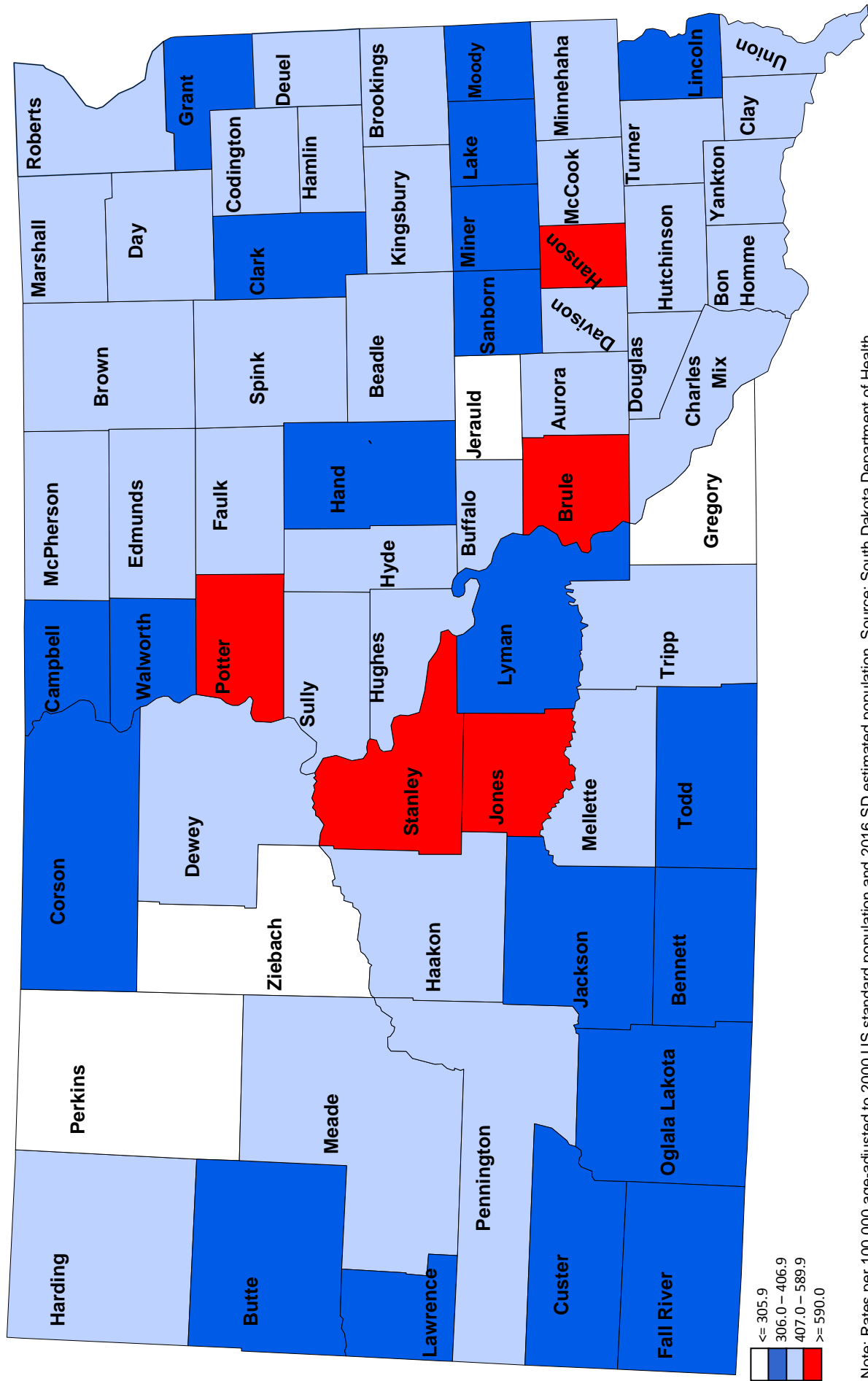
Lung and bronchus cancer was the most common cancer diagnosed during 2016. The five most diagnosed cancers were lung and bronchus, prostate, female breast, colorectal, and melanoma, which accounted for 52.8% of the new cases diagnosed and 47.5% of cancer deaths. Figure 2 shows the percent of new cancer cases and deaths by rank and gender.

**Figure 2: Percent Distribution of Cancer Cases and Deaths by Rank and Gender, South Dakota, 2016**

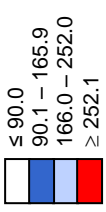
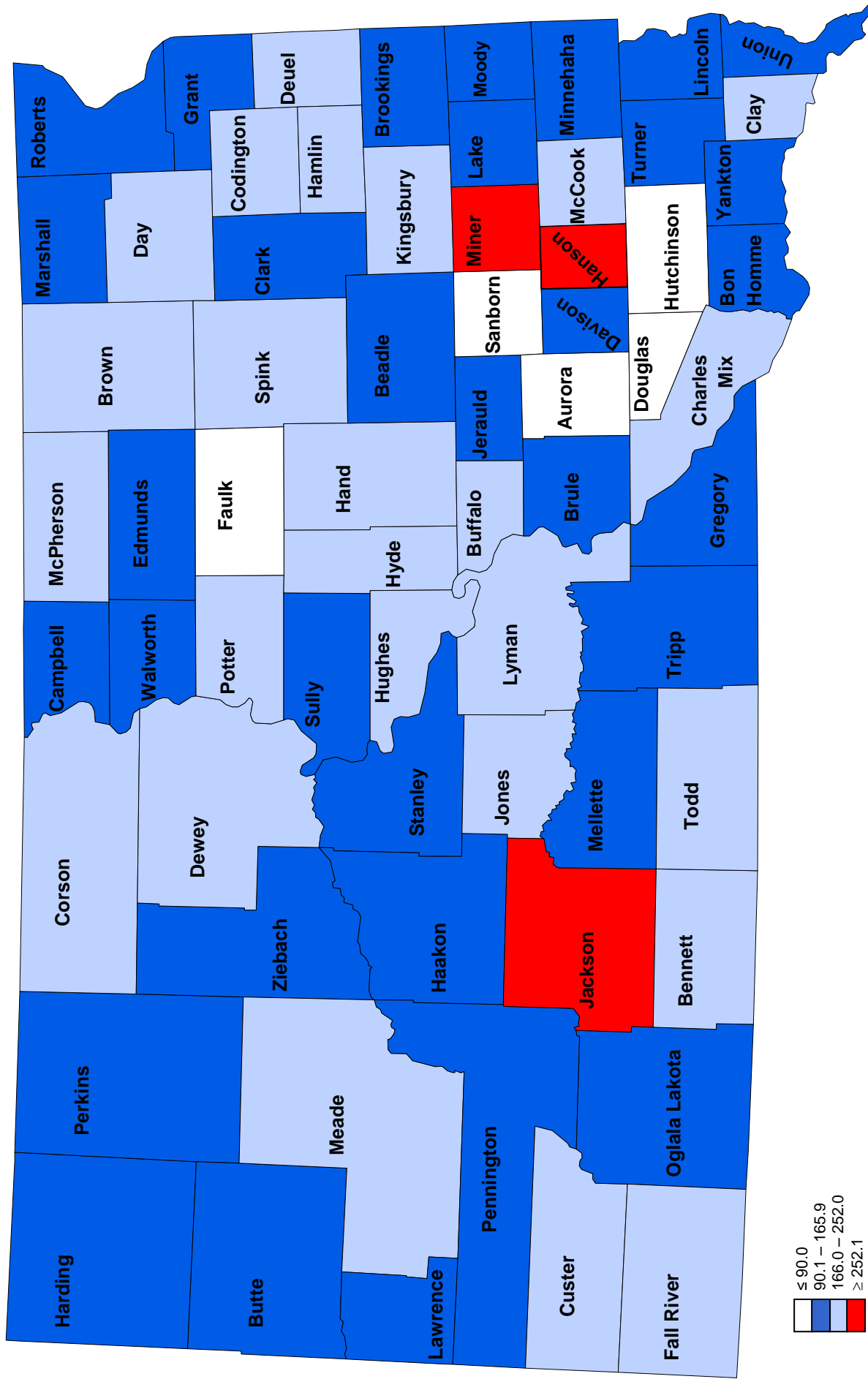


Source: South Dakota Department of Health

Figure 3: Cancer Incidence Rates by County, South Dakota, 2016



**Figure 4: Cancer Mortality Rates by County, South Dakota, 2016**



Note: Rates per 100,000 age-adjusted to 2000 US standard population and 2016 SD estimated population. Source: South Dakota Department of Health

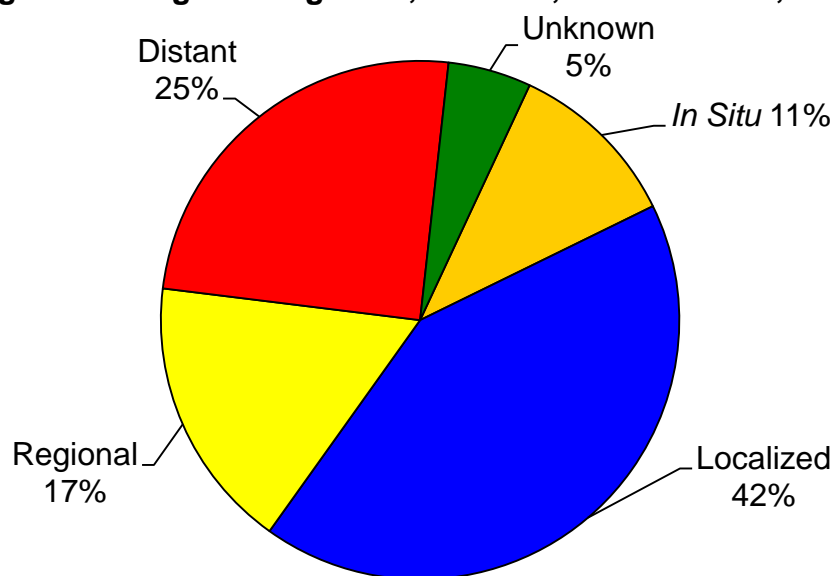
South Dakota has an area of 77,121 square miles with a 2016 estimated population of 865,454 persons resulting in a population density of 11 persons per square mile. Population densities range from a low of 0.5 in Harding County to a high of 210.0 persons per square mile in Minnehaha County.

## VI. STAGE AT DIAGNOSIS

### SEER Summary Staging:

- ***In Situ*** - Malignant cells are within the cell groups from which they arose, without penetration of the basement membrane of the tissue and stromal invasion.
- **Localized** - The malignant cells are limited to the organ of origin and have spread no farther than the organ where they began.
- **Regional** - The tumor is beyond the limits of the organ of origin by direct extension to adjacent areas such as the regional lymph nodes, adjacent organs, or tissue.
- **Distant** - The tumor cells have broken away from the primary tumor and traveled to other parts of the body.
- **Unknown** - If extension or metastatic, there is not sufficient evidence available to assign a stage.

**Figure 5: Stage at Diagnosis, All Sites, South Dakota, 2016**



Source: South Dakota Department of Health

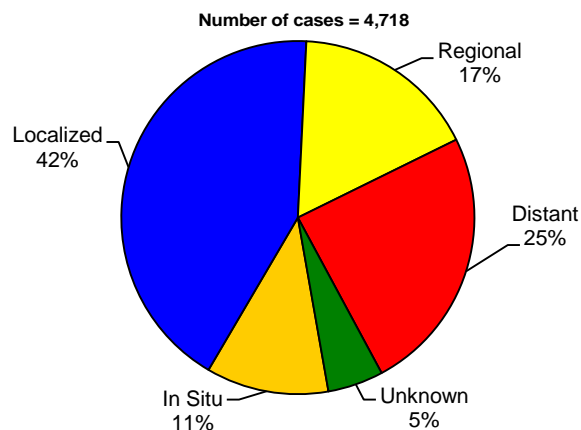
The figure above demonstrates the number of cases diagnosed at each stage of disease. For 2016, there were a total of 5,059 cases reported to the South Dakota State Cancer Registry, which includes *in situ* cases.

**Table 5: South Dakota Stage at Diagnosis, All Cases, 2016**

Stage	Number of Cases	Percent of Total
<i>In Situ</i>	544	11%
Localized	2127	42%
Regional	865	17%
Distant	1254	25%
Unknown	269	5%

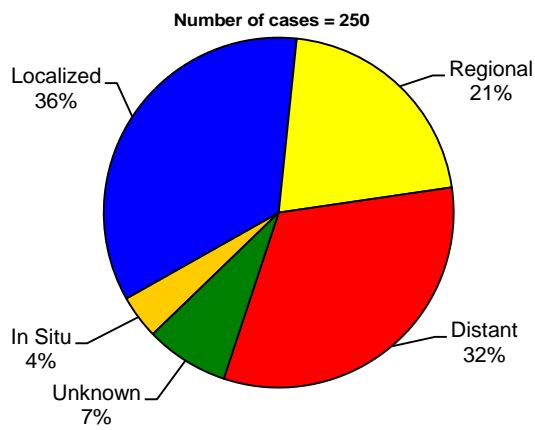
When analyzed by race, 42% of all cancer cases diagnosed for whites were diagnosed at localized stage and 36% for American Indians. American Indians had another 53% diagnosed at the regional and distant stages combined, while the same stages for whites were a combined 42%. Stage at diagnosis by race was as follows:

**Figure 6: Stage at Diagnosis in South Dakota, White, 2016**



Source: South Dakota Department of Health

**Figure 7: Stage at Diagnosis in South Dakota, American Indians, 2016**



Source: South Dakota Department of Health

Cases of non-Hodgkin's lymphoma, myeloma, and leukemias are usually at distant stages, and therefore can skew the proportion of all sites diagnosed at distant stages. Some differences in case counts by stage for selected sites are shown in Table 6.

**Table 6: Stage at Diagnosis for Selected Sites by Race, South Dakota, 2016**

	White						American Indian					
	Localized		Regional		Distant		Localized		Regional		Distant	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Female Breast	377	18.9%	120	15.0%	23	2.0%	19	21.3%	8	15.4%	1	1.3%
Lung and Bronchus	142	7.1%	130	16.3%	283	24.6%	6	6.7%	8	15.4%	21	26.3%
Prostate	460	23.1%	77	9.6%	34	3.0%	11	12.4%	4	7.7%	5	6.3%
Melanoma of the Skin	197	9.9%	19	2.4%	7	0.6%	1	1.1%	0	0.0%	0	0.0%
Colorectal	144	7.2%	116	14.5%	89	7.7%	9	10.1%	10	19.2%	8	10.0%
Bladder	47	2.4%	16	2.0%	15	1.3%	1	1.1%	0	0.0%	1	1.3%
Non-Hodgkin's Lymphoma	35	1.8%	22	2.8%	105	9.1%	0	0.0%	0	0.0%	5	6.3%
Kidney and Renal Pelvis	110	5.5%	25	3.1%	27	2.3%	19	21.3%	1	1.9%	3	3.8%
Corpus and Uterus, NOS	106	5.3%	18	2.3%	14	1.2%	2	2.2%	1	1.9%	1	1.3%
Leukemia	1	0.1%	2	0.3%	168	14.6%	0	0.0%	0	0.0%	9	11.3%
Thyroid	78	3.9%	33	4.1%	8	0.7%	3	3.4%	2	3.8%	1	1.3%
Pancreas	21	1.1%	46	5.8%	67	5.8%	0	0.0%	1	1.9%	3	3.8%

Source: South Dakota Department of Health