

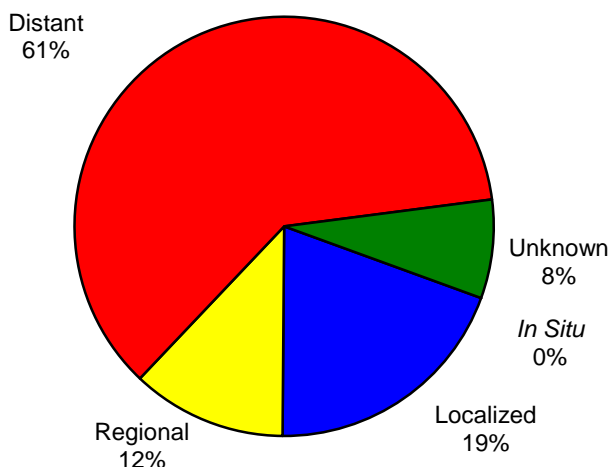
NON-HODGKIN'S LYMPHOMA

Table 22: Non-Hodgkin's Lymphoma Incidence and Mortality Summary, 2016

Non-Hodgkin's Lymphoma			Incidence			Mortality		
			Total	Male	Female	Total	Male	Female
South Dakota	Total	# Cases / Deaths	185	93	92	55	33	22
		Age-Adjusted Rate	18.7	20.1	17.4	5.4	7.3	3.6
	White	# Cases / Deaths	176	89	87	54	32	22
		Age-Adjusted Rate	19.2	20.7	17.7	5.6	7.4	3.8
	American Indian	# Cases / Deaths	5	2	3	0	0	0
		Age-Adjusted Rate	10.6	7.4	13.3	0.0	0.0	0.0
United States	Total	Age-Adjusted Rate	18.9	22.7	15.8	5.4	6.9	4.2
	White	Age-Adjusted Rate	19.7	23.6	16.4	5.6	7.2	4.4
	American Indian	Age-Adjusted Rate	12.3	11.7	12.8	4.5	6.5	2.9

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

Figure 53: Non-Hodgkin's Lymphoma Stage at Diagnosis, South Dakota, 2016



Source: South Dakota Department of Health

Descriptive Epidemiology

Stage at Diagnosis: Stage is based on where lymphoma cells are found (in the lymph or in other organs or tissues). The stage also depends on how many areas are involved. Localized stage only involves a single lymph node region or single extralymphatic organ. When two or more lymph node regions are involved and the regions are on both sides of the diaphragm, the cancer is staged as distant. In 2016, 61% of the cases were diagnosed at a distant stage, an increase from 2011 when 47% were diagnosed at a distant stage.

Incidence: Non-Hodgkin's lymphoma is a cancer that originates in the lymphatic system, the disease-fighting network that spreads throughout the body. It develops in lymphocytes, a type of white blood cell. Non-Hodgkin's lymphoma is more than five times as common as the other general type of lymphoma, Hodgkin's disease. The incidence rate has been

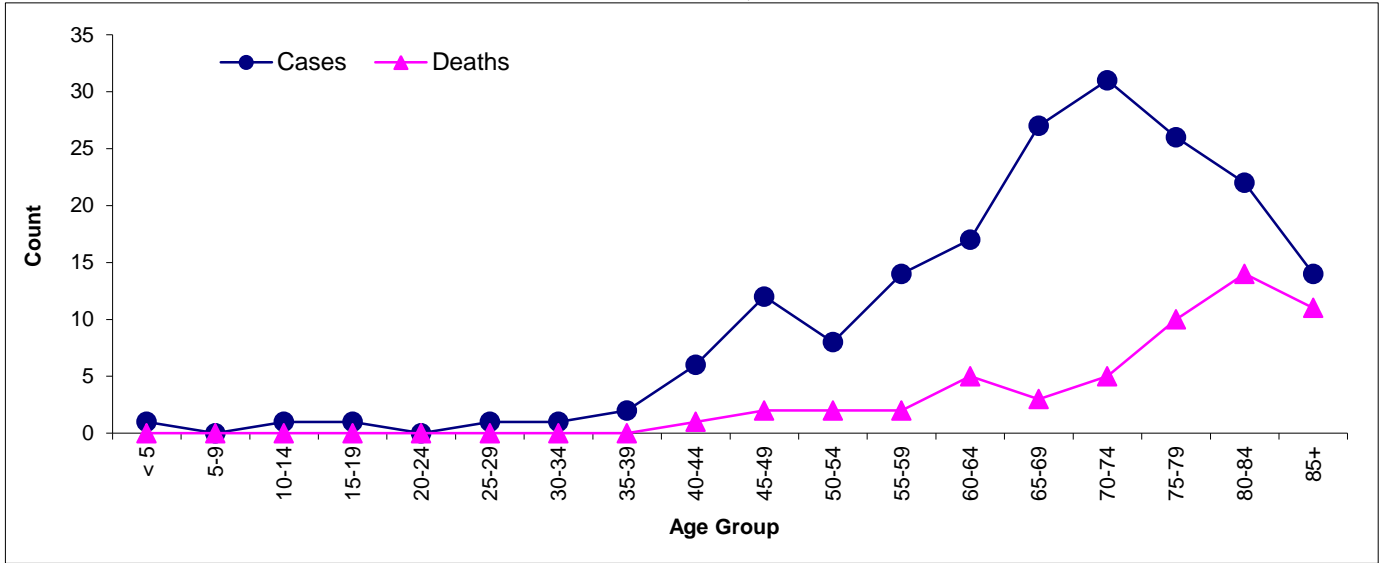
increasing in the United States since the 1970s. The incidence of non-Hodgkin's lymphoma in South Dakota was 185 cases in 2016. The median age at diagnosis in South Dakota in 2016 was 70 and 67 for the United States.

Mortality: There were 55 deaths reported in South Dakota that were attributed to non-Hodgkin's lymphoma. The median age at death for those whose death was attributed to non-Hodgkin's lymphoma in South Dakota was 79 years of age and 76 for the United States. Nationally, the five-year survival rate is 72.0% for non-Hodgkin's lymphoma.

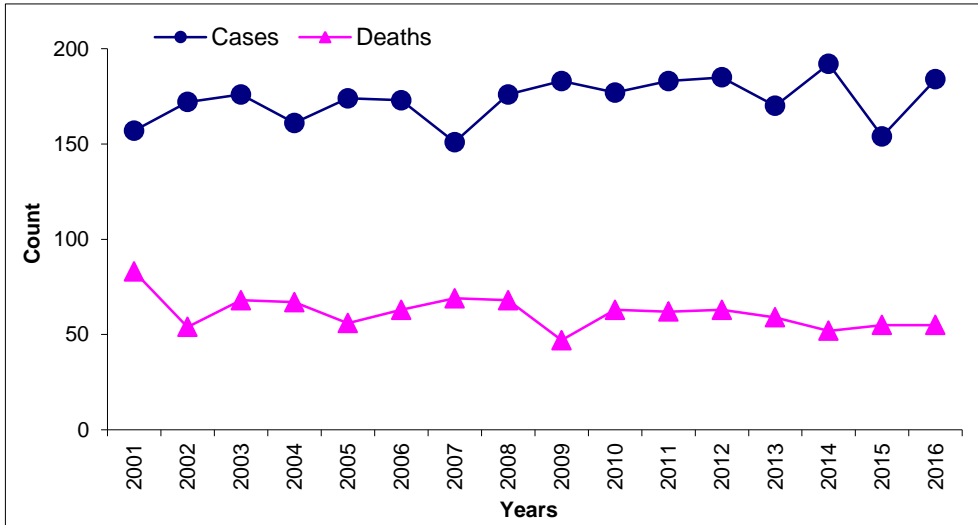
Risk and Associated Factors: Age is a strong risk factor for this disease, with most cases occurring from age 60 and older. Some studies suggest that exposure to chemicals such as benzene and certain herbicides and insecticides may be linked to an increased risk. Some chemotherapy used to treat other cancers can increase the risk as well as patients having been treated with radiation. The risk is higher for those having been treated with both. Certain infections increase the risk, such as HIV, Epstein - Barr virus, H. pylori bacteria, and Hepatitis C virus.

Early Detection and Prevention: Non-Hodgkin's lymphoma may present with various symptoms. Symptoms may include signs resulting from local effects of cancer growth. Non-Hodgkin's lymphoma can also produce generalized symptoms, such as unexplained weight loss, fever, drenching night sweats, and severe itching.

Figure 54: Non-Hodgkin's Lymphoma Number of Cases and Death by Age, South Dakota, 2016



Source: South Dakota Department of Health



Source: South Dakota Department of Health

Figure 55: Non-Hodgkin's Lymphoma Cases and Deaths by Year, South Dakota, 2001 – 2016

The number of cases associated with non-Hodgkin's lymphoma cancer remains constant.

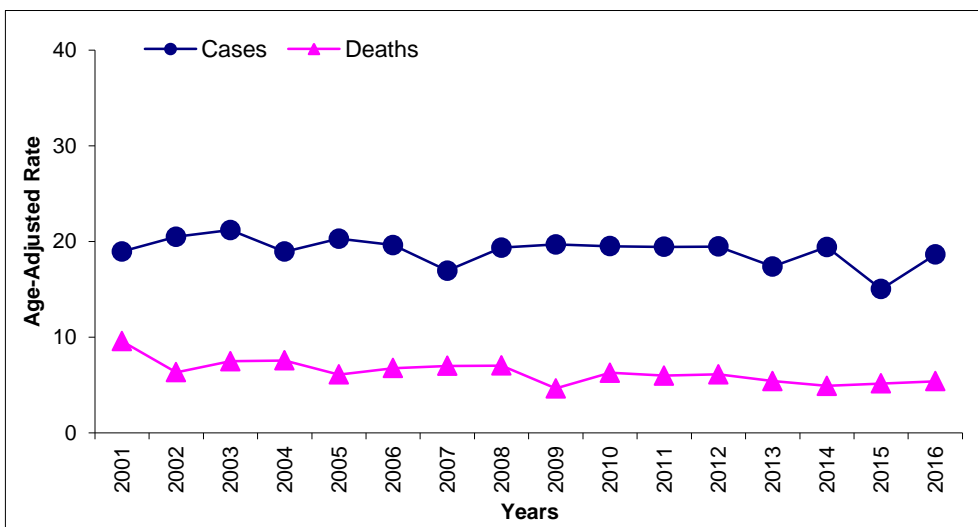


Figure 56: Non-Hodgkin's Lymphoma Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001 - 2016

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