

ALASKA NATIVE MORTALITY UPDATE: 1999-2003

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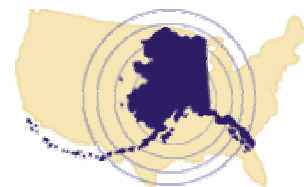
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Appendices

Appendix A -	NCHS 113 Selected Causes of Death – ICD-9 and ICD-10 Codes
Appendix B -	Leading Causes of Death, Alaska Whites vs U.S. Whites, 1999-2003, Ranked by Leading Causes of Death for Alaska Natives

HIGHLIGHTS

All-Cause Mortality

- The Alaska Native all-cause mortality rate, both genders combined, was 36% higher than the U.S. White rate during the period 1999 to 2003.
- Alaska Native people had significantly higher rates than U.S. Whites for eight of the ten leading causes of death (i.e., cancer, unintentional injuries, suicide, cerebrovascular disease, chronic obstructive pulmonary disease, homicide and legal intervention, chronic liver disease). Heart disease mortality rates were significantly lower than U.S. Whites. Diabetes mellitus mortality rates were not significantly different from U.S. Whites.
- Alaska Native all-cause mortality rates for all service regions were significantly higher than U.S. White rates.
- Alaska Native all-cause mortality rates declined 16% between 1979 and 2003. U.S. White all-cause mortality declined 15% during this period.

Excess Mortality

- The three leading causes of excess mortality among Alaska Native people, both genders combined, were unintentional injury (28.2%), suicide (12.6%), and cancer (10.3%).
- Among Alaska Native men, unintentional injury (33.4%), suicide (15.9%), and cancer (8.6%) were the leading causes of excess mortality.
- Among Alaska Native women, unintentional injury (20.2%), cancer (13.0%), and chronic liver disease (8.4%), were the leading causes of excess mortality.

#1 Cause of Death Among Alaska Native Peoples - Cancer

- Cancer was the leading cause of death among Alaska Native people, both genders combined, as well as among Alaska Native women. It ranked second among Alaska Native men.
- The Alaska Native cancer mortality rate, both genders combined, was 25% higher than the U.S. White rate.
- Alaska Native cancer mortality rates were significantly higher than U.S. White rates for all service regions except Kotzebue and the Interior.
- Alaska Native cancer mortality rates did not change significantly during the period 1979 to 2003. U.S. White rates significantly declined by 4% during this period.

#2 Cause of Death Among Alaska Native Peoples - Heart Disease

- Alaska Native heart disease mortality rates, for both genders combined, and for Alaska Native women, were significantly lower than U.S. White rates. Among Alaska Native men, the rate was not significantly lower than for U.S. White men.
- Alaska Native heart disease mortality rates were significantly lower than U.S. White rates for the Yukon-Kuskokwim Service Region. Mortality rates for the Anchorage Service Region were significantly higher. There were no significant differences as compared to U.S. White rates for any other service region.
- Alaska Native heart disease mortality rates declined 25% between 1979 and 2003. U.S. White rates declined 39% during this period.

#3 Cause of Death Among Alaska Native Peoples - Unintentional Injury

- Unintentional injury was the leading cause of death among Alaska Native men. It ranked third among women, and third overall.
- The Alaska Native unintentional injury mortality rate, both genders combined, was 3 times higher than the U.S. White rate.
- Alaska Native unintentional injury mortality rates were significantly higher than U.S. White rates for all service regions.
- Alaska Native unintentional injury mortality rates declined 43% between 1979 and 2003. U.S. White rates declined 16%.

#4 Cause of Death Among Alaska Native Peoples - Suicide

- The Alaska Native suicide rate, both genders combined, was 3.1 times higher than the U.S. White rate.
- Alaska Native suicide rates were significantly higher than U.S. White rates for all service regions except Bristol Bay and Mt. Edgecumbe.
- Alaska Native suicide rates did not change significantly between 1979 and 2003. U.S. White rates declined 12% during this period.

#5 Cause of Death Among Alaska Native Peoples - Cerebrovascular Disease

- The Alaska Native cerebrovascular disease mortality rate, both genders combined, was 26% higher than the U.S. White rate.
- Alaska Native cerebrovascular disease mortality rates were significantly higher than U.S. White rates for the Anchorage service region.
- Alaska Native cerebrovascular disease mortality rates did not change significantly between 1979 and 2003. U.S. White rates declined 36% during this period.

#6 Cause of Death Among Alaska Native Peoples - Chronic Obstructive Pulmonary Disease

- The Alaska Native chronic obstructive pulmonary disease mortality rate, both genders combined, was 42% higher than the U.S. White rate.
- Alaska Native chronic obstructive pulmonary disease mortality rates were higher than U.S. White rates for the Anchorage, Barrow, Norton Sound, and Yukon-Kuskokwim service regions.
- Alaska Native chronic obstructive pulmonary disease mortality rates increased nearly 3 times (192%) between 1979 and 2003. U.S. White rates increased 54% during this period.

#7 Cause of Death Among Alaska Native Peoples - Homicide and Legal Intervention

- The Alaska Native homicide rate, both genders combined, was 4.4 times higher than the U.S. White rate.
- Alaska Native homicide rates were significantly higher than U.S. White rates for all service regions except Barrow, Bristol Bay, and Norton Sound.
- Alaska Native homicide and legal intervention mortality rates declined 50% between 1979 and 2003. U.S. White rates declined 35% during this period.

#8 Cause of Death Among Alaska Native Peoples - Pneumonia and Influenza

- The Alaska Native pneumonia and influenza mortality rate, both genders combined, was 60% higher than the U.S. White rate.
- Alaska Native pneumonia and influenza mortality rates were significantly higher than U.S. White rates only for the Bristol Bay, Kotzebue, and Yukon-Kuskokwim service regions.
- Alaska Native pneumonia and influenza mortality rates declined 27% between 1979 and 2003. U.S. White rates declined 21% during this period.

#9 Cause of Death Among Alaska Native Peoples - Chronic Liver Disease and Cirrhosis

- The Alaska Native chronic liver disease mortality rate for both genders combined was 2 times higher than the U.S. White rate. The rate for Alaska Native women was 4 times higher than that for U.S. White women. The rate for Alaska Native men was not significantly different from that for U.S. White men.
- Alaska Native chronic liver disease mortality rates were significantly higher than U.S. White rates only in the Anchorage, Bristol Bay, Interior, and Mt. Edgecumbe service regions.
- Alaska Native chronic liver disease mortality rates declined 31% between 1979 and 2003. U.S. White rates declined 26% during this period.

#10 Cause of Death Among Alaska Native Peoples - Diabetes Mellitus

- The Alaska Native diabetes mellitus mortality rate was not significantly different from the U.S. White rate.
- Alaska Native diabetes mellitus mortality rates were significantly higher than U.S. White rates only in the Anchorage service region.
- Alaska Native diabetes mellitus mortality rates increased nearly 3 times (194%) between 1979 and 2003. U.S. White rates increased 40% during this period.

INTRODUCTION

Reliable information on cause of death is essential to the development of policies and programs for prevention and control of disease and injury. This report, produced by the Alaska Native Epidemiology Center, attempts to provide such information for health care planners, providers and other professionals throughout Alaska.

METHODOLOGY

Population

Alaska Native (AN) is the term used collectively for the inhabitants whose ancestors occupied the state of Alaska. The U.S. Bureau of the Census estimates that in the year 2000 there were 119,499 AN residing in Alaska, 97,012 of whom checked only the American Indian/Alaska Native category for race among multiple options. For this report, bridged population estimates were used. The bridged estimate for the year 2000 AN population was 107,661, an intermediate value between the single race and multiple race estimates reported by the census.

Population bridging is a method used to make multiple-race and single-race data comparable enough for analysis. In population bridging, all single race respondents are counted in the race category (in this case, all 97,012 AN). Persons who reported multiple races (in this case, an additional 22,487 individuals) are

assigned to a single race category based upon fairly complex mathematical models.¹

Mortality Data

The on-line SEERStat software available through the National Cancer Institute's Surveillance Epidemiology and End Results (SEER) Program was used to calculate mortality rates for AN.² Information on AN mortality in this database is available for 1992-2003. For information on changes in rates since our 1989-1998 report, we used data from the Alaska Native Mortality 1979-1998 data book.³

For current estimates, we calculated average annual mortality rates for AN using deaths during the five year time period, 1999-2003, and the SEER AN population for this period. We only calculated rates for those causes that had at least five deaths during the interval studied. Race is assigned at time of death by either next of kin, or the coroner. There is often concern about under-reporting of minority groups on death certificate data, however, a recent study estimates that under-reporting of Alaska Natives on death certificates is low (5%).⁴

AN rates for 1999-2003 were compared to mortality rates for U.S. Whites (USW) for this time period since the purpose of the paper was to assess the health disparities of the AN population from a national perspective. USW were chosen as a comparison group since they are frequently used as a standard population. The

numbers are large to provide accurate estimates by age and gender with which to compare. Mortality rates for Alaska Whites (AKW) were also calculated and compared to USW for the leading causes of death in order to determine the extent to which environment may be a factor. AKW data is included in the Appendices.

Data for USW as well as for AKW are from SEER and are available for the years 1969-2003. All mortality rates were age-adjusted to the 2000 standard population. Rate ratios were created to compare AN to USW rates and confidence intervals calculated around these ratios.⁵ AN rates were considered significantly different if the 95% confidence interval did not contain one. Unless otherwise stated all rate comparisons mentioned within the text in this data book should be considered statistically significant.

Rank Order

Mortality rates for the 10 leading causes of death were calculated for AN from among a list of 50 leading causes of death as defined by the National Center for Health Statistics (NCHS). A list of ICD-10 code groupings used is included in the Appendices.

Age-Specific Rates

For the most recent time period, 1999-2003, age-specific rates for AN were compared with age-specific USW rates. Age groups comprising more than five years were age-adjusted to the U.S. 2000 Standard population.

Excess Deaths

Excess deaths were calculated by multiplying the age-specific and cause-specific death rates for USW by the AN population for each age group to determine the expected number of deaths. The difference between the expected and the observed number of AN deaths was considered excess.

Service Regions

Alaska has traditionally been divided into a number of Service Regions within the Indian Health Service system. Alaska Native deaths for eight Service Regions (Anchorage, Barrow, Bristol Bay, Interior, Kotzebue, Mt. Edgecumbe including Annette Island, Norton Sound, and Yukon-Kuskokwim) were examined in this report. In Service Region tables, causes of death with fewer than 3 cases were recorded as <3.

Trends Over Time

Changes in mortality rates over the twenty-five year period, 1979 to 2003, were analyzed. Mantel-Haenszel Chi-square tests for trend stratified by age group were used to test for a significant trend over time for each age-adjusted time period.⁶ Percentage change over time was calculated by subtracting the rate for the first time period from the rate for the most recent time period and dividing by the rate for the first time period.

¹ National Center for Health Statistics
(www.cdc.gov/nchs/data/series/sr_02/sr02135.pdf)

² Surveillance, Epidemiology, and End Results (SEER) Program
(www.seer.cancer.gov) SEER*Stat Database: Mortality - All COD, Public-Use With State, Total U.S. for Expanded Races (1990-2002), National Cancer Institute, DCCPS, Surveillance Research Program, Cancer Statistics Branch, released April 2005. Underlying mortality data provided by NCHS (www.cdc.gov/nchs)

³ Day GE, Lanier AP. Alaska Native Mortality, 1979-1998. Pub Health Rep 2003;118:518-530

⁴ Indian Health Service. Adjusting for Miscoding of Indian Race on State Death Certificates. Washington DC: Department of Health and Human Services, Indian Health Services;1996

⁵ Armitage P, Berry G, Matthews. JNS. Statistical Methods in Medical Research (4th edition). Oxford: Blackwell Science 2002

⁶ Schlesselman. "Case-Control Studies", New York, Oxford Univ. Press, 1982,pp.203-206

**TABLE 1a. Leading Causes of Death
Alaska Natives vs U.S. Whites, 1999-2003
Ranked by Percentage of Mortality for Alaska Natives
Both Genders Combined**

	Both Genders Combined	Alaska Natives		Rate [†]	U.S. Whites		Rate [†]	SMR	Lower 95%	Upper 95%
		#	%	per 100,000	#	%	per 100,000			
1	Cancer	660	19.4%	242.3	2,400,904	23.0%	193.5	1.25 *	1.16	1.36
2	Heart Disease	504	14.8%	210.4	3,069,015	29.5%	243.6	0.86 *	0.79	0.95
3	Unintentional Injuries	499	14.7%	108.6	434,629	4.2%	36.4	2.98 *	2.71	3.29
4	Suicide	204	6.0%	36.1	137,651	1.3%	11.6	3.11 *	2.69	3.58
5	Cerebrovascular Diseases	165	4.8%	70.0	704,290	6.8%	55.6	1.26 *	1.07	1.48
6	Chronic Obstructive Pulmonary Disease	153	4.5%	65.1	573,695	5.5%	45.8	1.42 *	1.20	1.68
7	Homicide and Legal Intervention	90	2.6%	17.7	46,859	0.4%	4.0	4.43 *	3.52	5.45
8	Pneumonia and Influenza	85	2.5%	36.1	285,362	2.7%	22.5	1.60 *	1.27	2.02
9	Chronic Liver Disease and Cirrhosis	75	2.2%	19.4	116,808	1.1%	9.6	2.02 *	1.59	2.56
10	Diabetes Mellitus	51	1.5%	20.9	284,893	2.7%	22.8	0.92	0.68	1.23
	All Others	918	27.0%	305.0	2,363,079	22.7%	189.2	1.61 *	1.50	1.74
	All Causes	3,404	100.0%	1131.5	10,417,185	100.0%	834.6	1.36 *	1.31	1.41

†Age-adjusted to 2000 standard population.

* p<0.05

**TABLE 1b. Leading Causes of Death
Alaska Natives vs U.S. Whites, 1999-2003
Ranked by Percentage of Mortality for Alaska Natives
Males**

	Males	Alaska Natives		Rate [†]	U.S. Whites		Rate [†]	SMR	Lower 95%	Upper 95%
		#	%	per 100,000	#	%	per 100,000			
1	Unintentional Injuries	355	18.4%	156.2	279,721	5.5%	50.7	3.08 *	2.74	3.46
2	Cancer	349	18.1%	299.1	1,241,839	24.5%	239.2	1.25 *	1.11	1.41
3	Heart Disease	281	14.6%	270.6	1,493,023	29.4%	304.6	0.89	0.78	1.02
4	Suicide	159	8.2%	56.7	110,558	2.2%	19.4	2.92 *	2.49	3.42
5	Cerebrovascular Diseases	76	3.9%	77.9	267,834	5.3%	56.6	1.38 *	1.06	1.78
6	Chronic Obstructive Pulmonary Disease	73	3.8%	78.1	277,174	5.5%	56.3	1.39 *	1.07	1.79
7	Homicide and Legal Intervention	55	2.8%	22.5	34,135	0.7%	5.9	3.81 *	2.86	5.14
8	Pneumonia and Influenza	41	2.1%	43.6	123,409	2.4%	27.0	1.61 *	1.12	2.33
9	Diabetes Mellitus	25	1.3%	25.5	135,515	2.7%	26.4	0.97	0.61	1.54
10	Chronic Liver Disease and Cirrhosis	24	1.2%	13.2	75,764	1.5%	13.4	0.99	0.65	1.51
	All Others	492	25.5%	358.5	1,034,461	20.4%	209.8	1.71 *	1.53	1.91
	All Causes	1930	100.0%	1401.8	5,073,433	100.0%	1009.3	1.39 *	1.32	1.46

†Age-adjusted to 2000 standard population.

*p<0.05

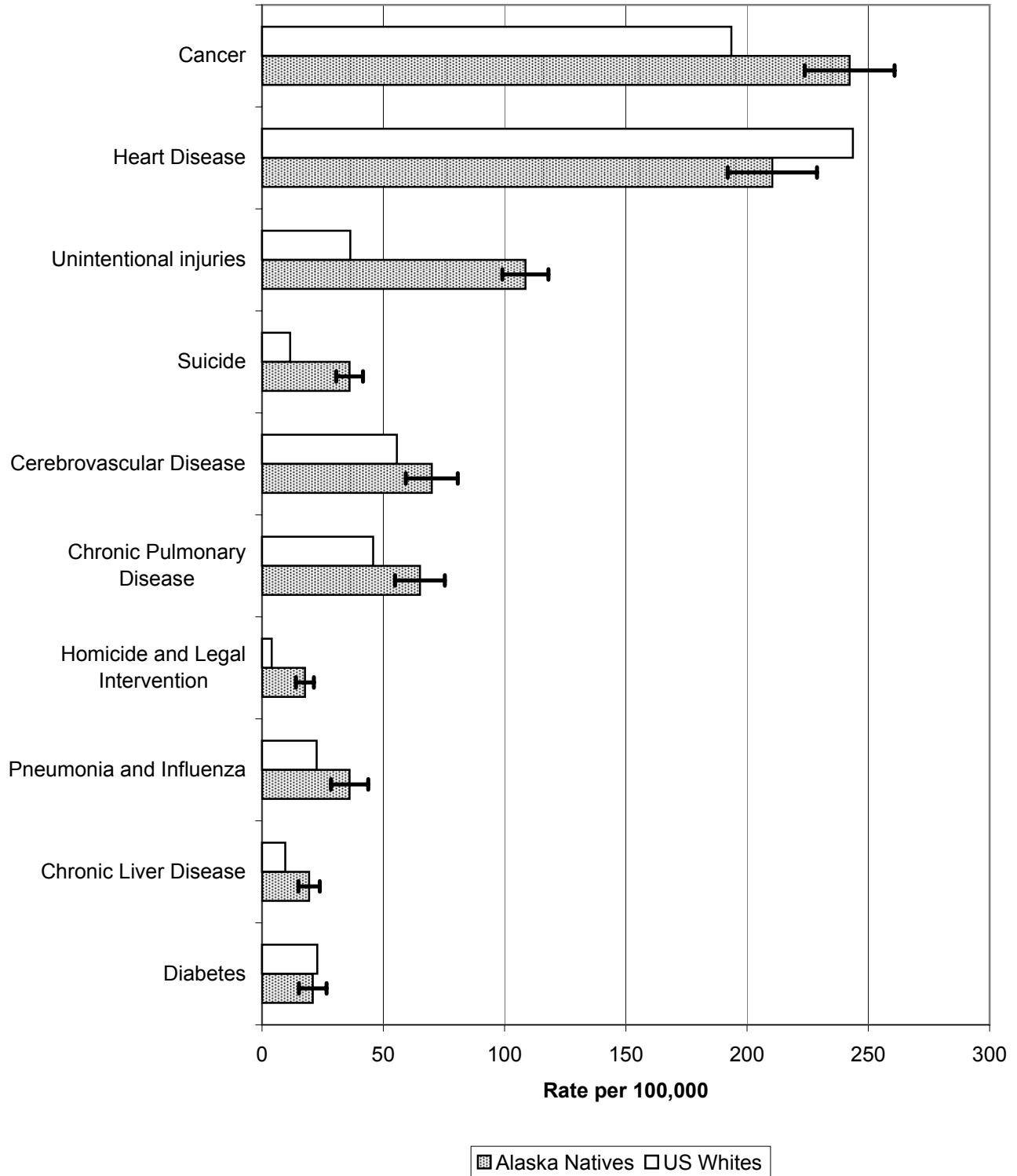
**TABLE 1c. Leading Causes of Death
Alaska Natives vs U.S. Whites, 1999-2003
Ranked by Percentage of Mortality for Alaska Natives
Females**

	Female	Alaska Natives		Rate [†]	U.S. Whites		Rate [†]	SMR	Lower 95%	Upper 95%
		#	%	per 100,000	#	%	per 100,000			
1	Cancer	311	21.1%	205.4	1,159,065	21.7%	163.4	1.26 *	1.12	1.41
2	Heart Disease	223	15.1%	169.5	1,575,992	29.5%	197.1	0.86 *	0.75	0.98
3	Unintentional Injuries	144	9.8%	61.8	154,908	2.9%	23.2	2.66 *	2.24	3.18
4	Cerebrovascular Diseases	89	6.0%	65.2	436,456	8.2%	54.1	1.21	0.97	1.50
5	Chronic Obstructive Pulmonary Disease	80	5.4%	58.4	296,521	5.5%	39.6	1.47 *	1.18	1.85
6	Chronic Liver Disease and Cirrhosis	51	3.5%	25.2	41,044	0.8%	6.2	4.06 *	3.07	5.41
7	Suicide	45	3.1%	15.4	27,093	0.5%	4.5	3.42 *	2.54	4.60
8	Pneumonia and Influenza	44	3.0%	32.5	161,953	3.0%	19.8	1.64 *	1.21	2.24
9	Homicide and Legal Intervention	35	2.4%	13.3	12,724	0.2%	2.2	6.05 *	4.35	8.54
10	Diabetes Mellitus	26	1.8%	19.7	149,378	2.8%	20.1	0.98	0.66	1.45
	All Others	426	28.9%	263.7	1,328,618	24.9%	171.7	1.54 *	1.39	1.70
	All Causes	1,474	100.0%	930.0	5,343,752	100.0%	701.8	1.33 *	1.26	1.40

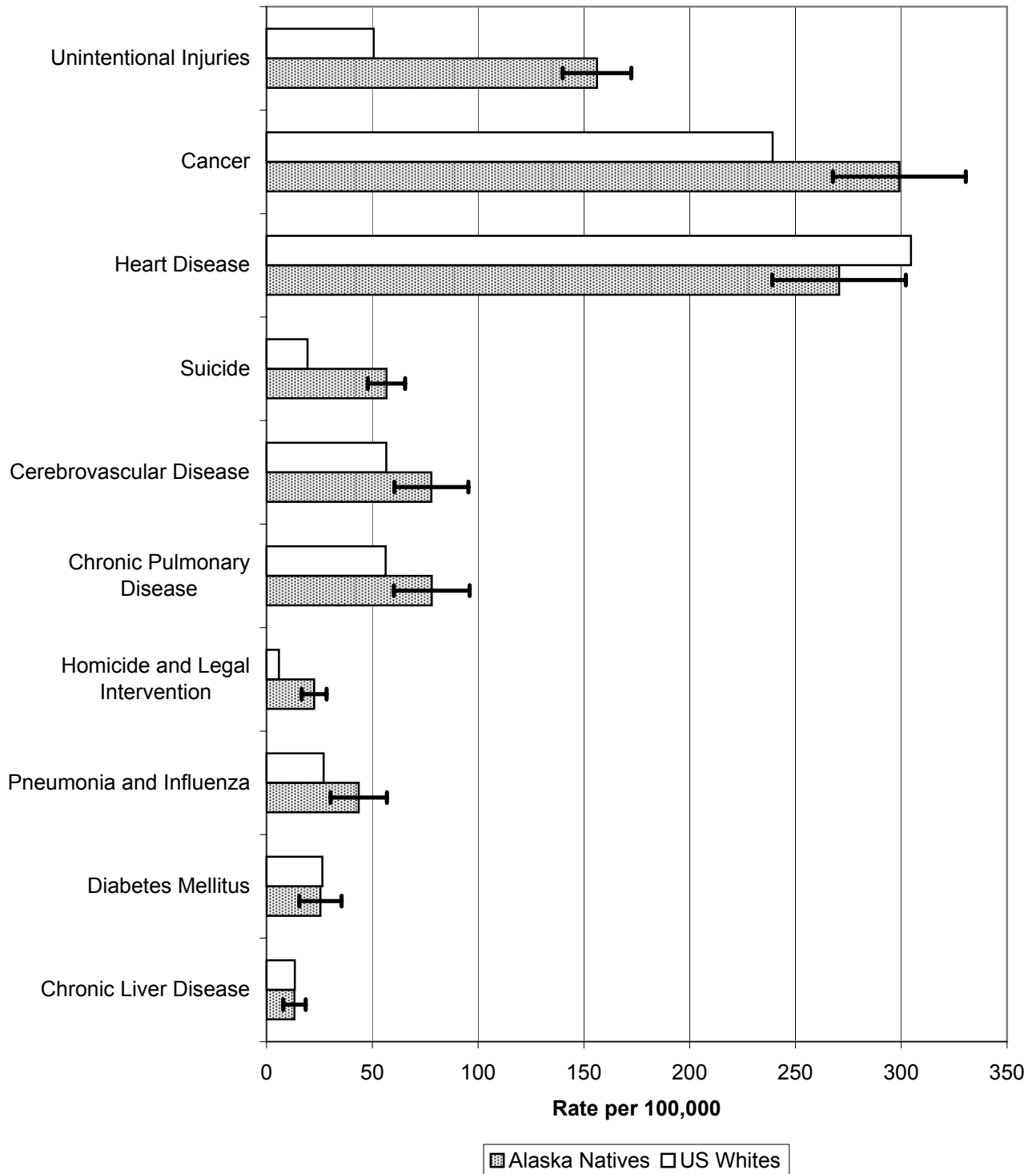
†Age-adjusted to 2000 standard population.

*p<0.05

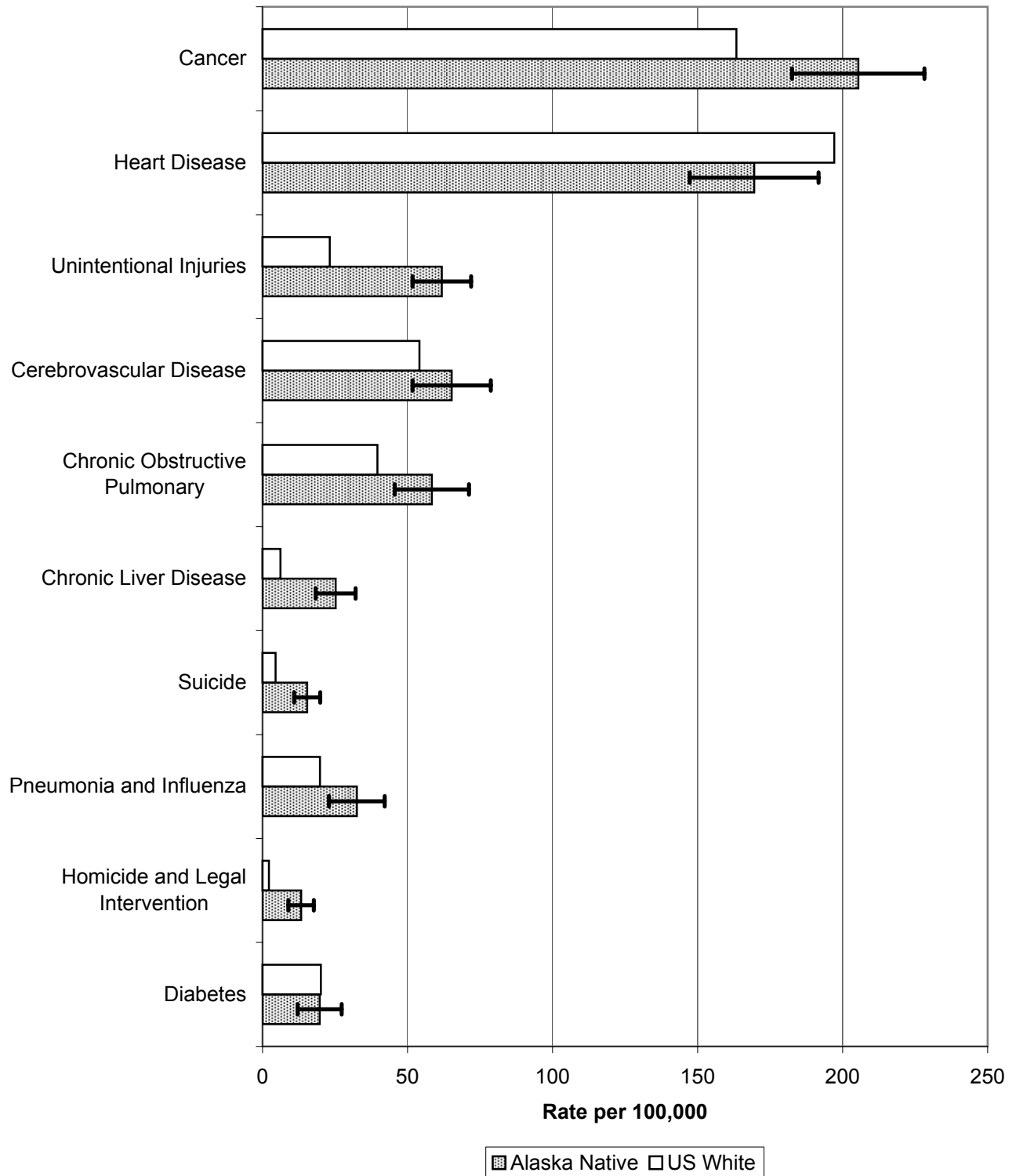
**FIGURE 1a. Age-Adjusted Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003
Both Genders Combined**



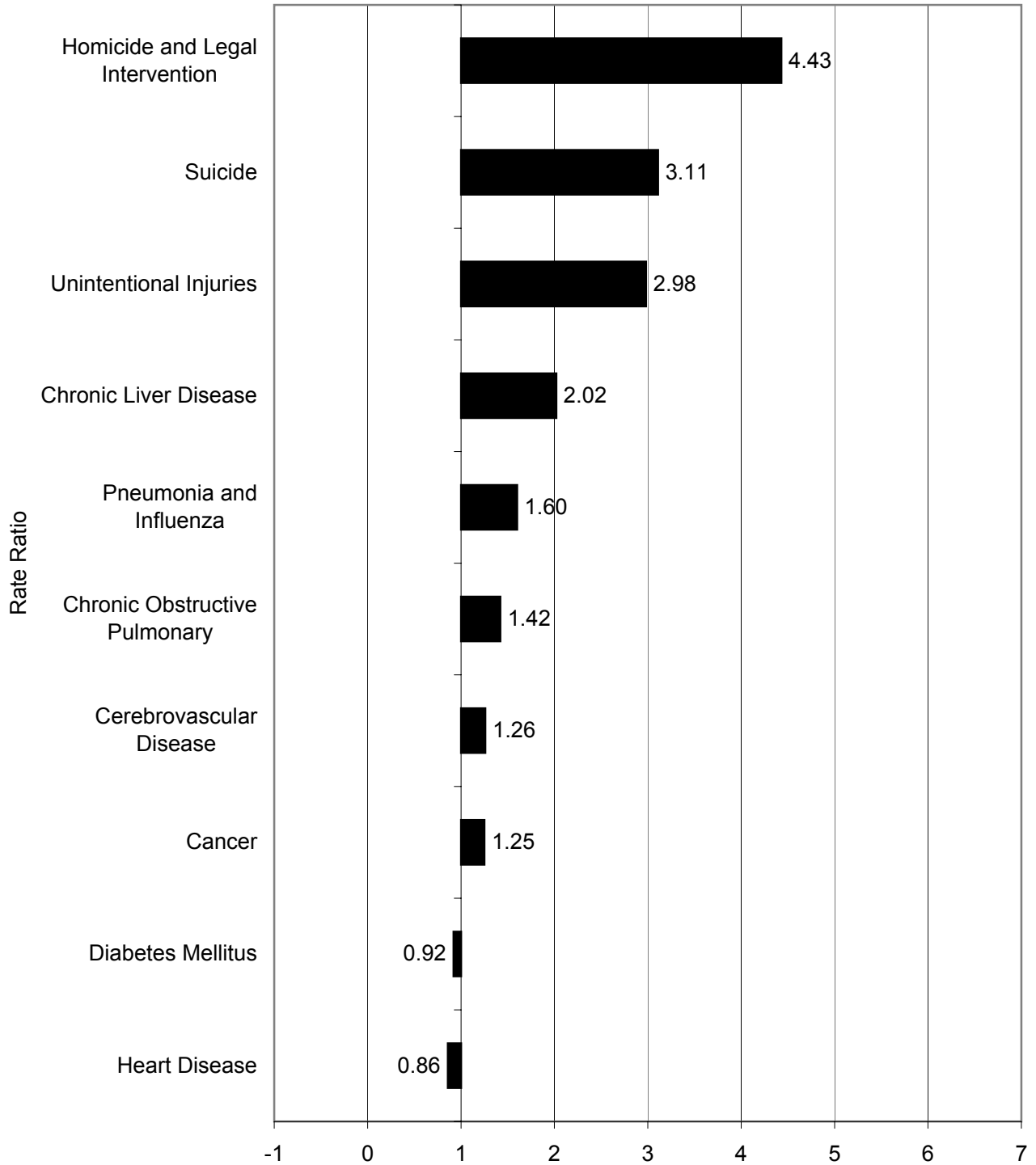
**FIGURE 1b. Age-Adjusted Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003
Males**



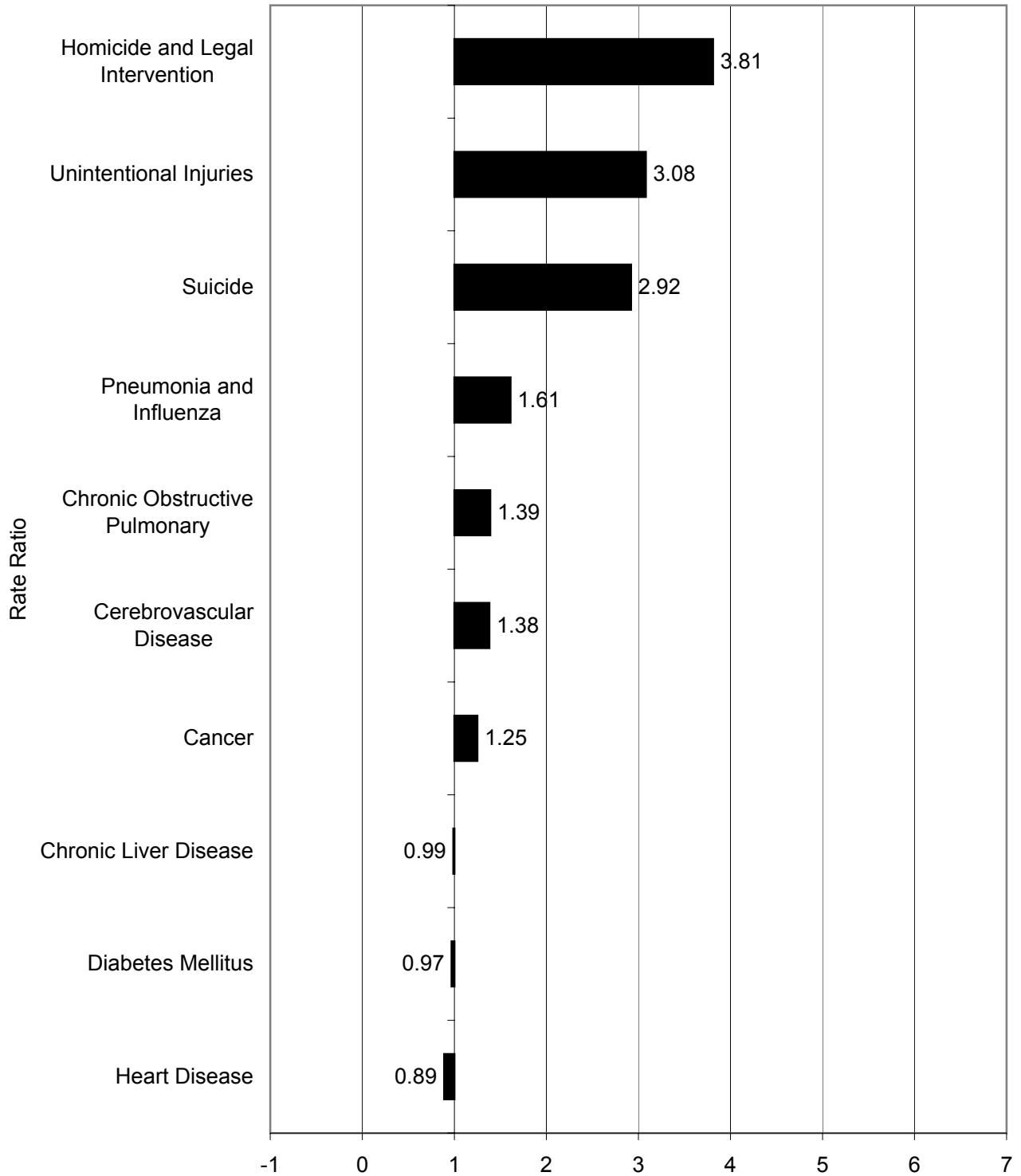
**FIGURE 1c. Age-Adjusted Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003
Females**



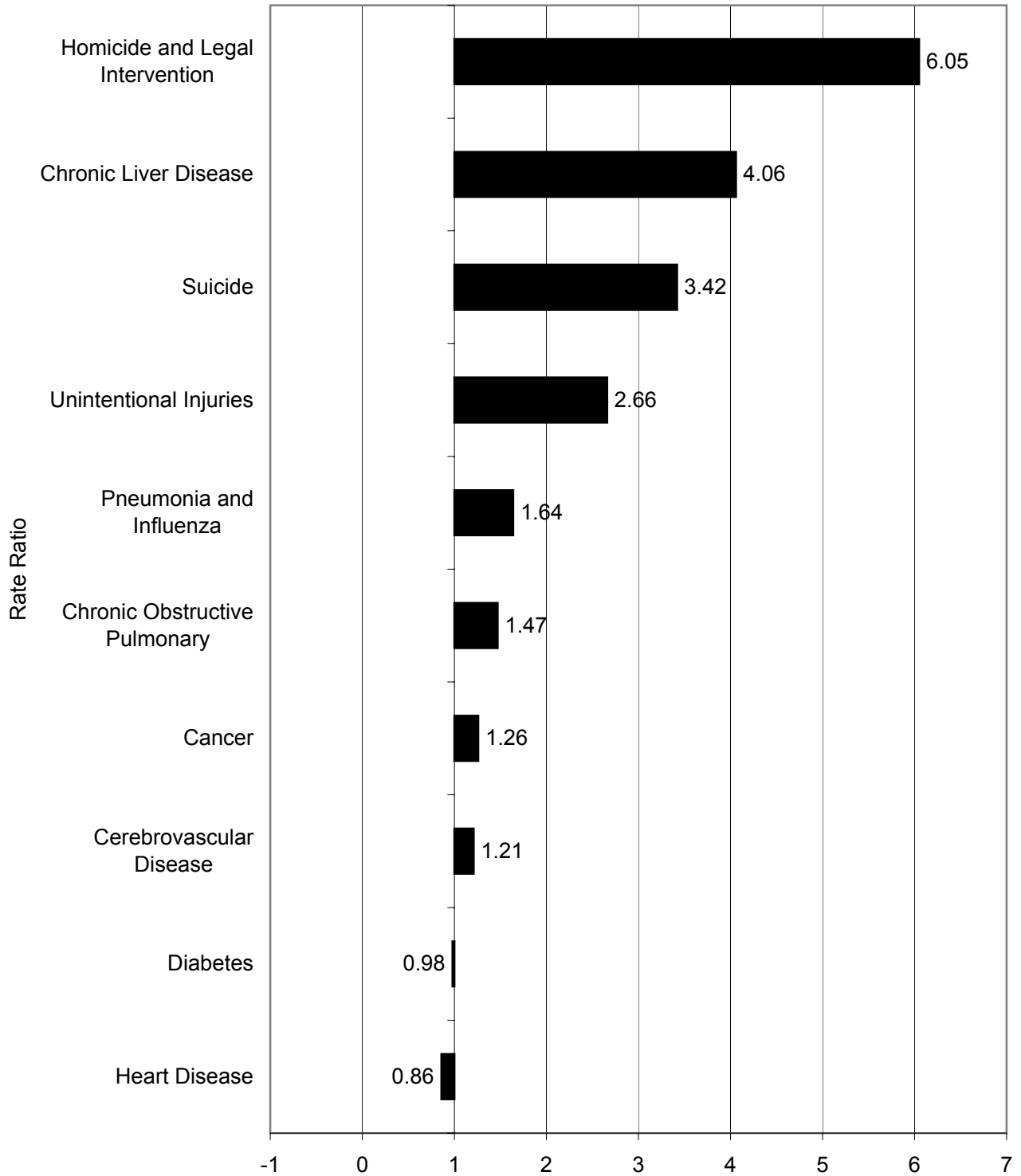
**FIGURE 2a. Ratio of Alaska Native vs U.S. White Mortality from Leading Causes
1999-2003
Both Genders Combined**



**FIGURE 2b. Ratio of Alaska Native vs U.S. White Mortality from Leading Causes
1999-2003
Males**



**FIGURE 2c. Ratio of Alaska Native vs U.S. White Mortality from Leading Causes
1999-2003
Females**



**TABLE 2a. Age-Specific Rates for Leading Causes of Death
Alaska Natives vs U.S. Whites, 1999-2003
Both Genders Combined**

	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
0-4 Years							
Unintentional Injuries	35	63.8	9,506	12.5	5.1 *	3.69	7.14
Pneumonia and Influenza	8	13.8	1295	1.7	8.1 *	4.35	17.02
Homicide and Legal Intervention	7	12.8	2,057	2.7	4.7 *	2.29	9.80
Heart Disease	3	-	2235	2.9	-	-	-
Cancer	2	-	1961	2.6	-	-	-
Cerebrovascular Diseases	1	-	512	0.7	-	-	-
Chronic Obstructive Pulmonary	1	-	242	0.3	-	-	-
All Causes	168	297.5	108,744	141.8	2.1 *	1.85	2.50
Pop	54,292		75,628,302				
5-14 Years							
Unintentional Injuries	38	30.5	10,468	6.6	4.6 *	3.43	6.46
Homicide and Legal Intervention	4	-	1076	0.7	-	-	-
Cancer	2	-	4077	2.6	-	-	-
Suicide	2	-	1,085	0.7	-	-	-
Heart Disease	1	-	907	0.6	-	-	-
Pneumonia and Influenza	1	-	384	0.2	-	-	-
All Causes	57	45.6	26,282	16.5	2.8 *	2.17	3.64
Pop	122,984		159,499,478				
15-24 Years							
Suicide	96	99.5	16,592	10.5	9.5 *	7.77	11.60
Unintentional Injuries	82	88.3	61,263	38.8	2.3 *	1.77	2.73
Homicide and Legal Intervention	20	21.9	10,855	6.8	3.2 *	1.96	4.67
Cancer	8	7.9	6,742	4.3	1.8	0.99	3.84
Heart Disease	7	8.1	3,398	2.1	3.9 *	1.64	6.98
Pneumonia and Influenza	3	-	681	0.4	-	-	-
Chronic Liver Disease	1	-	80	0.1	-	-	-
Diabetes Mellitus	1	-	514	0.3	-	-	-
All Causes	248	263.3	118,735	75.1	3.5 *	3.03	3.88
Pop	96,037		157,566,961				

25-44 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Unintentional Injuries	173	117.2	115,908	12.5	9.4 *	2.97	4.00
Suicide	83	55.7	51,410	1.7	32.8 *	3.01	4.62
Cancer	45	30.7	78,609	2.7	11.4 *	0.99	1.77
Homicide and Legal Intervention	36	24.2	20,472	2.9	8.3	2.93	5.62
Heart Disease	35	24.0	58,738	2.6	9.2	0.99	1.91
Chronic Liver Disease	23	15.8	14,875	0.7	22.6	2.38	5.36
Cerebrovascular Diseases	22	15.3	9,953	0.3	51.0	3.37	7.73
Chronic Obstructive Pulmonary	4	-	4,124	118.3	- *	-	-
Pneumonia and Influenza	4	-	4,786	141.8	- *	-	-
Diabetes Mellitus	2	-	9,277	2.7	-	-	-
All Causes of Death	585	397.4	482,454	142.0	2.8 *	2.58	3.03
Pop	147,870		341,313,188				
45-54 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Cancer	71	123.9	194,428	119.2	1.0	0.81	1.28
Unintentional Injuries	69	118.5	55,183	34.0	3.5 *	2.75	4.41
Heart Disease	46	79.5	137,492	84.3	0.9	0.70	1.24
Chronic Liver Disease	22	37.4	28,995	17.8	2.1 *	1.40	3.20
Suicide	18	30.9	27,244	16.8	1.8 *	1.16	2.91
Cerebrovascular Diseases	17	29.2	18,992	11.7	2.5 *	1.56	3.99
Homicide and Legal Intervention	17	28.7	6,220	3.8	7.6 *	4.75	12.20
Chronic Obstructive Pulmonary	8	13.4	13,470	8.2	1.6	0.84	3.26
Diabetes Mellitus	4	-	18,622	11.4	-	-	-
Pneumonia and Influenza	4	-	6,871	4.2	-	-	-
All Causes	386	664.4	634,712	389.5	1.7 *	1.53	1.87
Pop	58,372		162,578,652				
55-64 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Cancer	154	484.7	383,368	351.4	1.4 *	1.17	1.61
Heart Disease	65	205.7	254,311	233.1	0.9	0.69	1.11
Unintentional Injuries	44	137.9	33,290	30.5	4.5 *	3.36	6.06
Chronic Liver Disease	17	52.5	25,410	23.3	2.3 *	1.43	3.66
Chronic Obstructive Pulmonary	17	54.7	50,378	46.2	1.2 *	0.72	1.85
Cerebrovascular Diseases	12	38.0	35,218	32.3	1.2	0.67	2.03
Diabetes Mellitus	8	25.7	36,008	33.0	0.8	0.38	1.50
Pneumonia and Influenza	5	15.3	11,267	10.3	1.5	0.65	3.55
Suicide	5	15.1	15,611	14.3	1.1	0.47	2.56
Homicide and Legal Intervention	2	-	2,926	2.7	-	-	-
All Causes	426	1342.6	1,005,211	921.2	1.5 *	1.32	1.59
Pop	32,000		109,287,192				

65-74 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Cancer	180	947.5	638,358	797.8	1.2	0.99	1.32
Heart Disease	117	614.9	494,516	617.9	1.0	0.80	1.15
Chronic Obstructive Pulmonary	48	246.7	142,368	177.9	1.4 *	1.03	1.15
Unintentional Injuries	34	171.1	34,341	42.9	4.0 *	2.88	5.62
Cerebrovascular Diseases	28	153.6	90,885	113.5	1.4	0.87	1.81
Diabetes Mellitus	15	76.9	65,266	81.6	0.9	0.57	1.54
Pneumonia and Influenza	12	63.1	28,978	36.2	1.7	0.96	2.94
Chronic Liver Disease	7	35.6	24,697	30.9	1.2	0.56	2.38
Homicide and Legal Intervention	3	-	1,678	2.1	-	-	-
All Causes	579	3022.0	1,842,147	2301.9	1.3 *	1.18	1.38
Pop	19,680		79,976,661				
75+ Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Heart Disease	230	2193.0	2,117,418	2739.6	0.8 *	0.66	0.85
Cancer	198	1822.9	1,093,361	1425.0	1.3 *	1.09	1.44
Cerebrovascular Diseases	85	793.4	547,750	708.0	1.1	0.87	1.32
Chronic Obstructive Pulmonary	75	684.6	362,299	471.1	1.5 *	1.14	1.79
Pneumonia and Influenza	48	453.6	231,100	298.3	1.5 *	1.08	1.90
Unintentional Injuries	24	219.2	114,670	148.5	1.5	0.97	2.15
Diabetes Mellitus	21	199.6	155,068	201.5	1.0	0.61	1.43
Chronic Liver Disease	5	41.9	22,723	29.8	1.4	0.65	3.56
Homicide and Legal Intervention	1	-	1,575	2.1	-	-	-
All Causes	955	8997.1	6,198,900	8032.4	1.1	1.00	1.13
Pop	11,073		76,463,758				

*p<0.05.

[‡] Alaska Native rates not calculated for fewer than 5 deaths.

**TABLE 2b. Age-Specific Rates for Leading Causes of Death
Alaska Natives vs U.S. Whites, 1999-2003
Males**

0-4 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Unintentional Injuries	18	62.8	5,714	14.7	4.3 *	2.53	6.77
Pneumonia and Influenza	5	16.4	739	1.9	8.6 *	3.00	21.54
Homicide and Legal Intervention	4	-	1176	3.0	-	-	-
Cancer	2	-	1084	2.8	-	-	-
Cerebrovascular Diseases	1	-	281	0.7	-	-	-
Chronic Obstructive Pulmonary	1	-	149	0.4	-	-	-
Heart Disease	1	-	1211	3.1	-	-	-
All Causes	94	316.9	61,527	156.7	2.0 *	1.68	2.54
Pop	28,530		38,753,766				
5-14 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Unintentional Injuries	29	45.8	6,570	8.0	5.7 *	3.85	8.27
Homicide and Legal Intervention	2	-	621	0.8	-	-	-
Suicide	2	-	843	1.0	-	-	-
Cancer	1	-	2,219	2.7	-	-	-
Pneumonia and Influenza	1	-	191	0.2	-	-	-
All Causes	40	62.7	15,510	18.9	3.3 *	2.40	4.58
Pop	62,790		81,853,242				
15-24 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Suicide	71	142.9	14,211	17.4	8.2 *	6.39	10.34
Unintentional Injuries	65	137.7	45,439	55.7	2.5 *	1.81	2.99
Homicide and Legal Intervention	14	29.2	8,772	10.7	2.7 *	1.43	4.39
Cancer	4	-	4,026	4.9	-	-	-
Heart Disease	4	-	2,177	2.7	-	-	-
Pneumonia and Influenza	1	-	389	0.5	-	-	-
All Causes	181	373.4	86,901	106.3	3.5 *	2.94	3.95
Pop	49,591		81,329,041				

25-44 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Unintentional Injuries	119	162.3	86,804	50.2	3.2 *	2.68	3.88
Suicide	66	89.4	40,869	23.7	3.8 *	2.95	4.85
Heart Disease	24	33.4	42,536	24.9	1.3	0.85	1.98
Cancer	20	27.9	35,940	21.0	1.3	0.80	2.03
Homicide and Legal Intervention	19	25.6	15,268	8.8	2.9 *	1.77	4.59
Chronic Liver Disease	9	12.4	10,230	6.0	2.1	0.95	3.95
Cerebrovascular Diseases	8	11.3	5,170	3.0	3.8 *	1.58	7.21
Chronic Obstructive Pulmonary	2	-	1,936	1.1	-	-	-
Diabetes Mellitus	2	-	5,683	3.3	-	-	-
Pneumonia and Influenza	2	-	2,717	1.6	-	-	-
All Causes	362	495.6	320,852	186.6	2.7 *	2.40	2.95
	73,286		173,086,083				
45-54 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Unintentional Injuries	51	177.8	40,022	49.6	3.6 *	2.66	4.70
Cancer	41	145.9	98,576	121.8	1.2	0.84	1.58
Heart Disease	35	122.6	103,589	128.1	1.0	0.66	1.32
Suicide	15	52.6	20,690	25.7	2.0 *	1.14	3.35
Homicide and Legal Intervention	11	37.1	4,445	5.5	6.7 *	3.46	12.42
Cerebrovascular Diseases	6	21.4	10,434	12.9	1.7	0.59	3.51
Diabetes Mellitus	4	-	11,291	14.0	-	-	-
Pneumonia and Influenza	4	-	4,106	5.1	-	-	-
Chronic Liver Disease	3	-	21,813	27.0	-	-	-
Chronic Obstructive Pulmonary	2	-	6,897	8.5	-	-	-
All Causes	239	836.4	402,415	498.0	1.7 *	1.46	1.89
	28,786		80,677,075				
55-64 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Cancer	67	424.4	208,538	395.2	1.1	0.83	1.37
Heart Disease	45	287.6	177,924	337.0	0.9	0.62	1.13
Unintentional Injuries	33	208.6	22,776	43.0	4.9 *	3.34	6.82
Chronic Obstructive Pulmonary	9	57.3	25,774	48.9	1.2	0.54	2.22
Chronic Liver Disease	8	50.5	17,875	33.8	1.5	0.65	2.96
Cerebrovascular Diseases	6	38.4	19,423	36.8	1.0	0.38	2.25
Suicide	5	30.9	12,128	22.9	1.3	0.45	3.23
Diabetes Mellitus	2	-	20,563	38.9	-	-	-
Homicide and Legal Intervention	1	-	2,066	3.9	-	-	-
Pneumonia and Influenza	1	-	6,383	12.1	-	-	-
All Causes	233	1478.5	603,307	1142.6	1.3 *	1.13	1.47
	15,810		52,988,716				

65-74 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Cancer	114	1280.6	353,856	970.3	1.3 *	1.10	1.53
Heart Disease	69	776.9	307,818	844.8	0.9	0.69	1.12
Unintentional Injuries	28	298.0	20,938	57.4	5.2 *	3.52	7.65
Cerebrovascular Diseases	21	247.0	46,813	128.7	1.9 *	1.10	2.71
Chronic Obstructive Pulmonary	20	220.8	73,275	201.4	1.1	0.66	1.67
Diabetes Mellitus	9	98.0	34,245	93.9	1.0	0.48	1.97
Pneumonia and Influenza	6	66.2	16,249	44.7	1.5	0.54	3.18
Homicide and Legal Intervention	3	-	1032	2.8	-	-	-
Chronic Liver Disease	2	-	14,986	41.0	-	-	-
All Causes	351	3912.0	1,043,202	2862.7	1.4 *	1.20	1.48
Pop	9,247		36,599,516				
75+ Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Heart Disease	103	2755.5	857,247	3214.9	0.9 *	0.63	0.93
Cancer	100	2449.3	537,600	1932.8	1.3 *	0.97	1.45
Chronic Obstructive Pulmonary	39	936.1	168,678	616.1	1.5 *	1.10	2.03
Cerebrovascular Diseases	34	857.1	185,163	697.9	1.2	0.81	1.64
Pneumonia and Influenza	21	569.1	92,635	358.1	1.6	0.90	2.22
Unintentional Injuries	12	262.0	51,458	192.8	1.4	0.77	2.46
Diabetes Mellitus	8	250.4	63,353	230.0	1.1	0.35	1.59
Chronic Liver Disease	2	-	10,800	37.5	-	-	-
Homicide and Legal Intervention	1	-	755	2.7	-	-	-
All Causes	430	11120.4	2,539,719	9436.3	1.2	0.98	1.19
	4,445		28,479,545				

*p<0.05.

‡ Alaska Native rates not calculated for fewer than 5 deaths.

**TABLE 2c. Age-Specific Rates for Leading Causes of Death
Alaska Natives vs U.S. Whites, 1999-2003
Females**

0-4 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Unintentional Injuries	17	64.9	3,792	10.3	6.3 *	3.73	10.29
Homicide and Legal Intervention	3	-	881	2.4	-	-	-
Pneumonia and Influenza	3	-	556	1.5	-	-	-
Heart Disease	2	-	1024	2.7	-	-	-
All Causes	74	276.1	47,217	126.2	2.2 *	1.79	2.82
Pop	25,762		36,874,536				
5-14 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Unintentional Injuries	9	14.5	3,898	5.0	2.9 *	1.57	5.66
Homicide and Legal Intervention	2	-	455	0.6	-	-	-
Cancer	1	-	1858	2.4	-	-	-
Heart Disease	1	-	386	0.5	-	-	-
All Causes	17	27.8	10,772	13.9	2.0 *	1.27	3.26
Pop	60,194		77,646,236				
15-24 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Suicide	25	53.2	2,381	3.1	17.2 *	11.10	25.50
Unintentional Injuries	17	35.3	15,824	20.8	1.7 *	1.10	2.82
Homicide and Legal Intervention	6	14.1	2,083	2.7	5.2 *	2.16	10.33
Cancer	4	-	2,716	3.5	-	-	-
Heart Disease	3	-	1221	1.6	-	-	-
Pneumonia and Influenza	2	-	292	0.4	-	-	-
Chronic Liver Disease	1	-	38	0.0	-	-	-
Diabetes Mellitus	1	-	214	0.3	-	-	-
All Causes	67	145.4	31,834	41.7	3.5 *	2.72	4.39
Pop	46,446		76,237,920				

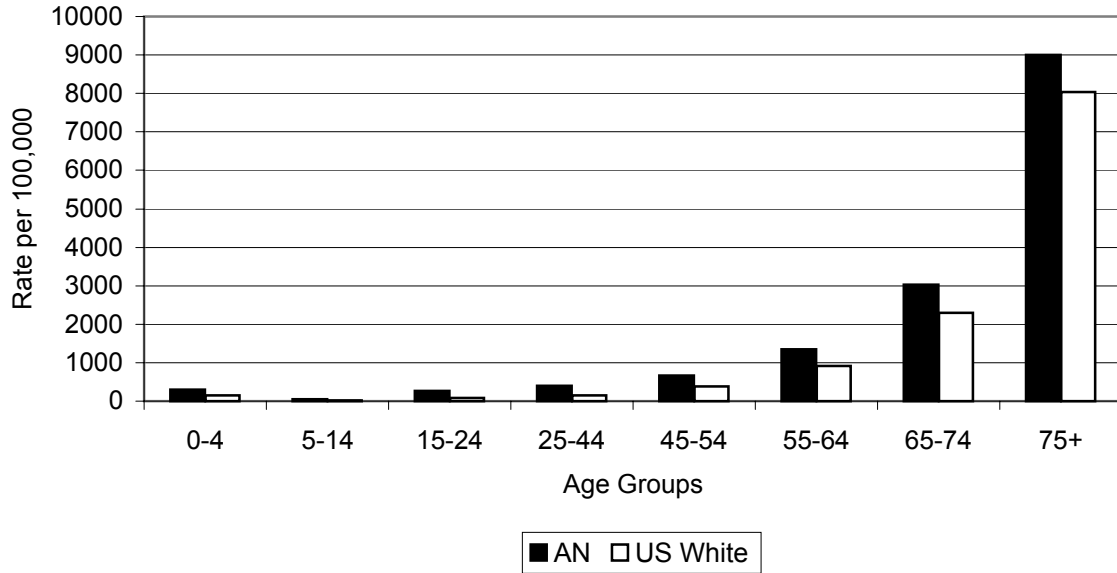
25-44 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Unintentional Injuries	54	72.8	29,104	17.3	4.2 *	3.21	5.46
Cancer	25	33.6	42,669	25.4	1.3	0.90	1.95
Homicide and Legal Intervention	17	22.7	5,204	3.1	7.3 *	4.60	11.81
Suicide	17	22.6	10,541	6.3	3.6 *	2.27	5.83
Cerebrovascular Diseases	14	19.2	4,783	2.8	6.9 *	3.93	11.09
Chronic Liver Disease	14	19.0	4,645	2.8	6.8 *	4.05	11.42
Heart Disease	11	14.9	16,202	9.6	1.6	0.85	2.74
Chronic Obstructive Pulmonary	2	-	2,188	1.3	-	-	-
Pneumonia and Influenza	2	-	2,069	1.2	-	-	-
All Causes	223	300.7	161,602.00	96.2	3.1 *	2.73	3.55
Pop	74,584		168,227,105				
45-54 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Cancer	30	102.5	95,852	116.5	0.9	0.61	1.24
Chronic Liver Disease	19	63.7	7,182	8.8	7.2 *	4.69	11.44
Unintentional Injuries	18	60.9	15,161	18.5	3.3 *	2.08	5.20
Cerebrovascular Diseases	11	36.9	8,558	10.4	3.5 *	1.99	6.37
Heart Disease	11	37.6	33,903	41.2	0.9	0.50	1.61
Chronic Obstructive Pulmonary	6	19.7	6,573	8.0	2.5 *	1.16	5.51
Homicide and Legal Intervention	6	20.4	1,775	2.2	9.3 *	4.28	20.44
Suicide	3	-	6,554	8.0	-	-	-
All Causes	147	497.1	232,297	282.7	1.8 *	1.49	1.92
Pop	29,586		81,901,577				
55-64 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Cancer	87	545.5	174,830	310.4	1.8 *	1.40	2.13
Heart Disease	20	123.3	76,387	135.6	0.9	0.59	1.41
Unintentional Injuries	11	69.0	10,514	18.7	3.7 *	2.03	6.51
Chronic Liver Disease	9	54.3	7,535	13.4	4.1 *	2.18	7.89
Chronic Obstructive Pulmonary	8	52.9	24,604	43.7	1.2	0.57	2.23
Cerebrovascular Diseases	6	37.4	15,795	28.0	1.3	0.61	2.88
Diabetes Mellitus	6	38.2	15,445	27.4	1.4	0.62	2.95
Pneumonia and Influenza	4	-	4,884	8.7	-	-	-
Homicide and Legal Intervention	1	-	860	1.5	-	-	-
All Causes	193	1212.2	401,904	713.6	1.7 *	1.45	1.92
Pop	16,190		56,298,476				

65-74 Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Cancer	66	655.4	284,502	653.7	1.0	0.76	1.23
Heart Disease	48	473.3	186,698	427.8	1.1	0.81	1.42
Chronic Obstructive Pulmonary	28	269.9	69,093	158.4	1.7 *	1.17	2.43
Cerebrovascular Diseases	7	72.6	44,072	100.9	0.7	0.32	1.36
Diabetes Mellitus	6	58.2	31,021	71.2	0.8	0.37	1.75
Pneumonia and Influenza	6	60.1	12,729	29.1	2.1	0.90	4.27
Unintentional Injuries	6	58.2	13,403	30.8	1.9	0.85	4.06
Chronic Liver Disease	5	45.8	9,711	22.3	2.1	0.91	5.01
All Causes	228	2240.8	798,945	1832.8	1.2 *	1.04	1.35
Pop	10,433		43,377,145				
75+ Years	Alaska Native # Deaths	Alaska Native Rate[‡]	U.S. White # Deaths	U.S. White Rate	Rate Ratio	Lower 95%	Upper 95%
Heart Disease	127	1926.0	1,260,171	2453.7	0.8 *	0.61	0.87
Cancer	98	1479.0	555,761	1140.3	1.3 *	1.05	1.55
Cerebrovascular Diseases	51	769.8	362,587	706.9	1.1	0.78	1.34
Chronic Obstructive Pulmonary	36	539.1	193,621	393.5	1.4	0.97	1.86
Pneumonia and Influenza	27	402.9	138,465	266.5	1.5	0.97	2.05
Diabetes Mellitus	13	201.5	91,715	184.9	1.1	0.60	1.75
Unintentional Injuries	12	173.8	63,212	124.4	1.4	0.79	2.40
Chronic Liver Disease	3	-	11,923	25.2	-	-	-
All Others	158	2354.2	978878	1908.9	1.2		
Pop	6,628		47,984,213				

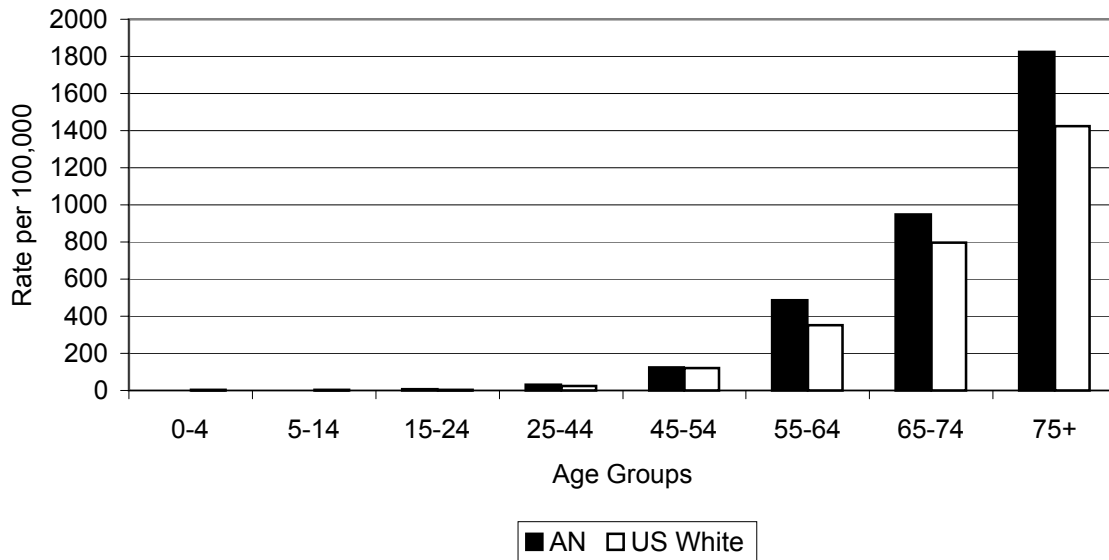
*p<0.05.

‡ Alaska Native rates not calculated for fewer than 5 deaths.

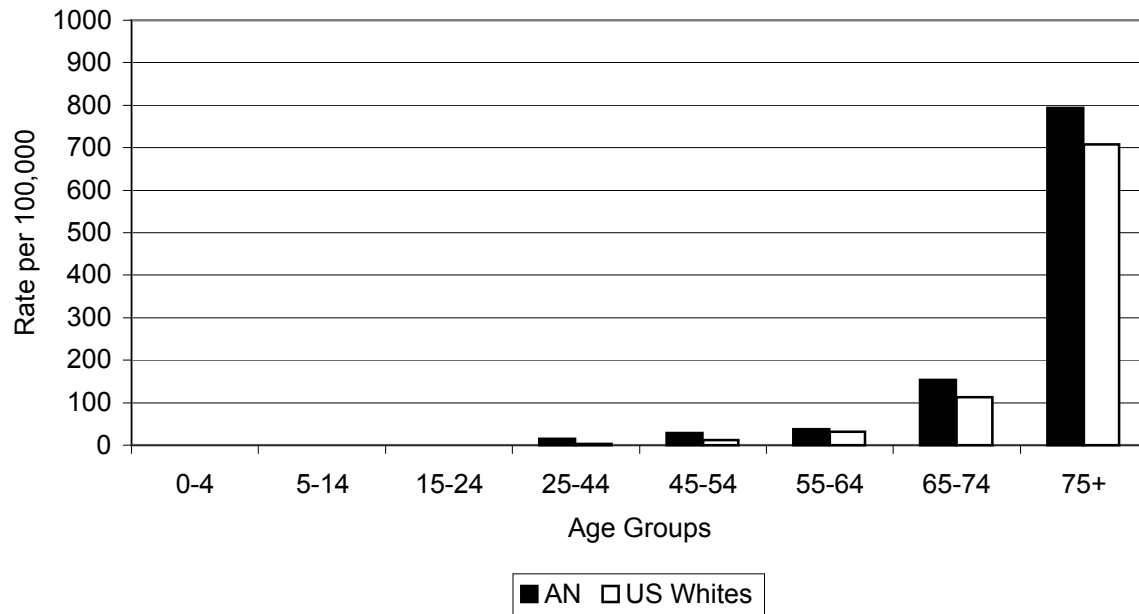
**FIGURE 3a. Age-Specific Mortality Rates from All Causes
Alaska Natives vs US Whites, 1999-2003
Both Genders Combined**



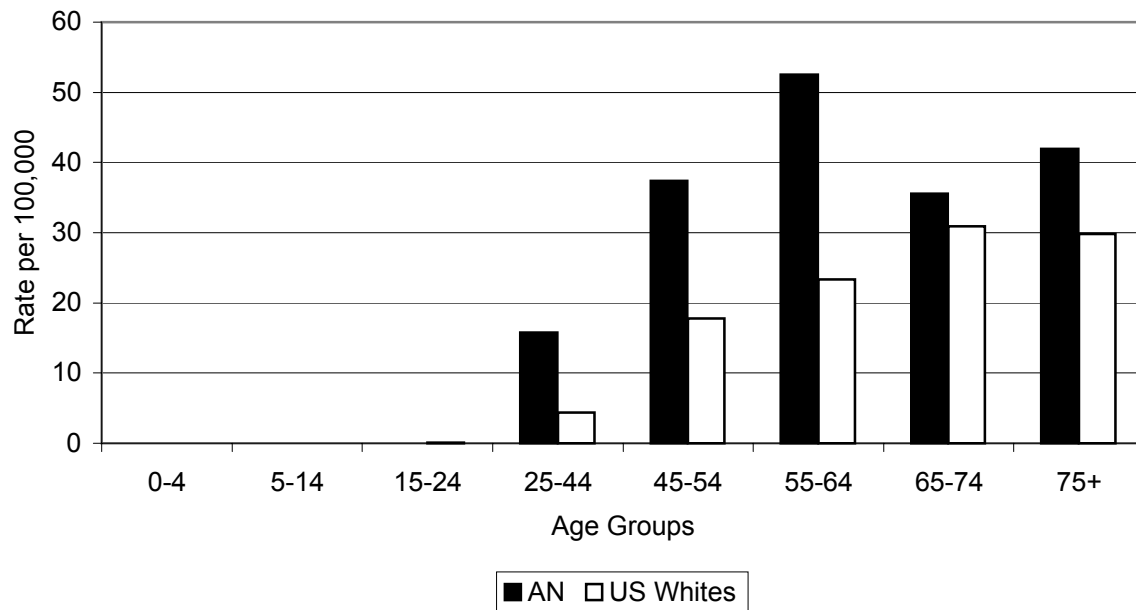
**FIGURE 4a. Age-Specific Mortality Rates from Cancer
Alaska Natives vs US Whites, 1999-2003
Both Genders Combined**



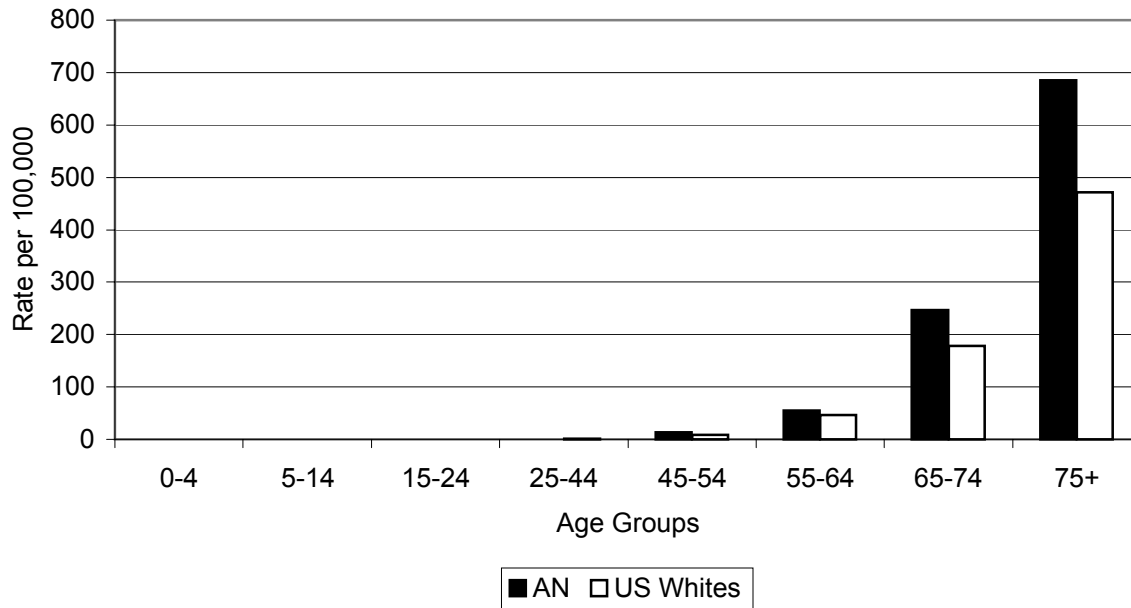
**FIGURE 5a. Age-Specific Mortality Rates from Cerebrovascular Disease
Alaska Natives vs US Whites, 1999-2003
Both Genders Combined**



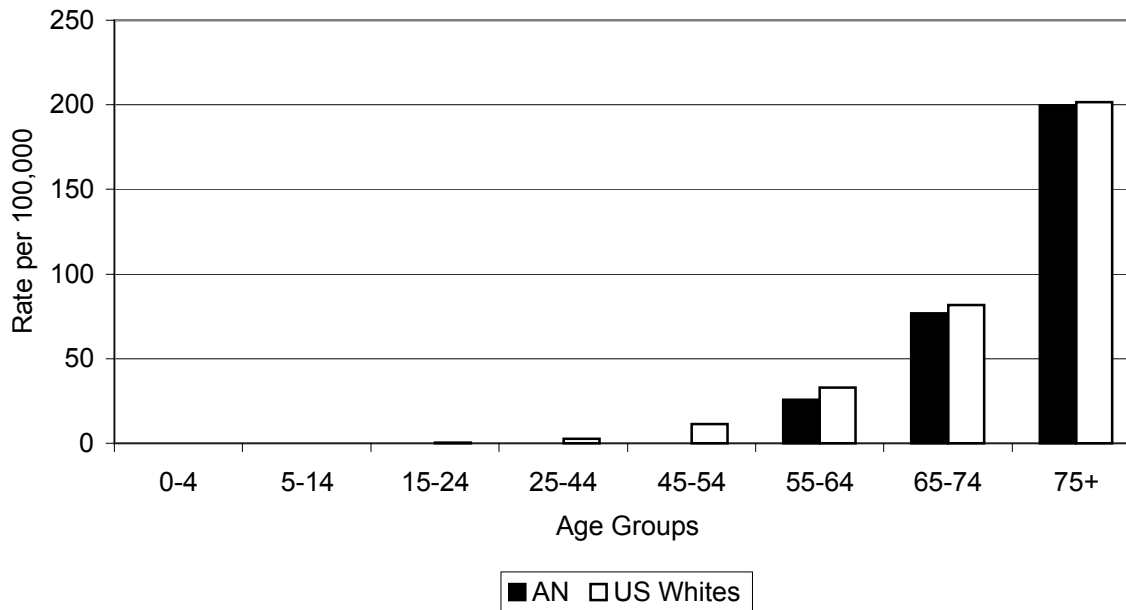
**FIGURE 6a. Age-Specific Mortality Rates from Chronic Liver Disease
Alaska Natives vs US Whites, 1999-2003
Both Genders Combined**



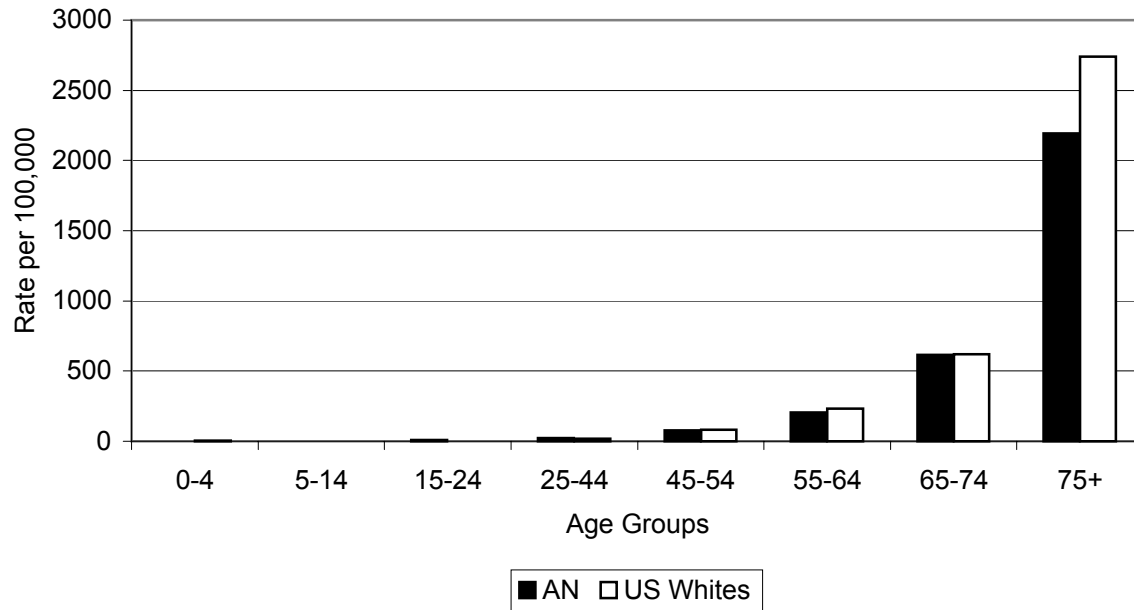
**FIGURE 7a. Age-Specific Mortality Rates from Chronic Obstructive Pulmonary Diseases
Alaska Natives vs US Whites, 1999-2003
Both Genders Combined**



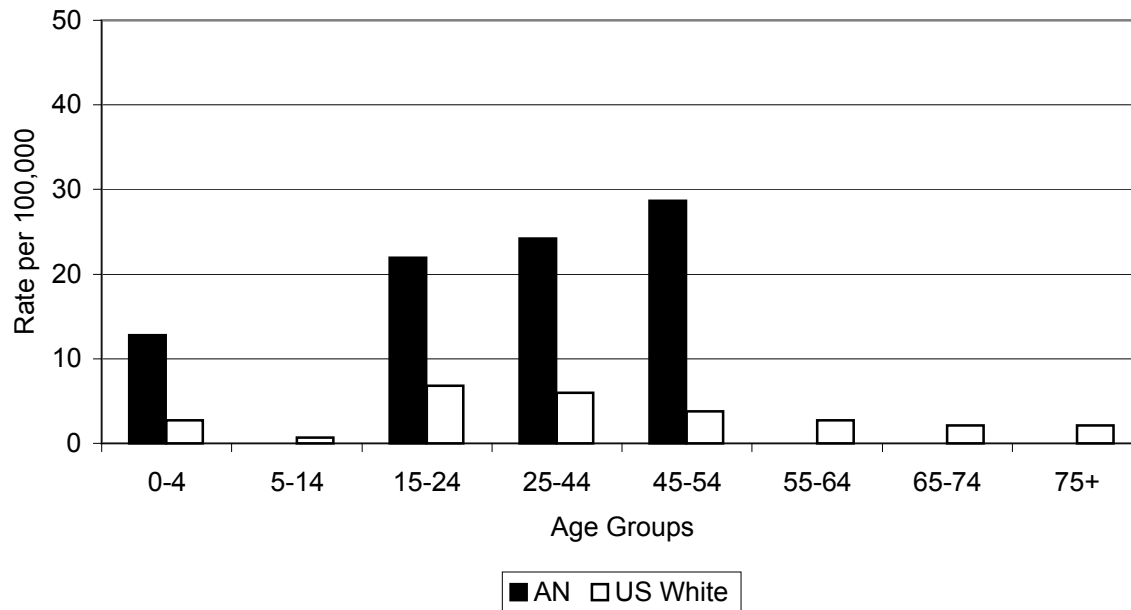
**FIGURE 8a. Age-Specific Mortality Rates from Diabetes Mellitus
Alaska Natives vs US Whites, 1999-2003
Both Genders Combined**



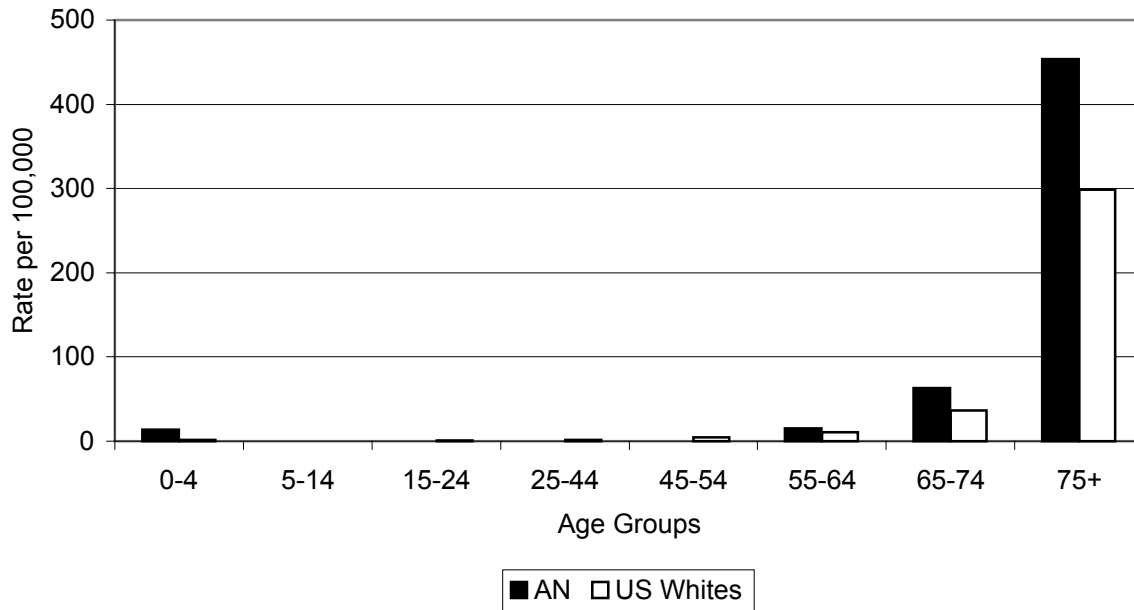
**FIGURE 9a. Age-Specific Mortality Rates from Heart Disease
Alaska Natives vs US Whites, 1999-2003
Both Genders Combined**



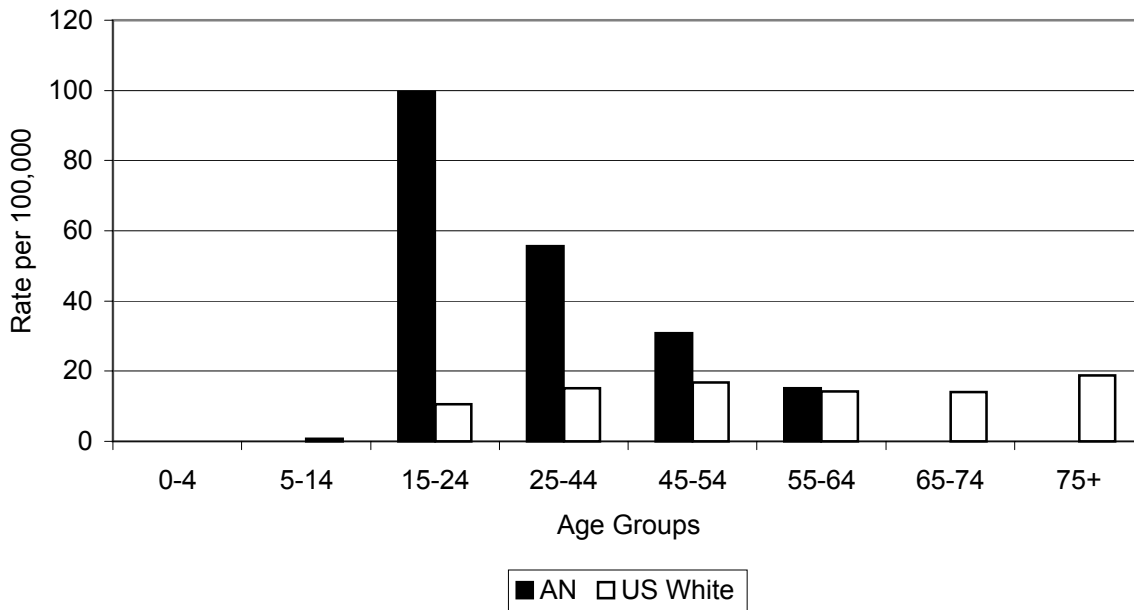
**FIGURE 10a. Age-Specific Mortality Rates from Homicide and Legal Intervention
Alaska Natives vs US Whites, 1999-2003
Both Genders Combined**



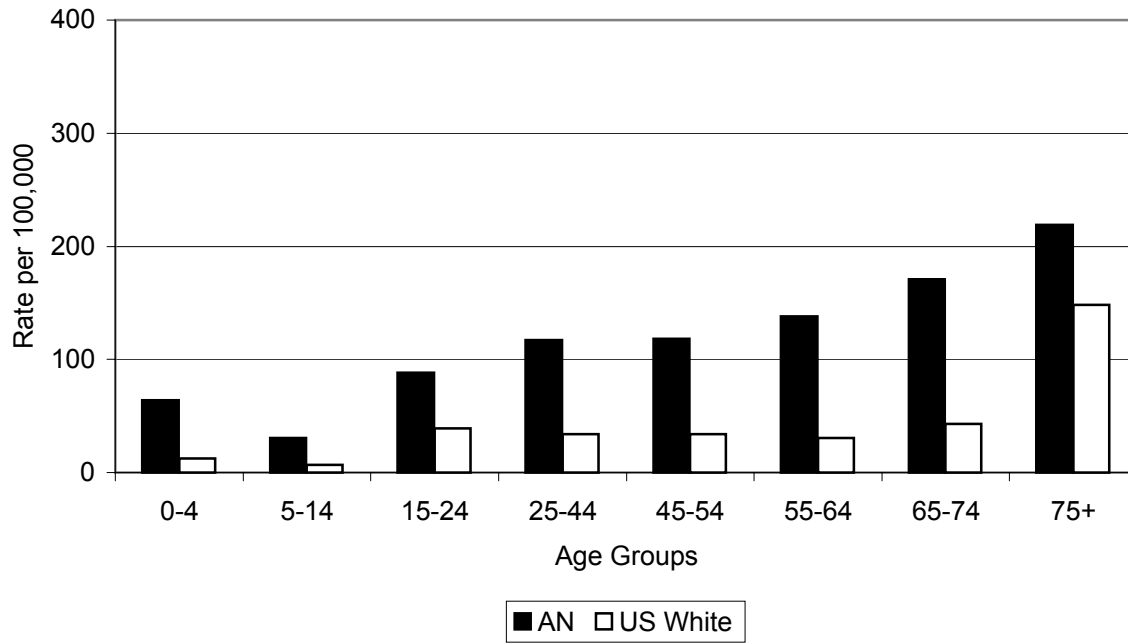
**FIGURE 11a. Age-Specific Mortality Rates from Pneumonia and Influenza
Alaska Natives vs US Whites, 1999-2003
Both Genders Combined**



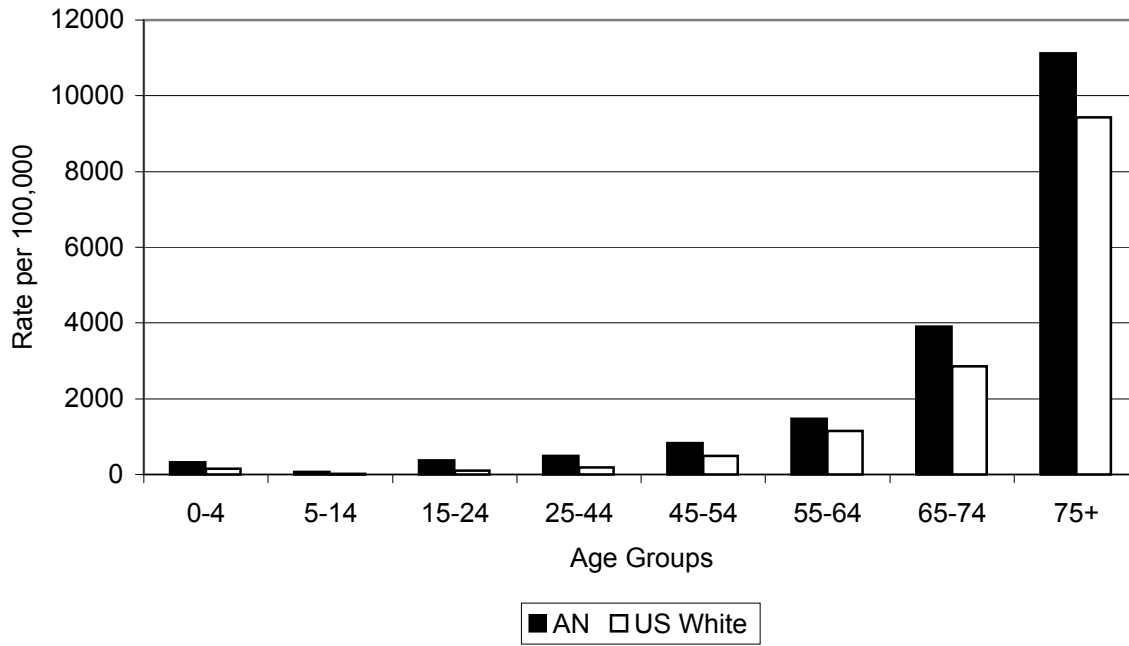
**FIGURE 12a. Age-Specific Mortality Rates from Suicide
Alaska Natives vs US Whites, 1999-2003
Both Genders Combined**



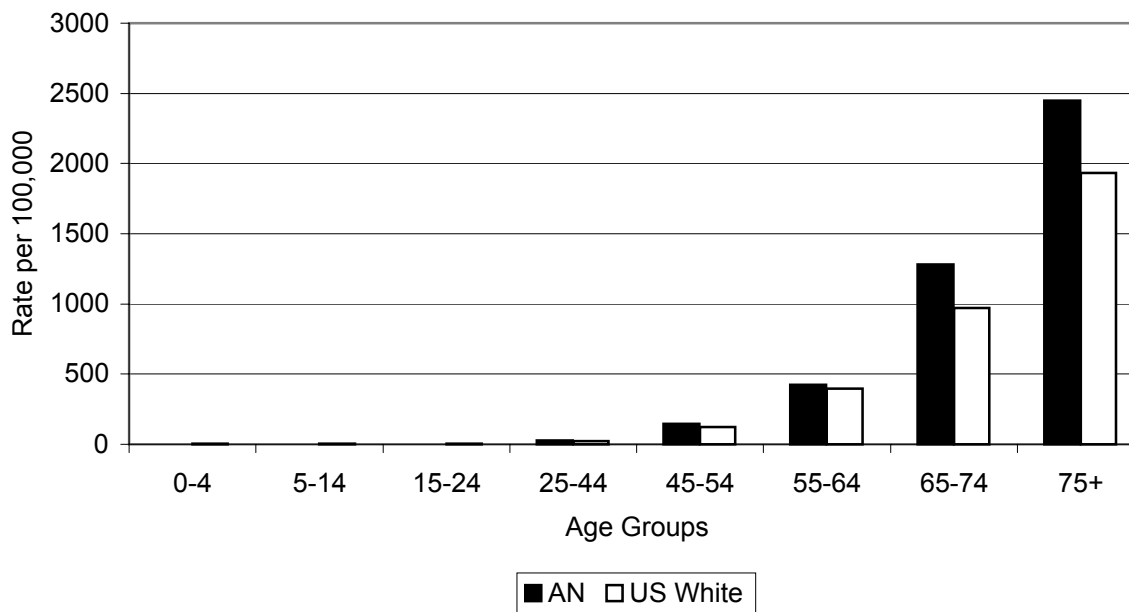
**FIGURE 13a. Age-Specific Mortality Rates from Unintentional Injuries
Alaska Natives vs US Whites, 1999-2003
Both Genders Combined**



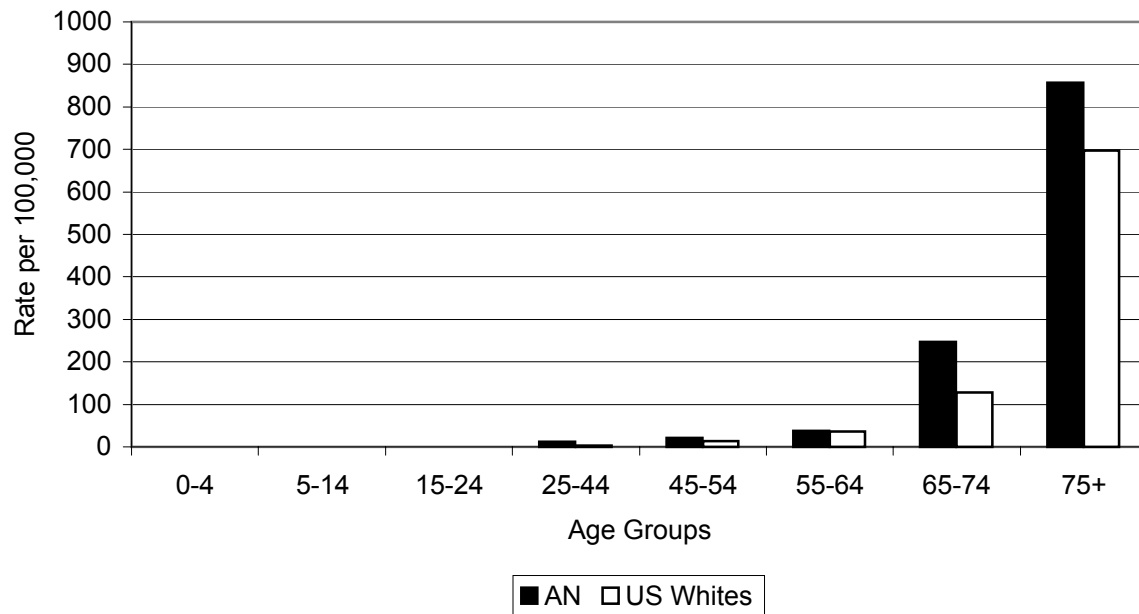
**FIGURE 3b. Age-Specific Mortality Rates from All Causes
Alaska Natives vs US Whites, 1999-2003
Males**



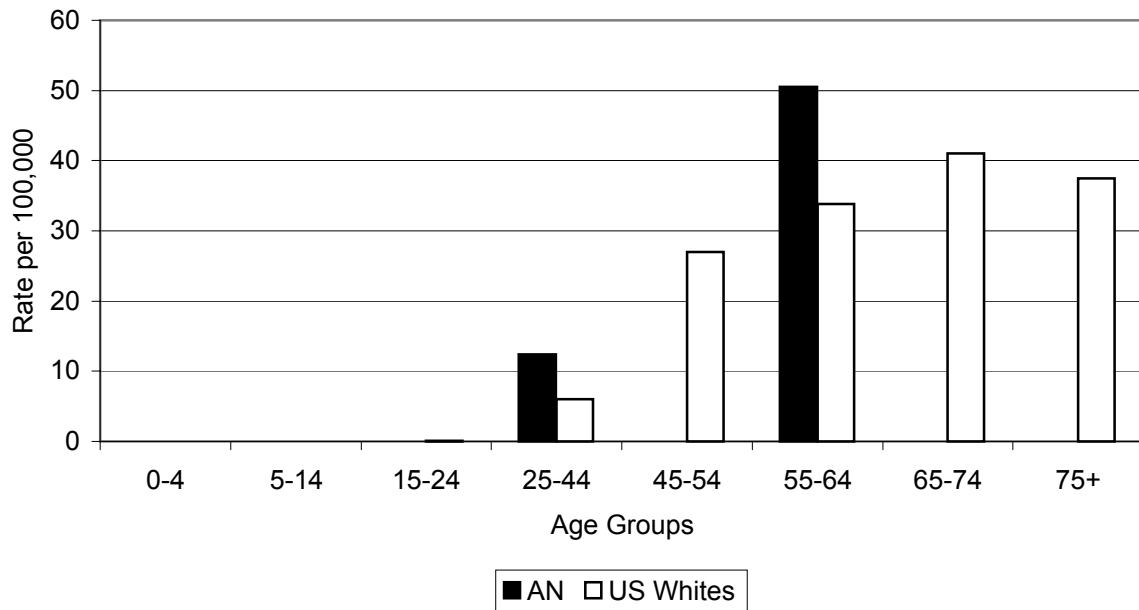
**FIGURE 4b. Age-Specific Mortality Rates from Cancer
Alaska Natives vs US Whites, 1999-2003
Males**



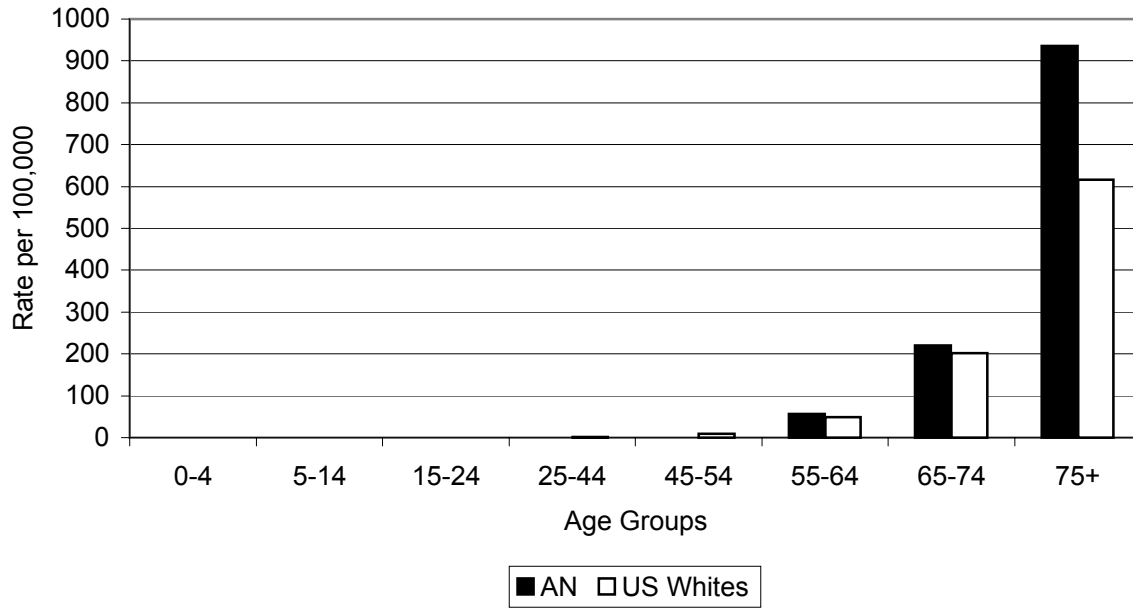
**FIGURE 5b. Age-Specific Mortality Rates from Cerebrovascular Disease
Alaska Natives vs US Whites, 1999-2003
Males**



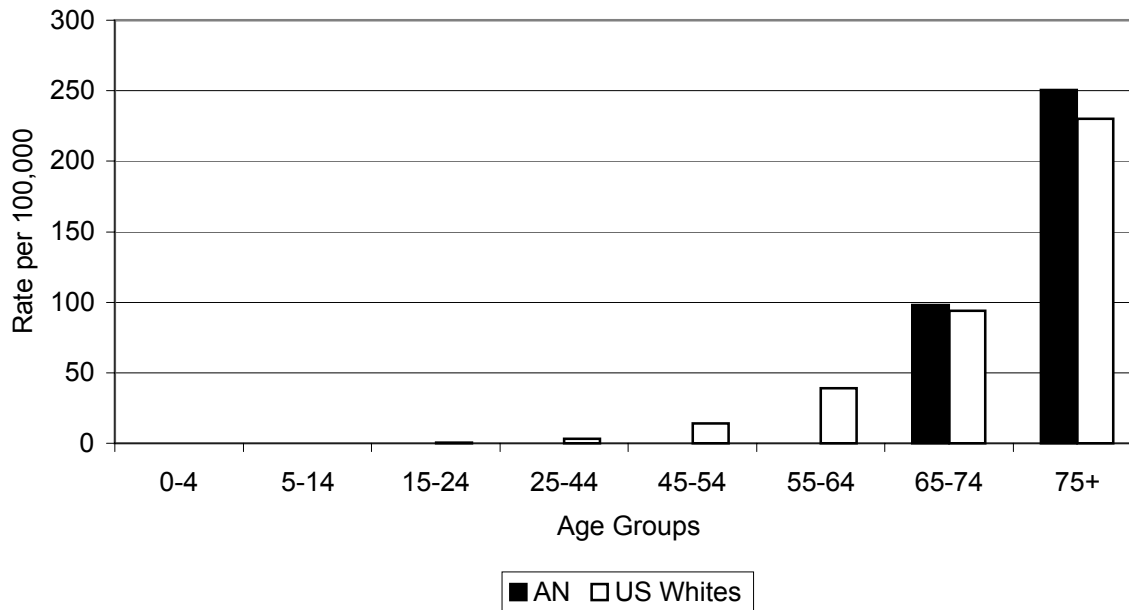
**FIGURE 6b. Age-Specific Mortality Rates from Chronic Liver Disease
Alaska Natives vs US Whites, 1999-2003
Males**



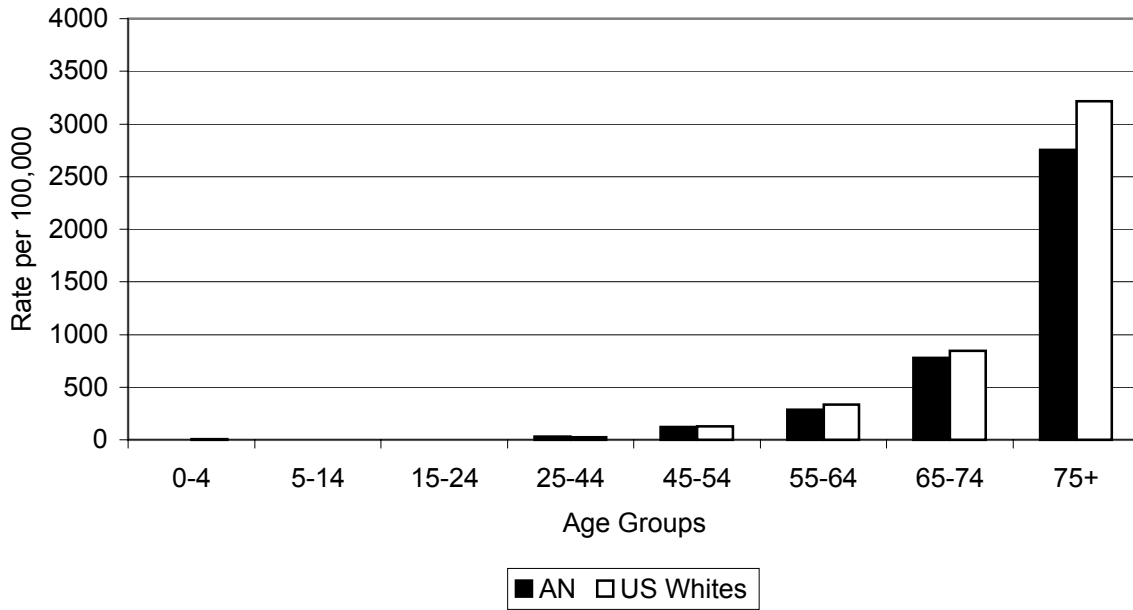
**FIGURE 7b. Age-Specific Mortality Rates from Chronic Obstructive Pulmonary Disease
Alaska Natives vs US Whites, 1999-2003
Males**



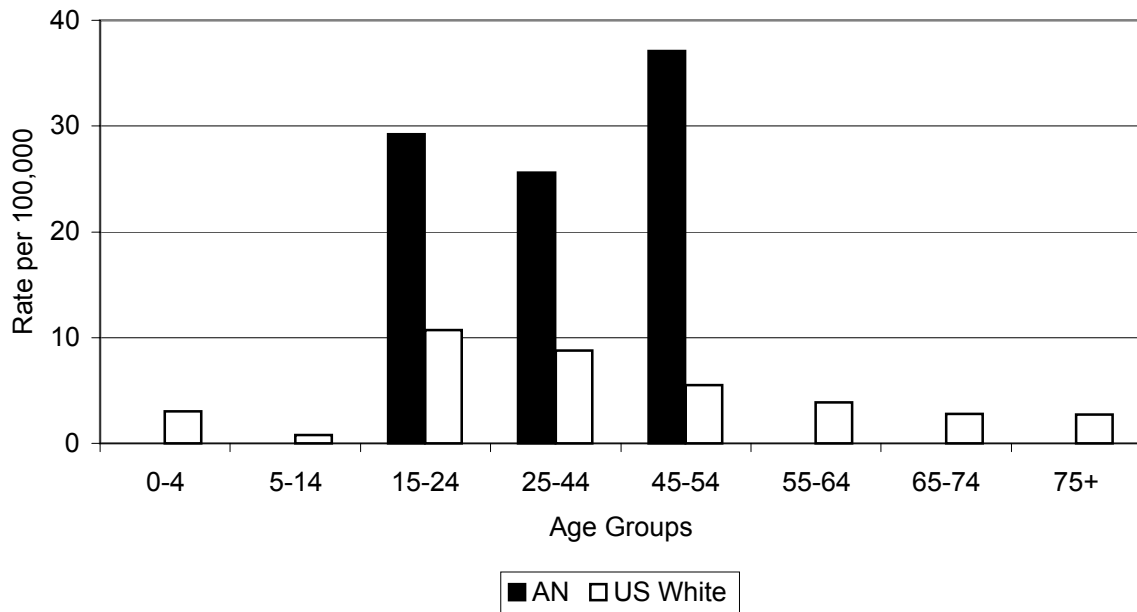
**FIGURE 8b. Age-Specific Mortality Rates from Diabetes Mellitus
Alaska Natives vs US Whites, 1999-2003
Males**



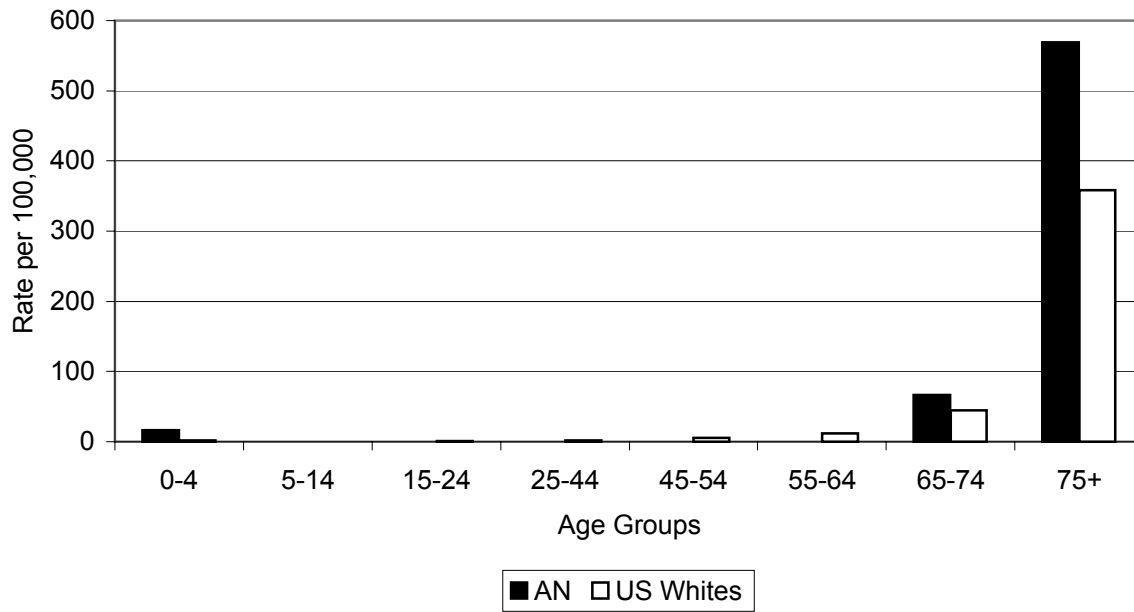
**FIGURE 9b. Age-Specific Mortality Rates from Heart Disease
Alaska Natives vs US Whites, 1999-2003
Males**



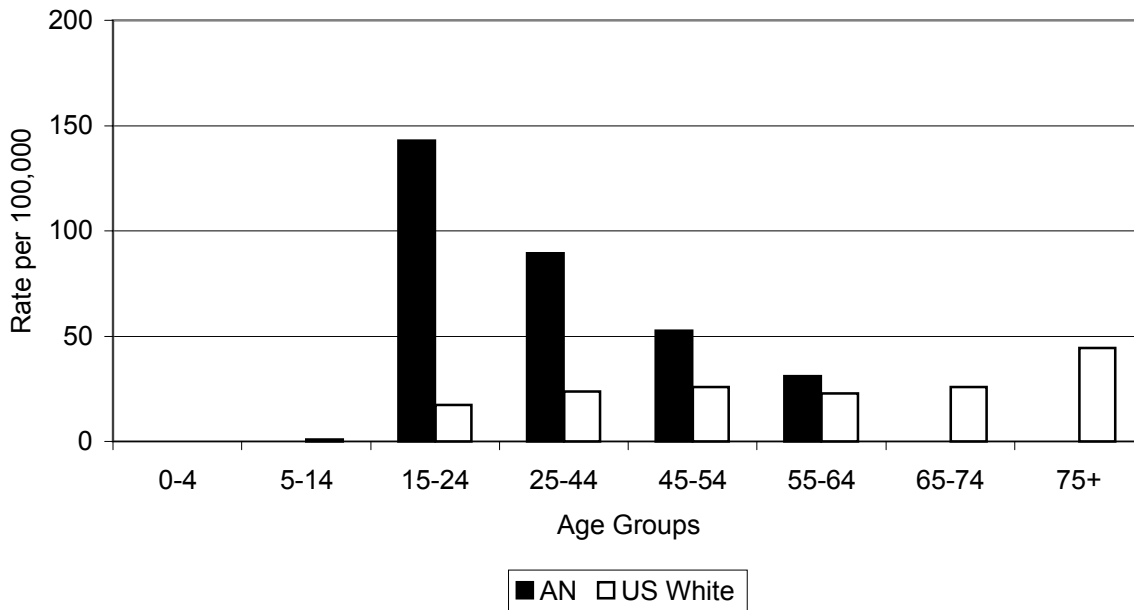
**FIGURE 10b. Age-Specific Mortality Rates from Homicide and Legal Intervention
Alaska Natives vs US Whites, 1999-2003
Males**



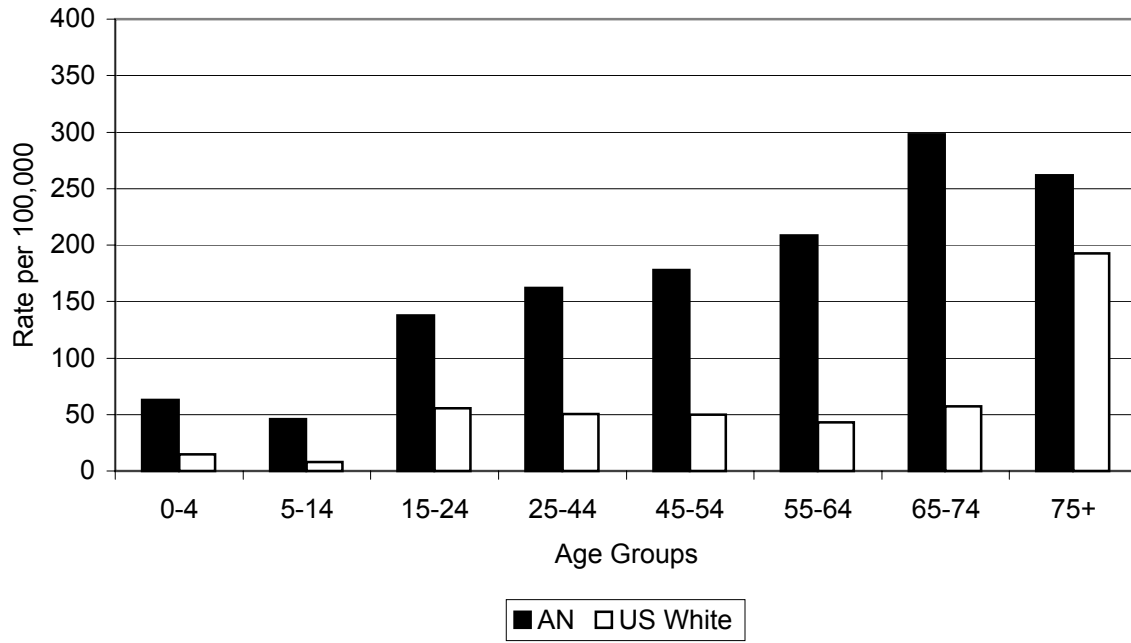
**FIGURE 11b. Age-Specific Mortality Rates from Pneumonia and Influenza
Alaska Natives vs US Whites, 1999-2003
Males**



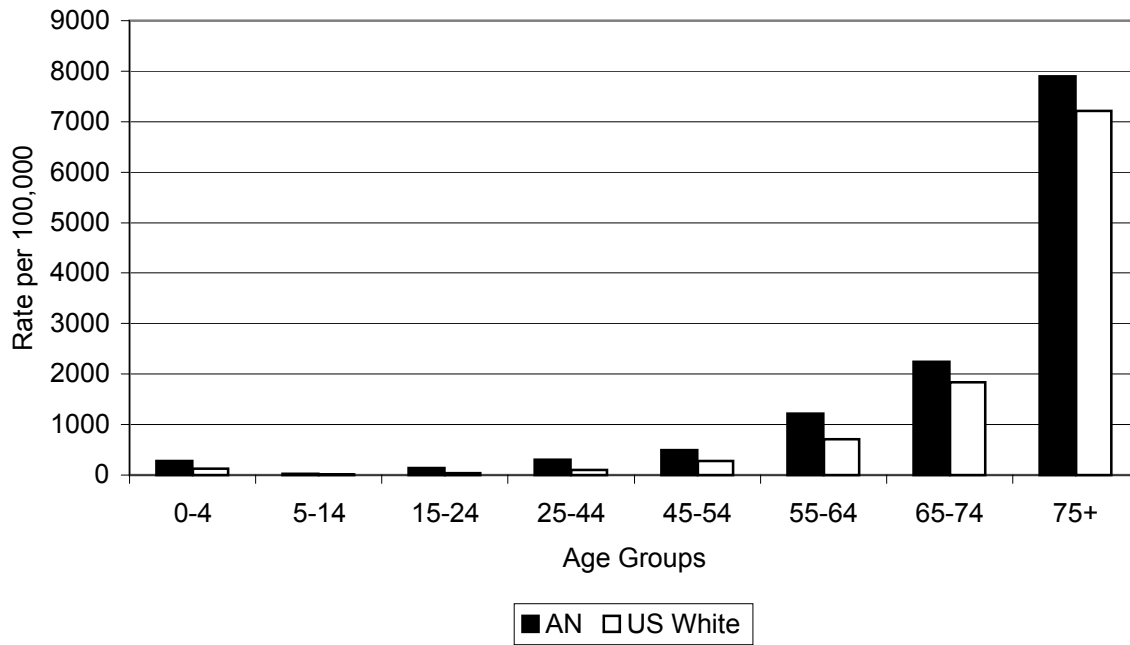
**FIGURE 12b. Age-Specific Mortality Rates from Suicide
Alaska Natives vs US Whites, 1999-2003
Males**



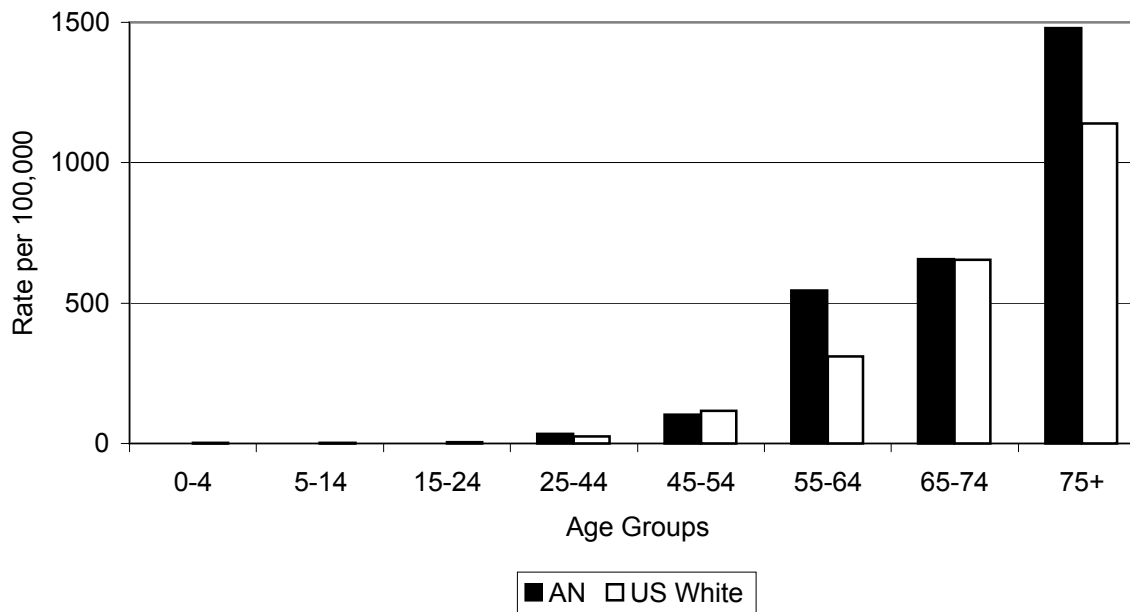
**FIGURE 13b. Age-Specific Mortality Rates from Unintentional Injuries
Alaska Natives vs US Whites, 1999-2003
Males**



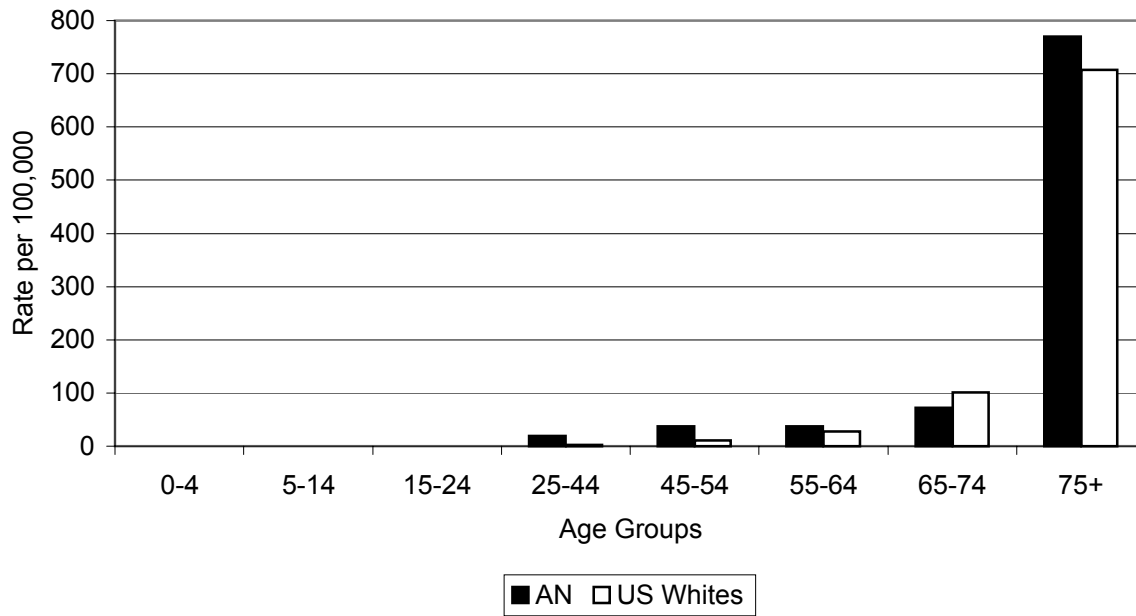
**FIGURE 3c. Age-Specific Mortality Rates from All Causes
Alaska Natives vs US Whites, 1999-2003
Females**



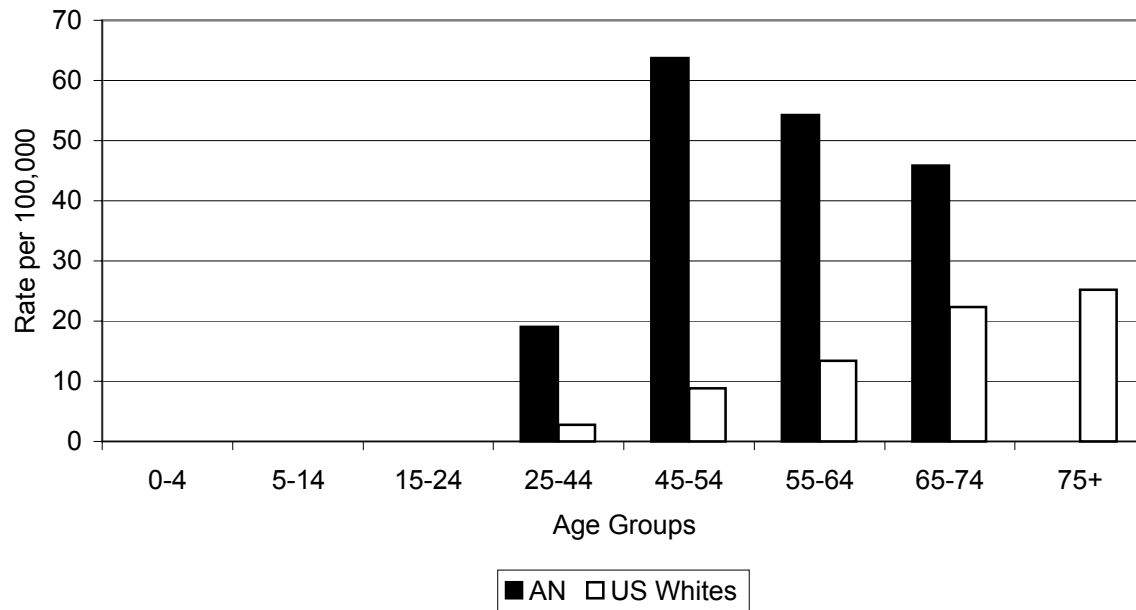
**FIGURE 4c. Age-Specific Mortality Rates from Cancer
Alaska Natives vs US Whites, 1999-2003
Females**



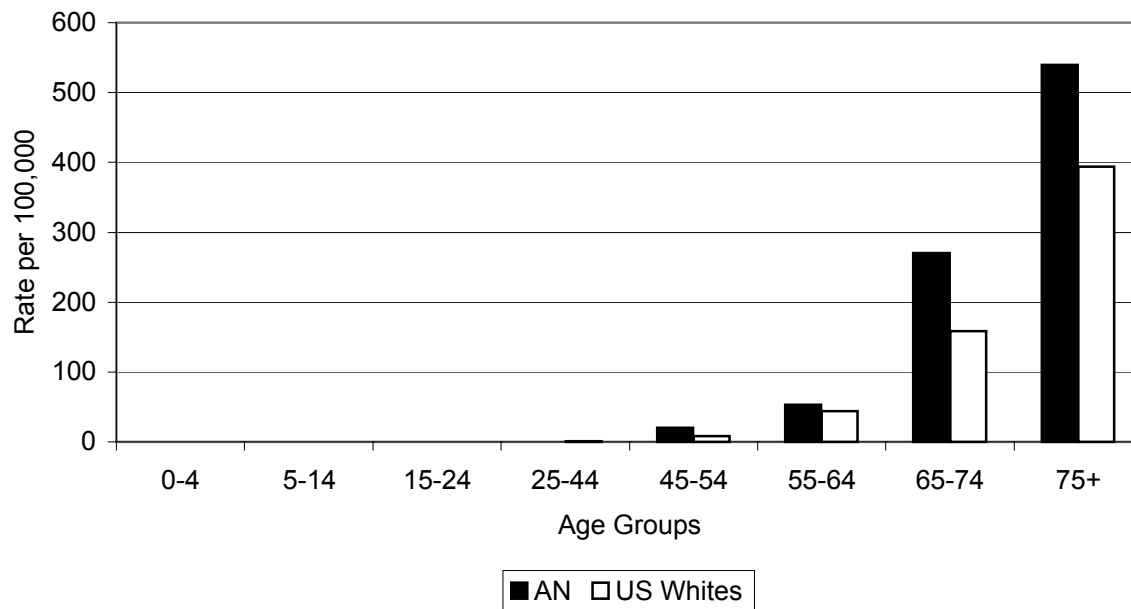
**FIGURE 5c. Age-Specific Mortality Rates from Cerebrovascular Disease
Alaska Natives vs US Whites, 1999-2003
Females**



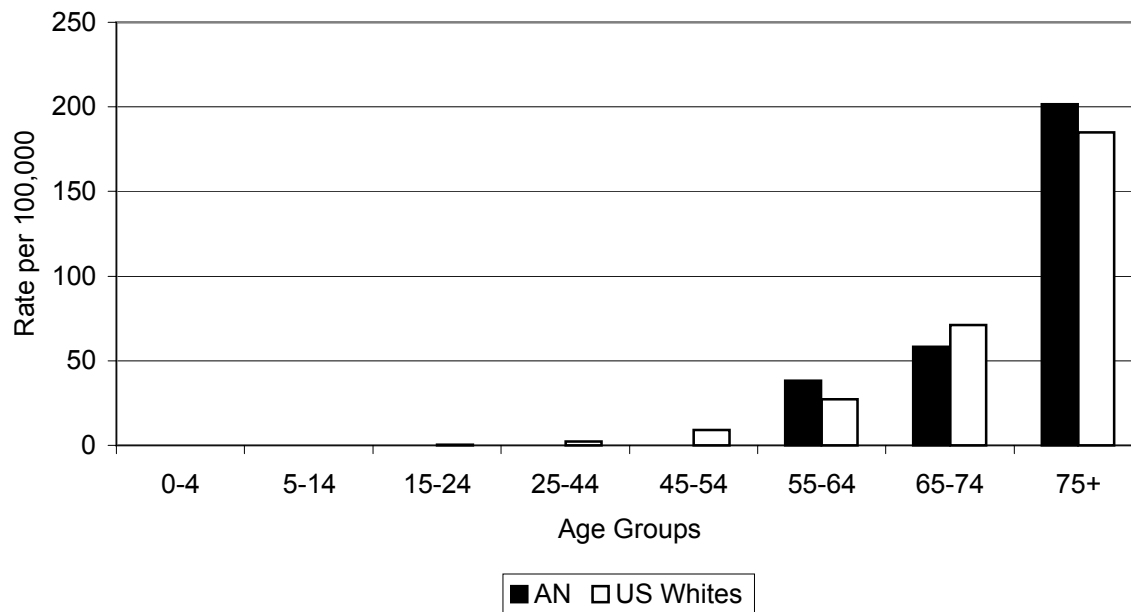
**FIGURE 6c. Age-Specific Mortality Rates from Chronic Liver Disease
Alaska Natives vs US Whites, 1999-2003
Females**



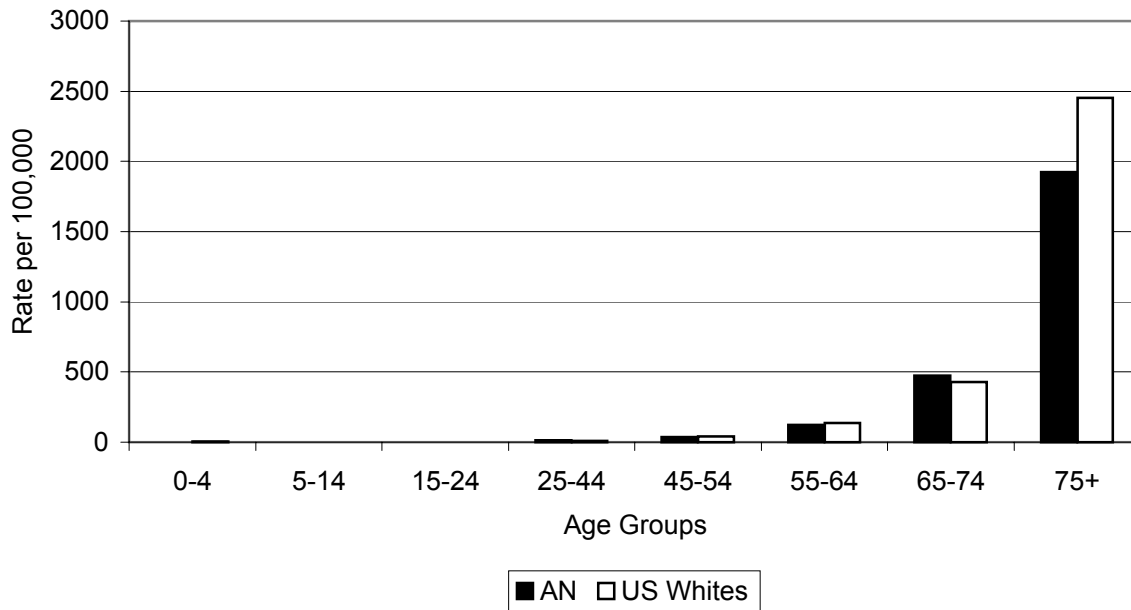
**FIGURE 7c. Age-Specific Mortality Rates from Chronic Obstructive Pulmonary Disease
Alaska Natives vs US Whites, 1999-2003
Females**



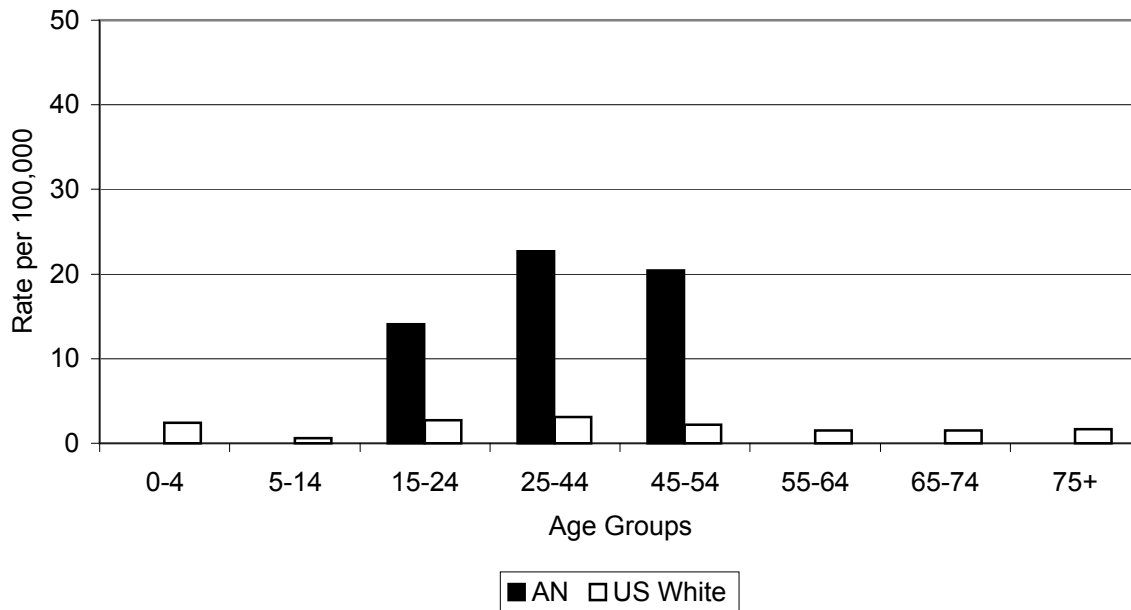
**FIGURE 8c. Age-Specific Mortality Rates from Diabetes Mellitus
Alaska Natives vs US Whites, 1999-2003
Females**



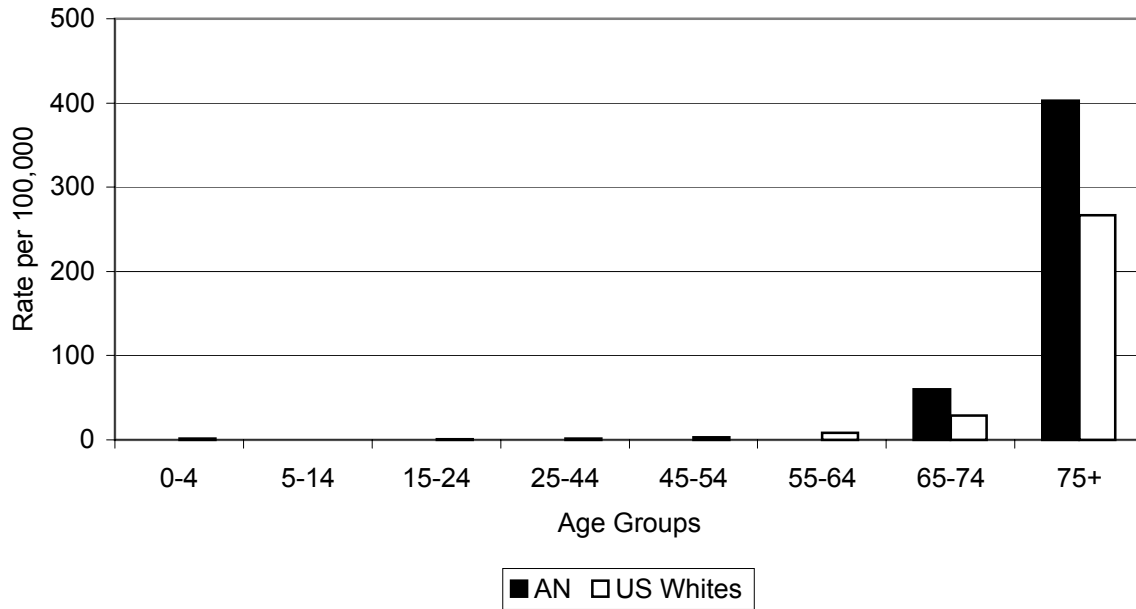
**FIGURE 9c. Age-Specific Mortality Rates from Heart Disease
Alaska Natives vs US Whites, 1999-2003
Females**



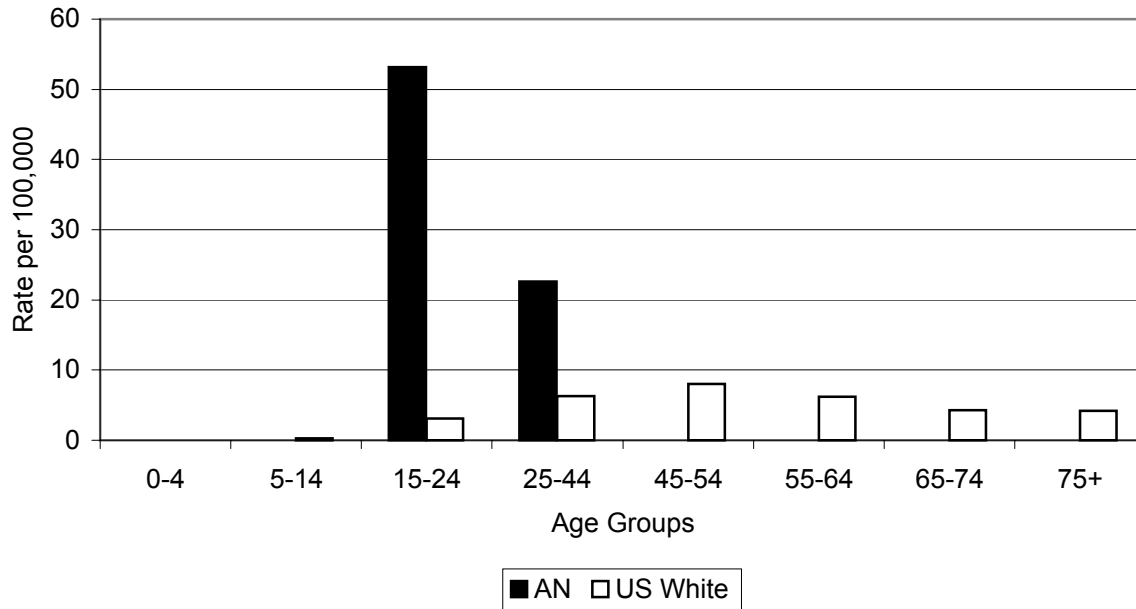
**FIGURE 10c. Age-Specific Mortality Rates from Homicide and Legal Intervention
Alaska Natives vs US Whites, 1999-2003
Females**



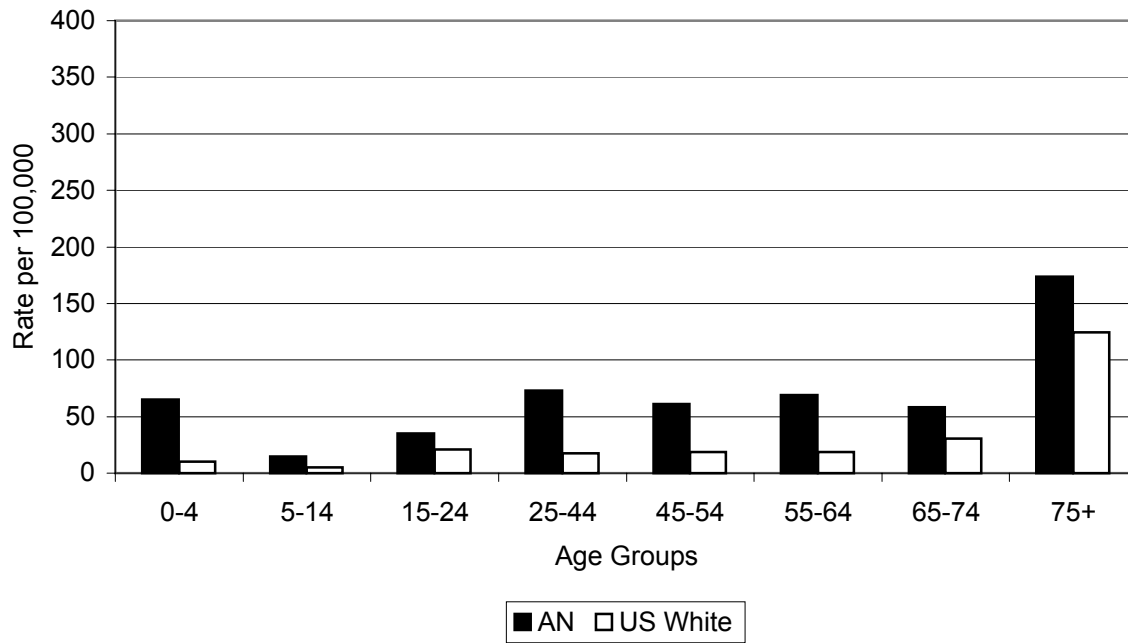
**FIGURE 11c. Age-Specific Mortality Rates from Pneumonia and Influenza
Alaska Natives vs US Whites, 1999-2003
Females**



**FIGURE 12c. Age-Specific Mortality Rates from Suicide
Alaska Natives vs US Whites, 1999-2003
Females**



**FIGURE 13c. Age-Specific Mortality Rates from Unintentional Injuries
Alaska Natives vs US Whites, 1999-2003
Females**



**TABLE 3. Age-Specific Rates for Leading Causes of Death
Alaska Natives, 1999-2003
Males vs Females**

	Male # Deaths	Male Rate‡	Female # Deaths	Female Rate	Rate Ratio	Lower 95%	Upper 95%
0-4 Years							
Unintentional Injuries	18	62.8	17	64.9	1.0	0.50	1.83
Pneumonia and Influenza	5	16.4	3	-	-	-	-
Homicide and Legal Intervention	4	-	3	-	-	-	-
Cancer	2	-	0	-	-	-	-
Cerebrovascular Disease	1	-	0	-	-	-	-
Chronic Obstructive Pulmonary	1	-	0	-	-	-	-
Heart Disease	1	-	2	-	-	-	-
All Causes	94	316.9	74	276.1	1.1	0.85	1.55
Pop	28,530		25,762				
5-14 Years							
Unintentional Injuries	29	45.8	9	14.5	3.2 *	1.49	6.42
Homicide and Legal Intervention	2	-	2	-	-	-	-
Suicide	2	-	2	-	-	-	-
Cancer	1	-	1	-	-	-	-
Pneumonia and Influenza	1	-	0	-	-	-	-
Heart Disease	0	-	1	-	-	-	-
All Causes	40	62.7	17	27.8	2.3 *	1.29	3.95
Pop	62,790		60,194				
15-24 Years							
Suicide	71	142.9	25	53.2	2.7 *	1.69	4.18
Unintentional Injuries	65	137.7	17	35.3	3.9 *	2.11	6.07
Homicide and Legal Intervention	14	29.2	6	14.1	2.1	0.87	5.50
Cancer	4	-	4	-	-	-	-
Heart Disease	4	-	3	-	-	-	-
Pneumonia and Influenza	1	-	2	-	-	-	-
Chronic Liver Disease	0	-	1	-	-	-	-
Diabetes Mellitus	0	-	1	-	-	-	-
All Causes of Death	181	373.40	67	145.4	2.6 *	1.91	3.34
Pop	49,591		46,446				

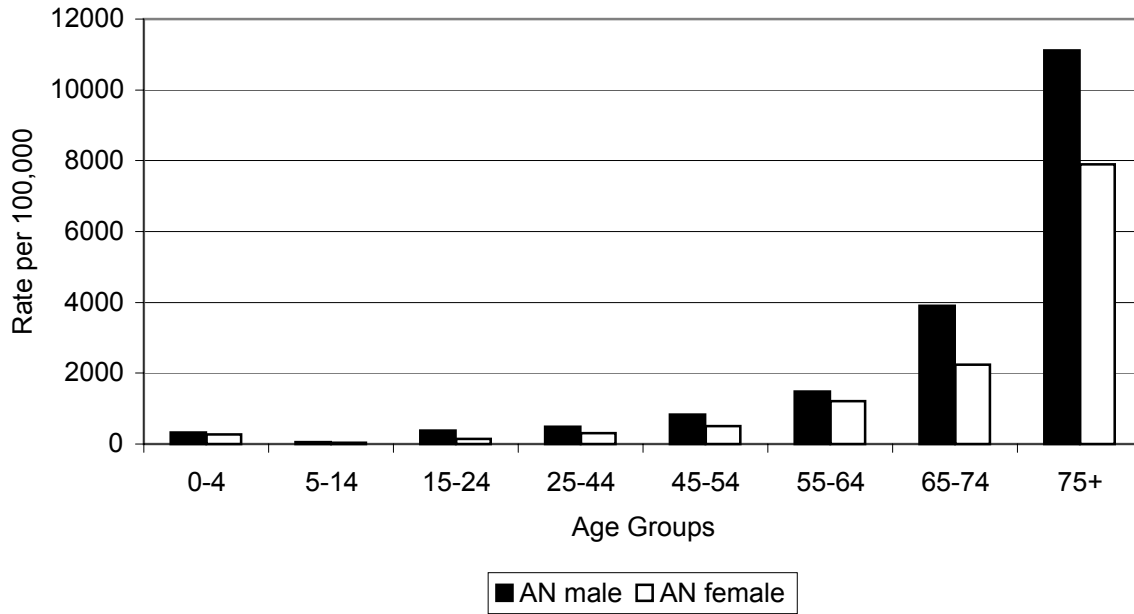
25-44 Years	Male # Deaths	Male Rate‡	Female # Deaths	Female Rate	Rate Ratio	Lower 95%	Upper 95%
Unintentional Injuries	119	162.3	54	72.8	2.2 *	1.63	3.09
Suicide	66	89.4	17	22.6	4.0 *	2.33	6.69
Heart Disease	24	33.4	11	14.9	2.2 *	1.10	4.47
Cancer	20	27.90	25	33.6	0.8	0.46	1.45
Homicide and Legal Intervention	19	25.60	17	22.7	1.1	0.60	2.16
Chronic Liver Disease	9	12.4	14	19	0.7	0.29	1.48
Cerebrovascular Disease	8	11.3	14	19.2	0.6	0.25	1.35
Chronic Obstructive Pulmonary	2	-	2	-	-	-	-
Diabetes Mellitus	2	-	0	-	-	-	-
Pneumonia and Influenza	2	-	2	-	-	-	-
All Causes	362	495.60	223	300.7	1.6 *	1.40	1.95
	73,286		74,584				
45-54 Years	Male # Deaths	Male Rate‡	Female # Deaths	Female Rate	Rate Ratio	Lower 95%	Upper 95%
Unintentional Injuries	51	177.8	18	60.9	2.9 *	1.71	4.95
Cancer	41	145.9	30	102.5	1.4	0.88	2.24
Heart Disease	35	122.6	11	37.6	3.3 *	1.68	6.36
Suicide	15	52.6	3	-	-	-	-
Homicide and Legal Intervention	11	37.1	6	20.4	1.8	0.72	4.91
Cerebrovascular Disease	6	21.4	11	36.9	0.6	0.22	1.46
Diabetes Mellitus	4	-	0	-	-	-	-
Pneumonia and Influenza	4	-	2	-	-	-	-
Chronic Liver Disease	3	-	19	63.7	-	-	-
Chronic Obstructive Pulmonary	2	-	6	19.7	-	-	-
All Causes	239	836.4	147	497.1	1.7 *	1.36	2.05
	28,786		29,586				
55-64 Years	Male # Deaths	Male Rate‡	Female # Deaths	Female Rate	Rate Ratio	Lower 95%	Upper 95%
Cancer	67	424.4	87	545.5	0.8	0.57	1.08
Heart Disease	45	287.6	20	123.3	2.3 *	1.37	3.88
Unintentional Injuries	33	208.6	11	69	3.0 *	1.57	6.00
Chronic Obstructive Pulmonary	9	57.3	8	52.9	1.1	0.46	2.89
Chronic Liver Disease	8	50.5	9	54.3	0.9	0.36	2.28
Cerebrovascular Disease	6	38.4	6	37.4	1.0	0.36	3.01
Suicide	5	30.9	0	-	-	-	-
Diabetes Mellitus	2	-	6	38.2	-	-	-
Homicide and Legal Intervention	1	-	1	-	-	-	-
Pneumonia and Influenza	1	-	4	-	-	-	-
All Causes	233	1,478.50	193	1,212.20	1.2 *	1.02	1.49
	15,810		16,190				

65-74 Years	Male # Deaths	Male Rate‡	Female # Deaths	Female Rate	Rate Ratio	Lower 95%	Upper 95%
Cancer	114	1,280.60	66	655.4	2.0 *	1.44	2.63
Heart Disease	69	776.9	48	473.3	1.6 *	1.13	2.34
Unintentional Injuries	28	298	6	58.2	5.1 *	2.24	12.38
Cerebrovascular Disease	21	247	7	72.6	3.4 *	1.47	7.77
Chronic Obstructive Pulmonary	20	220.8	28	269.9	0.8	0.46	1.42
Diabetes Mellitus	9	98	6	58.2	1.7	0.63	4.56
Pneumonia and Influenza	6	66.2	6	60.1	1.1	0.38	3.32
Homicide and Legal Intervention	3	-	0	-	-	-	-
Chronic Liver Disease	2	-	5	45.8	-	-	-
All Causes	351	3912.00	228	2,240.80	1.7 *	1.47	2.05
Pop	9,247		10,433				
75+ Years	Male # Deaths	Male Rate‡	Female # Deaths	Female Rate	Rate Ratio	Lower 95%	Upper 95%
Heart Disease	103	2,755.50	127	1,926.00	1.4	0.98	1.56
Cancer	100	2,449.30	98	1,479.00	1.7 *	1.16	2.00
Chronic Obstructive Pulmonary	39	936.1	36	539.1	1.7 *	1.03	2.53
Cerebrovascular Disease	34	857.1	51	769.8	1.1	0.65	1.53
Pneumonia and Influenza	21	569.1	27	402.9	1.4	0.66	2.03
Unintentional Injuries	12	262	12	173.8	1.5	0.68	3.25
Diabetes Mellitus	8	250.4	13	201.5	1.2	0.39	2.15
Chronic Liver Disease	2	-	3	-	-	-	-
Homicide and Legal Intervention	1	-	0	-	-	-	-
All Causes	430	11,120.40	525	7,892.40	1.4 *	1.08	1.38
	4,445		6,628				

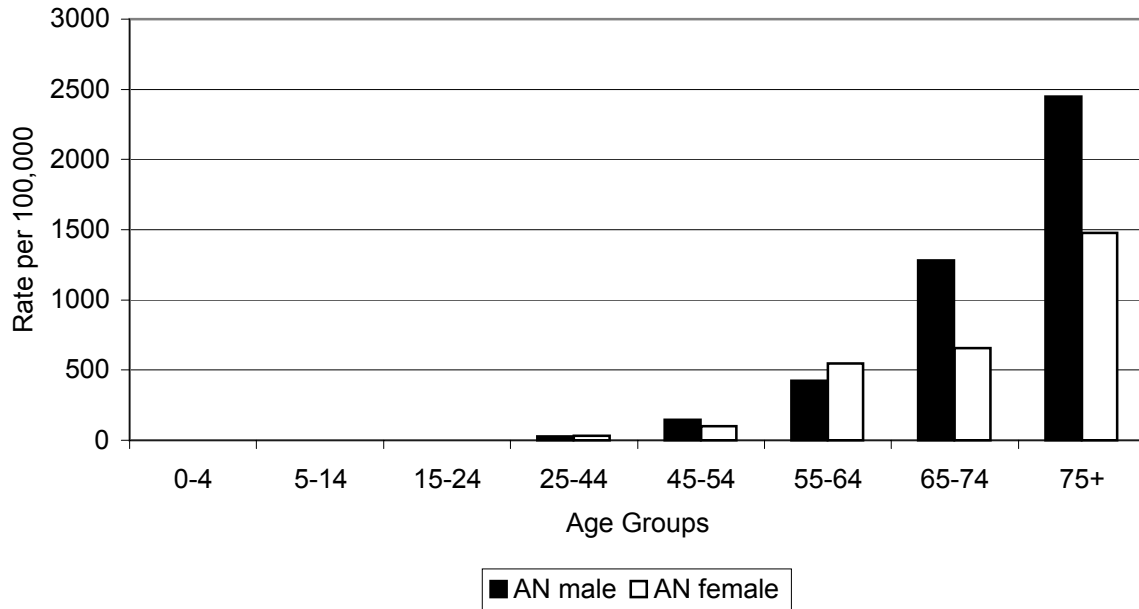
*p<0.05.

‡ Alaska Native rates not calculated for fewer than 5 deaths.

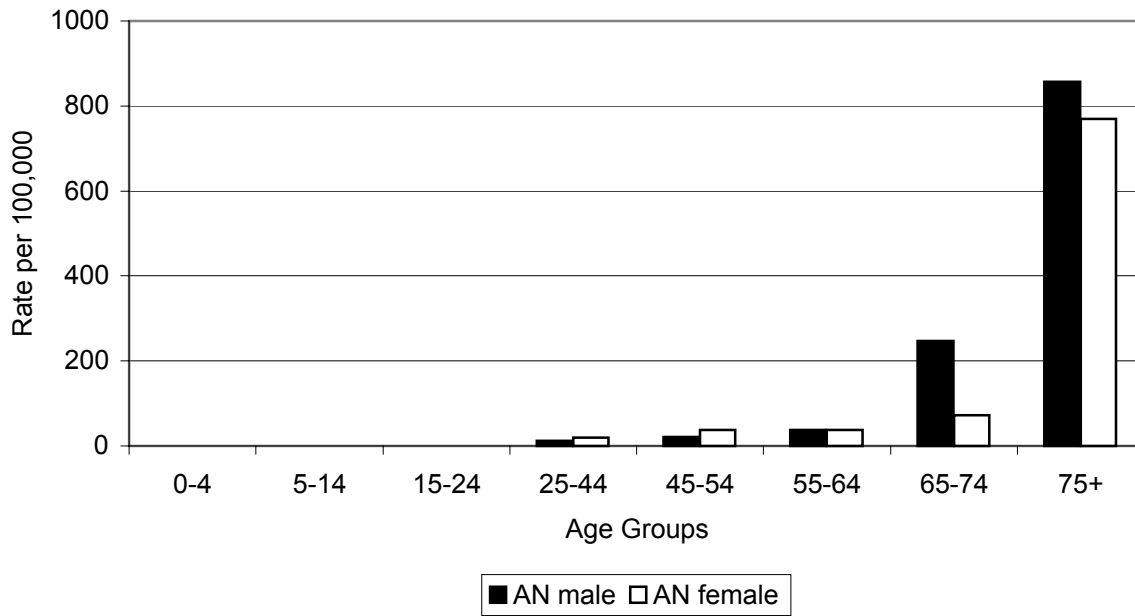
**FIGURE 14. Age-Specific Mortality Rates from All Causes
Alaska Natives, 1999-2003
Males vs Females**



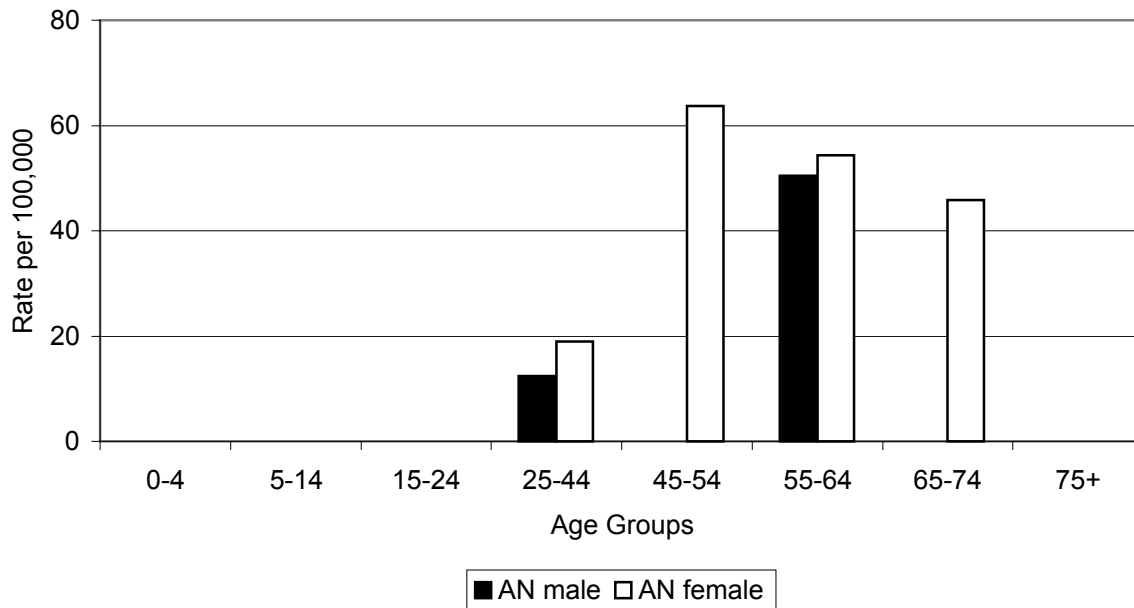
**FIGURE 15. Age-Specific Mortality Rates from Cancer
Alaska Natives, 1999-2003
Males vs Females**



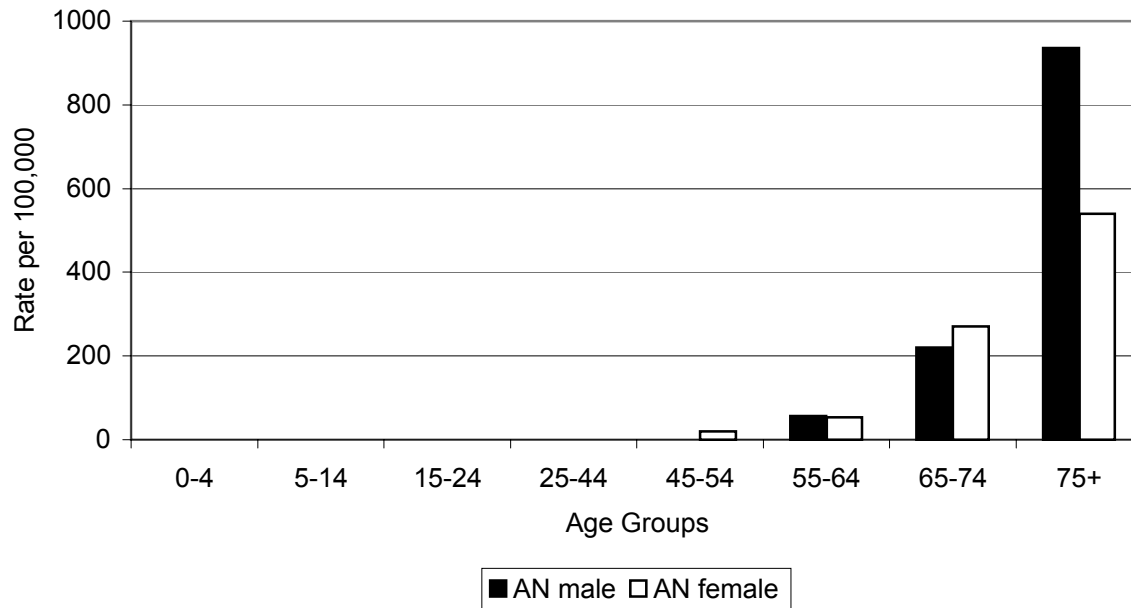
**FIGURE 16. Age-Specific Mortality Rates from Cerebrovascular Disease
Alaska Natives, 1999-2003
Males vs Females**



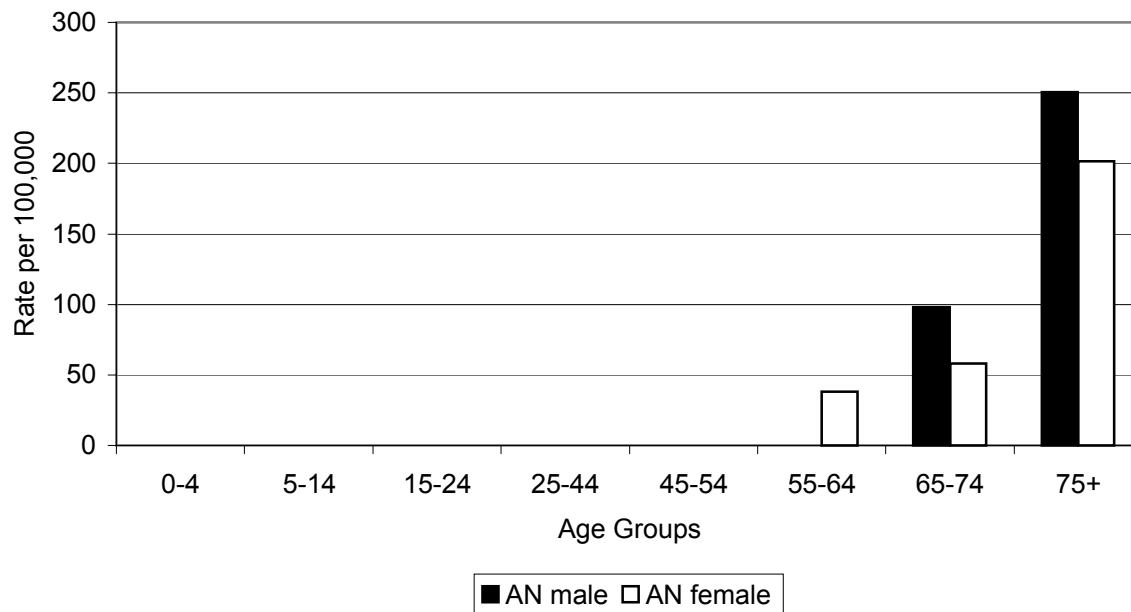
**FIGURE 17. Age-Specific Mortality Rates from Chronic Liver Disease
Alaska Natives, 1999-2003
Males vs Females**



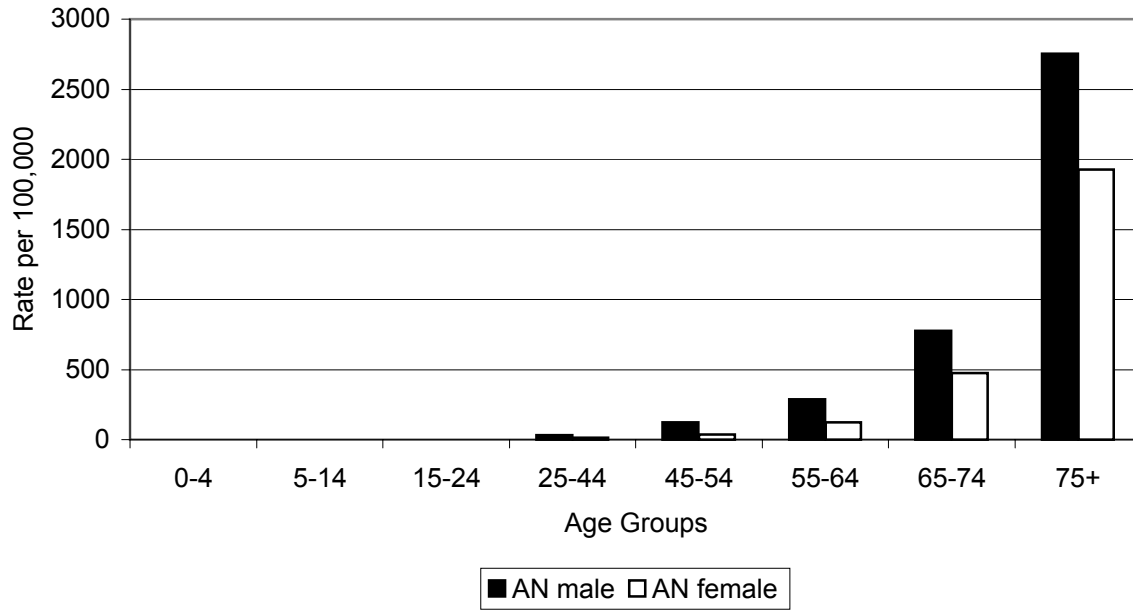
**FIGURE 18. Age-Specific Mortality Rates from Chronic Obstructive Pulmonary Disease
Alaska Natives, 1999-2003
Males vs Females**



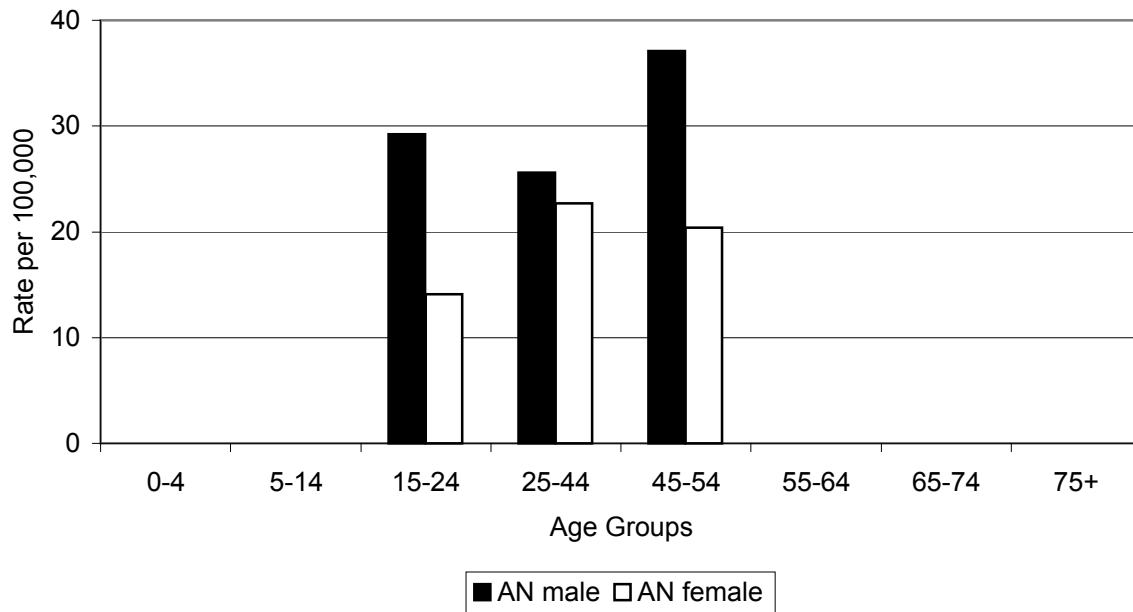
**FIGURE 19. Age-Specific Mortality Rates from Diabetes Mellitus
Alaska Natives, 1999-2003
Males vs Females**



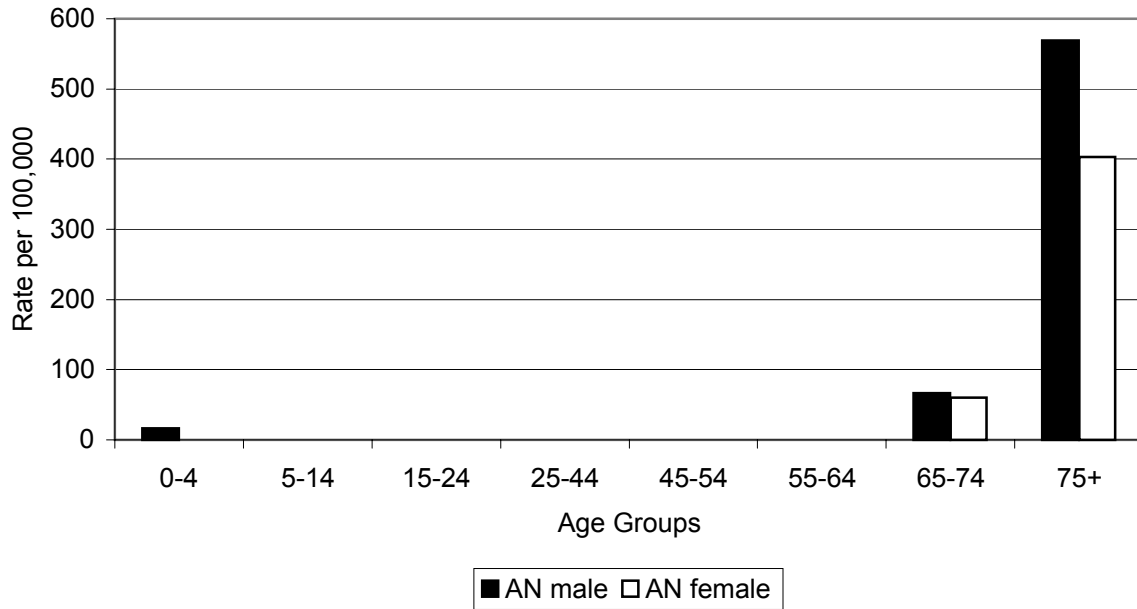
**FIGURE 20. Age-Specific Mortality Rates from Heart Disease
Alaska Natives, 1999-2003
Males vs Females**



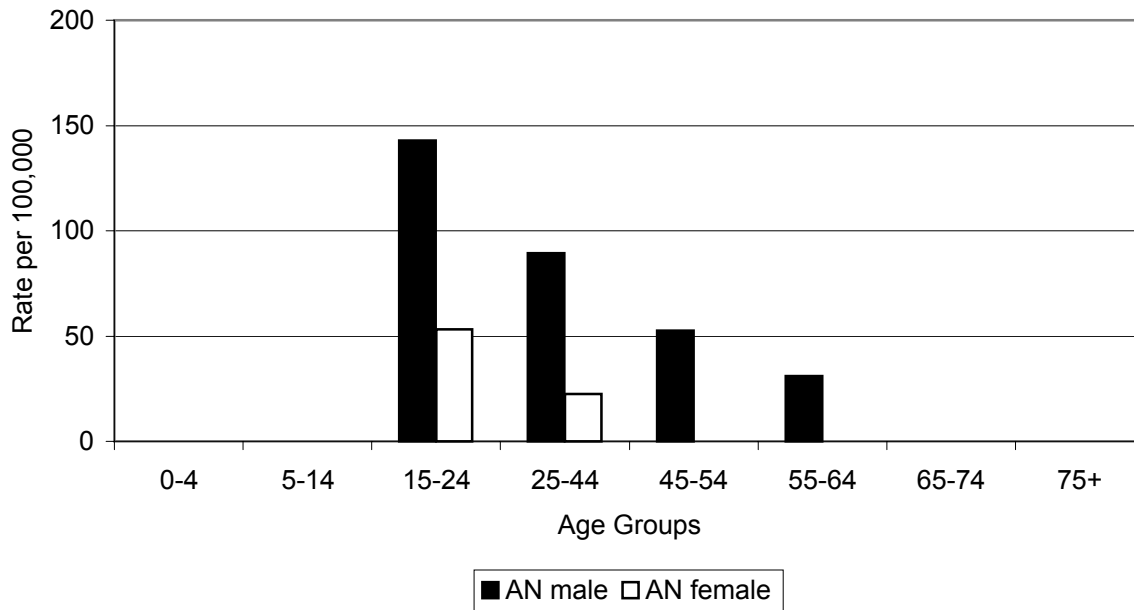
**FIGURE 21. Age-Specific Mortality Rates from Homicide and Legal Intervention
Alaska Natives, 1999-2003
Males vs Females**



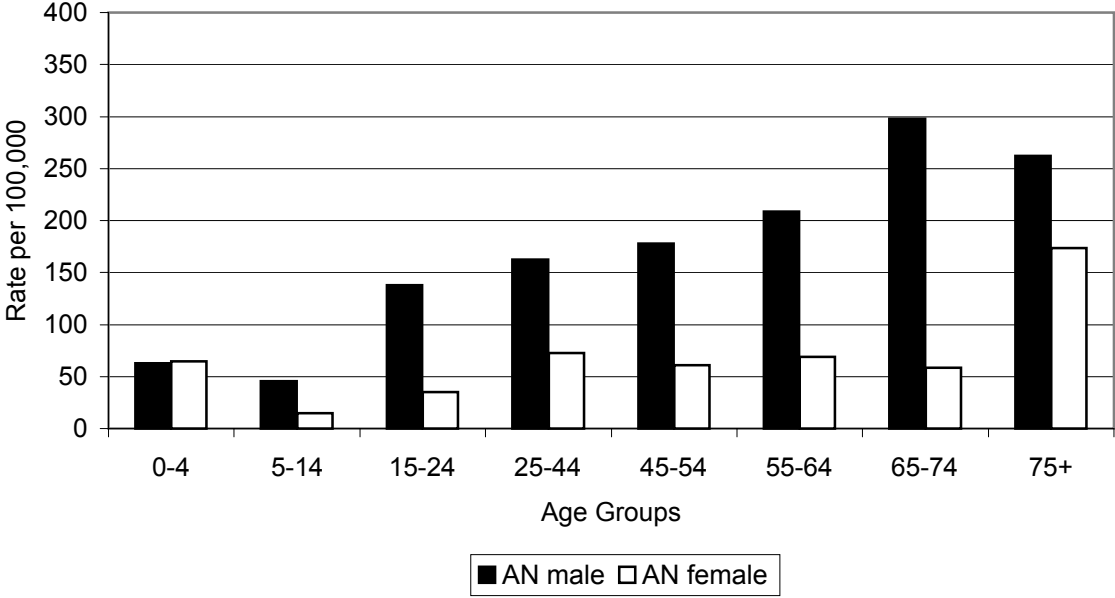
**FIGURE 22. Age-Specific Mortality Rates from Pneumonia and Influenza
Alaska Natives, 1999-2003
Males vs Females**



**FIGURE 23. Age-Specific Mortality Rates from Suicide
Alaska Natives, 1999-2003
Males vs Females**



**FIGURE 24. Age-Specific Mortality Rates from Unintentional Injuries
Alaska Natives, 1999-2003
Males vs Females**

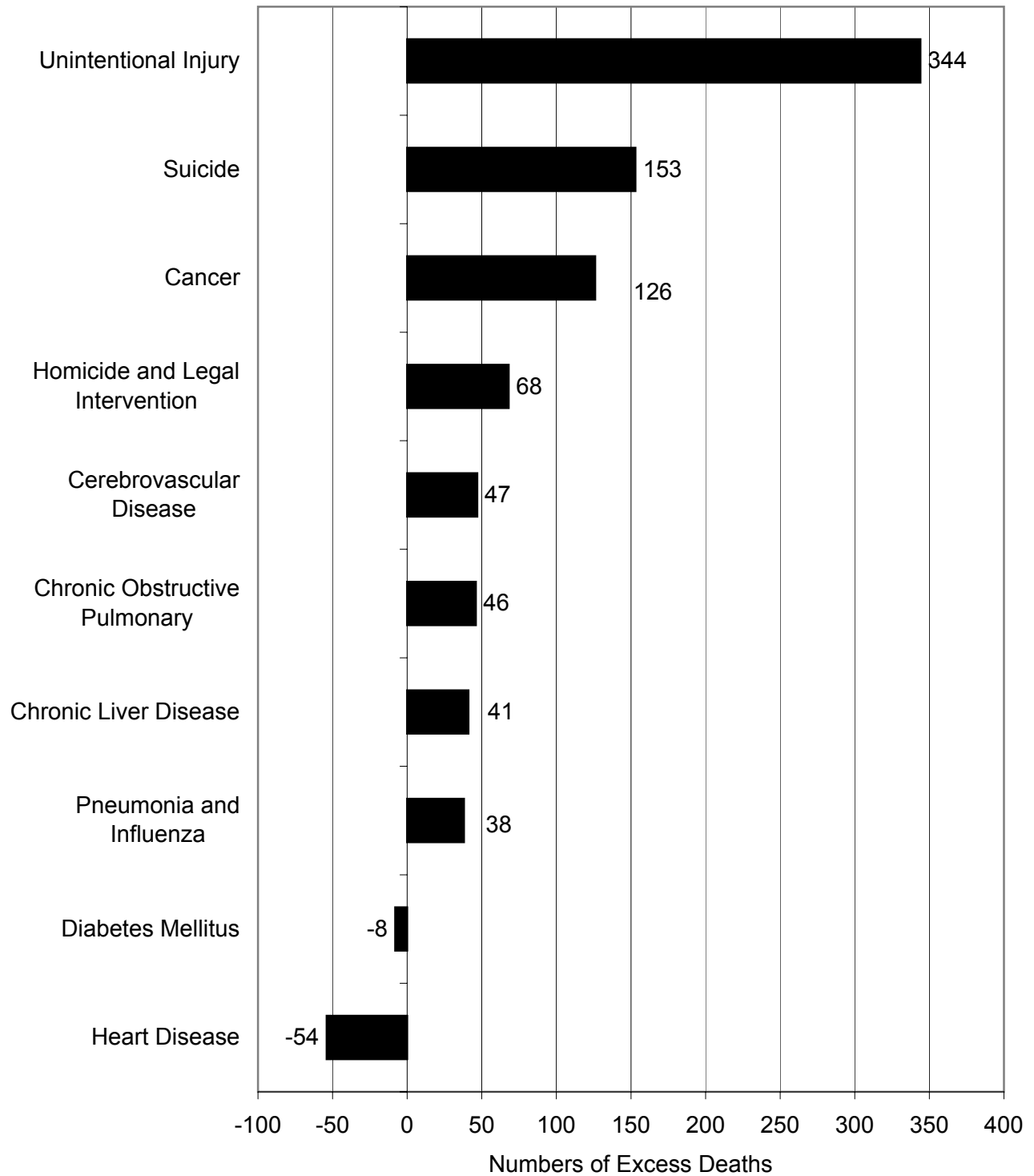


**TABLE 4. Numbers of Excess Deaths for Alaska Natives
Based on U.S. White Rates, 1999-2003**

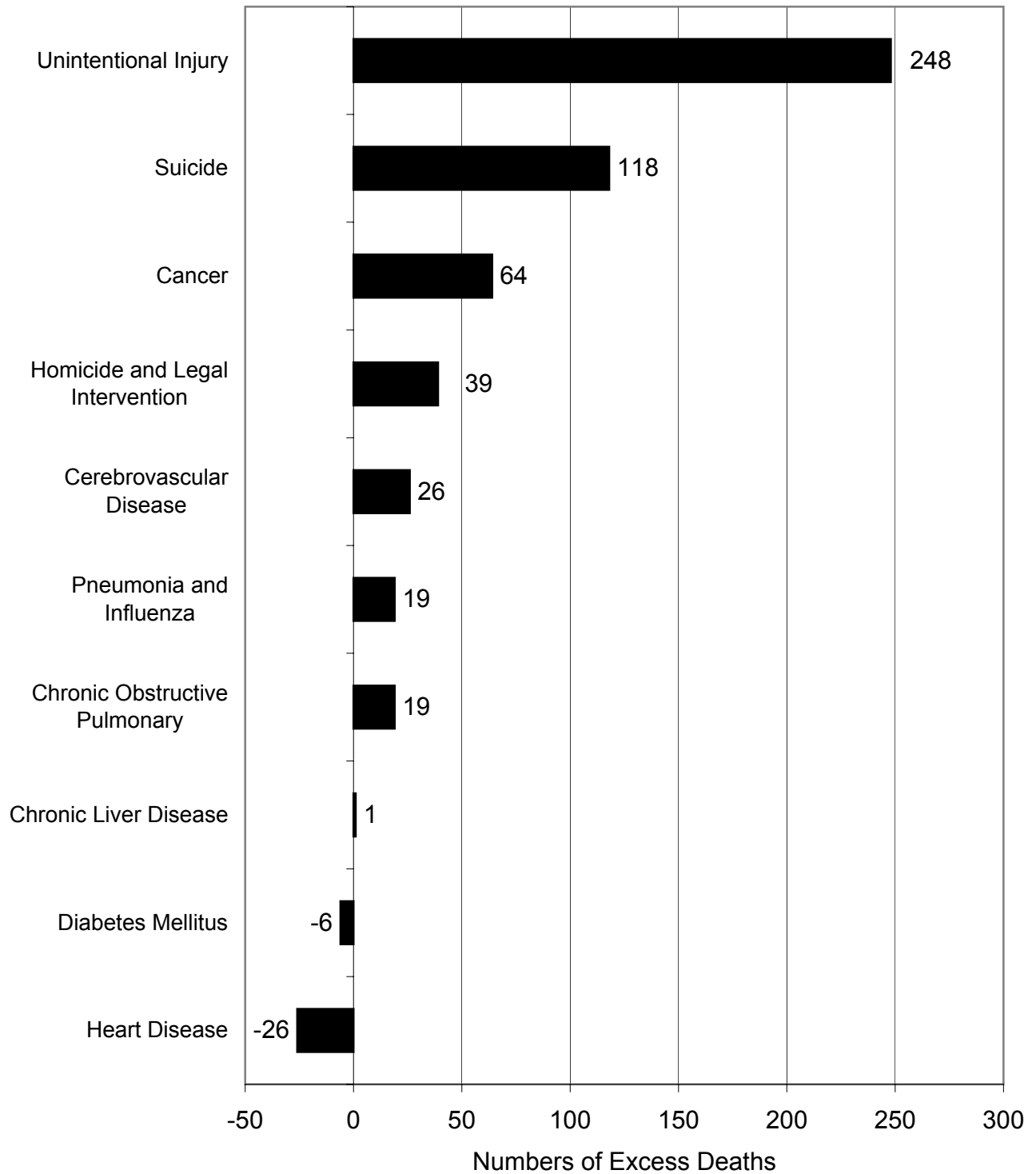
MALE AND FEMALE COMBINED	Alaska Native Deaths	Expected Deaths*	Excess Deaths (Alaska Native deaths - Expected deaths)	Percentage of Total Excess Deaths
Cancer	660	534	126	10.3%
Cerebrovascular Disease	165	118	47	3.9%
Chronic Liver Disease	75	34	41	3.4%
Chronic Obstructive Pulmonary	153	107	46	3.8%
Diabetes Mellitus	51	59	-8	-0.7%
Heart Disease	504	558	-54	-4.4%
Homicide and Legal Intervention	90	22	68	5.6%
Pneumonia and Influenza	85	47	38	3.1%
Suicide	204	51	153	12.6%
Unintentional Injury	499	155	344	28.2%
Total	3404	2185	1219	100.0%
MALE				
Cancer	349	285	64	8.6%
Cerebrovascular Disease	76	50	26	3.5%
Chronic Liver Disease	24	23	1	0.1%
Chronic Obstructive Pulmonary	73	54	19	2.6%
Diabetes Mellitus	25	31	-6	-0.8%
Heart Disease	281	307	-26	-3.5%
Homicide and Legal Intervention	55	16	39	5.2%
Pneumonia and Influenza	41	22	19	2.6%
Suicide	159	41	118	15.9%
Unintentional Injury	355	107	248	33.4%
Total	1930	1187	743	100.0%
FEMALE				
Cancer	311	249	62	13.0%
Cerebrovascular Disease	89	68	21	4.4%
Chronic Liver Disease	51	11	40	8.4%
Chronic Obstructive Pulmonary	80	53	27	5.7%
Diabetes Mellitus	26	28	-2	-0.4%
Heart Disease	223	251	-28	-5.9%
Homicide and Legal Intervention	35	6	29	6.1%
Pneumonia and Influenza	44	25	19	4.0%
Suicide	45	10	35	7.4%
Unintentional Injury	144	48	96	20.2%
Total	1474	998	476	100.0%

* Expected Deaths = (age-specific and cause-specific death rates for USW) x (AN population for each age group)

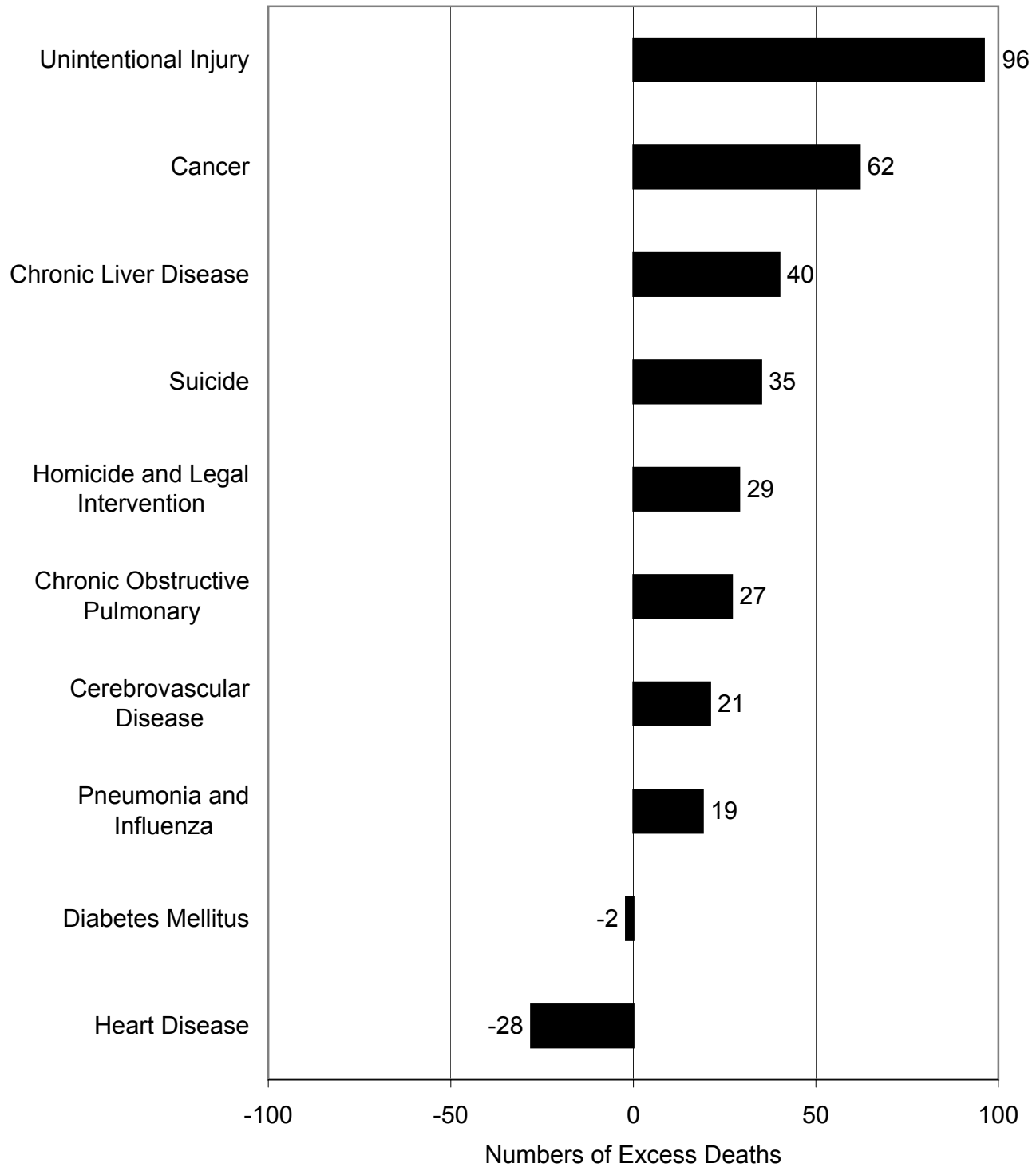
**FIGURE 25a. Excess Deaths for Alaska Natives Based on US White Rates
1999-2003
Both Genders Combined**



**FIGURE 25b. Excess Deaths for Alaska Natives Based on US White Rates
1999-2003
Males**



**FIGURE 25c. Excess Deaths for Alaska Natives Based on US White Rates, 1999-2003
Females**



**TABLE 5. Ranking of Leading Causes of Alaska Native Deaths for Each Service Region
1999-2003
Both Genders Combined**

Anchorage Service Region		Barrow Service Region			
Cause of Death	% Deaths	Cause of Death	% Deaths		
1	Cancer	19.5%	1	Cancer	23.5%
2	Heart Disease	15.3%	2	Unintentional injury	13.4%
3	Unintentional injury	12.9%	3	Heart Disease	12.6%
4	Chronic Obstructive Pulmonary	5.1%	4	Chronic Obstructive Pulmonary	6.7%
5	Cerebrovascular Disease	4.9%	5	Suicide	5.9%
6	Suicide	3.6%	6	Cerebrovascular Disease	5.0%
7	Chronic Liver Disease	3.3%	7	Homicide & Legal Intervention	2.5%
8	Homicide & Legal Intervention	2.6%	8	Pneumonia & Influenza	1.7%
9	Pneumonia & Influenza	1.9%	9	Chronic Liver Disease	0.8%
10	Diabetes Mellitus	1.8%	10	Diabetes Mellitus	0.8%
	All Other Causes	29.2%		All Other Causes	26.9%
	Total - All Causes	100.0%		Total - All Causes	100.0%
Bristol Bay Service Region		Interior Service Region			
Cause of Death	% Deaths	Cause of Death	% Deaths		
1	Unintentional injury	22.6%	1	Cancer	17.0%
2	Cancer	22.0%	2	Unintentional injury	17.0%
3	Heart Disease	13.0%	3	Heart Disease	14.0%
4	Cerebrovascular Disease	6.2%	4	Suicide	8.1%
5	Chronic Obstructive Pulmonary	5.1%	5	Cerebrovascular Disease	4.6%
6	Pneumonia & Influenza	3.4%	6	Chronic Obstructive Pulmonary	4.0%
7	Chronic Liver Disease	2.8%	7	Homicide & Legal Intervention	3.5%
8	Homicide & Legal Intervention	2.8%	8	Chronic Liver Disease	2.7%
9	Suicide	2.3%	9	Pneumonia & Influenza	1.6%
10	Diabetes Mellitus	1.7%	10	Diabetes Mellitus	1.3%
	All Other Causes	18.1%		All Other Causes	26.1%
	Total - All Causes	100.0%		Total - All Causes	100.0%
Kotzebue Service Region		Mt. Edgecumbe Service Region			
Cause of Death	% Deaths	Cause of Death	% Deaths		
1	Cancer	17.4%	1	Cancer	22.3%
2	Unintentional injury	17.4%	2	Heart Disease	21.6%
3	Suicide	13.7%	3	Unintentional injury	8.5%
4	Heart Disease	12.8%	4	Cerebrovascular Disease	5.7%
5	Cerebrovascular Disease	5.5%	5	Chronic Obstructive Pulmonary	3.8%
6	Pneumonia & Influenza	5.5%	6	Diabetes Mellitus	2.8%
7	Chronic Obstructive Pulmonary	3.7%	7	Homicide & Legal Intervention	2.6%
8	Homicide & Legal Intervention	2.3%	8	Chronic Liver Disease	2.1%
9	Chronic Liver Disease	0.0%	9	Pneumonia & Influenza	2.1%
10	Diabetes Mellitus	0.0%	10	Suicide	1.7%
	All Other Causes	21.9%		All Other Causes	26.8%
	Total - All Causes	100.0%		Total - All Causes	100.0%

Norton Sound Service Region	
Cause of Death	% Deaths
1	Cancer 19.2%
2	Unintentional injury 14.3%
3	Heart Disease 12.6%
4	Suicide 11.9%
5	Chronic Obstructive Pulmonary 4.5%
6	Cerebrovascular Disease 4.2%
7	Chronic Liver Disease 1.4%
8	Homicide & Legal Intervention 1.4%
9	Pneumonia & Influenza 1.4%
10	Diabetes Mellitus 0.7%
	All Other Causes 28.3%
	Total - All Causes 100.0%

Yukon Kuskokwim Service Region	
Cause of Death	% Deaths
1	Cancer 19.4%
2	Unintentional injury 17.0%
3	Heart Disease 13.4%
4	Suicide 7.8%
5	Chronic Obstructive Pulmonary 4.2%
6	Pneumonia & Influenza 4.1%
7	Cerebrovascular Disease 3.6%
8	Homicide & Legal Intervention 3.3%
9	Diabetes Mellitus 0.7%
10	Chronic Liver Disease 0.5%
	All Other Causes 26.0%
	Total - All Causes 100.0%

Alaska Native Total	
Cause of Death	% Deaths
1	Cancer 19.7%
2	Heart Disease 14.9%
3	Unintentional injury 14.5%
4	Suicide 6.0%
5	Cerebrovascular Disease 4.8%
6	Chronic Obstructive Pulmonary 4.6%
7	Homicide & Legal Intervention 2.7%
8	Pneumonia & Influenza 2.6%
9	Chronic Liver Disease 2.1%
10	Diabetes Mellitus 1.5%
	All Other Causes 26.6%
	Total - All Causes 100.0%

**TABLE 6a. Age-Adjusted Alaska Native Mortality Rates* By Service Region
1999-2003
Both Genders Combined**

Cause of Death	Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives
Cancer	370.2	303.7	285.1	222.4	246.3	277.7	275.6	258.9	245.4
Cerebrovascular Disease	115.5	78.9	97.7	58.8	80.4	80.9	59.5	57.4	64.4
Chronic Liver Disease	42.1	-	29.3	26.5	-	19.5	-	-	18.4
Chronic Obstructive Pulmonary	123.3	130.0	73.2	60.4	49.8	53.3	70.5	67.4	67.8
Diabetes	48.0	-	-	15.5	-	36.5	-	-	19.3
Heart Disease	338.1	220.9	189.9	186.6	187.8	290.9	185.2	190.9	211.4
Homicide and Legal Intervention	21.9	-	15.1	26.0	19.0	18.0	-	19.6	19.0
Pneumonia and Influenza	38.1	-	50.6	27.0	77.5	30.7	-	57.4	33.7
Suicide	32.8	35.6	-	66.9	88.6	11.6	88.8	44.5	36.3
Unintentional Injuries	118.0	112.3	180.0	132.8	125.0	58.6	140.5	119.6	116.1
Total - All Causes	1690.4	1241.5	1124.1	1097.1	1029.6	1193.5	1234.8	1089.1	1133.4

* Rates per 100,000

(-) Rates not calculated for fewer than 5 deaths

**TABLE 6b. Age-Adjusted Alaska Native Mortality Rates* By Service Region
1999-2003
Males**

Cause of Death	Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives
Cancer	411.2	383.0	335.8	201.4	276.0	306.6	425.4	312.2	308.5
Cerebrovascular Disease	125.7	-	89.1	57.0	96.5	61.3	68.5	61.6	70.8
Chronic Liver Disease	38.2	-	-	-	-	-	-	-	11.2
Chronic Obstructive Pulmonary	150.6	242.3	-	47.8	-	80.2	87.2	56.1	82.4
Diabetes	35.6	-	-	-	-	50.0	-	-	
Heart Disease	370.8	292.2	245.2	252.6	249.8	313.5	250.5	211.9	263.7
Homicide and Legal Intervention	17.7	-	-	43.9	35.7	29.0	-	26.1	25.8
Pneumonia and Influenza	42.5	-	-	51.0	-	-	-	52.0	40.8
Suicide	34.8	68.9	-	89.5	142.2	18.6	130.7	71.9	57.8
Unintentional Injuries	151.7	243.2	232.6	220.3	184.1	84.5	179.0	182.3	167.8
Total - All Causes	1917.5	1722.7	1299.9	1309.7	1361.9	1301.3	1550.3	1227.6	1917.5

* Rates per 100,000

(-) Rates not calculated for fewer than 5 deaths

**TABLE 6c. Age-Adjusted Alaska Native Mortality Rates By Service Region
1999-2003
Females**

Cause of Death	Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives
Cancer	340.0	239.8	244.1	239.4	222.7	259.7	148.0	198.4	202.4
Cerebrovascular Disease	105.7	-	106.8	59.8	68.0	98.2	45.2	52.7	62.3
Chronic Liver Disease	47.6	-	-	33.6	-	31.4	-	-	24.9
Chronic Obstructive Pulmonary	105.4	-	106.0	70.7	60.0	33.0	61.7	79.1	60.2
Diabetes	55.3	-	-	-	-	25.2	-	-	21.2
Heart Disease	307.0	156.4	140.3	134.5	151.4	269.3	131.2	170.2	172.4
Homicide and Legal Intervention	24.4	-	-	-	-	-	-	12.7	12.7
Pneumonia and Influenza	33.7	-	-	-	91.0	30.1	-	63.4	29.2
Suicide	28.0	-	-	41.7	27.9	-	40.0	15.6	14.7
Unintentional Injuries	102.0	-	121.9	57.0	60.5	37.7	98.4	48.7	65.1
Total - All Causes	1877.9	852.0	963.8	907.0	786.2	1101.9	936.2	944.2	1877.9

* Rates per 100,000

(-) Rates not calculated for fewer than 5 deaths

**TABLE 7a. Number of Deaths by Cause by Service Region
Alaska Natives, 1999-2003
Both Genders Combined**

Cause of Death	Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Total†
Cancer	228	28	39	63	38	94	55	119	669
Cerebrovascular Disease	57	6	11	17	12	24	12	22	162
Chronic Liver Disease	39	<3	5	10	0	9	4	<3	72
Chronic Obstructive Pulmonary	59	8	9	15	8	16	13	26	156
Diabetes	21	<3	3	5	0	12	<3	4	50
Heart Disease	178	15	23	52	28	91	36	82	508
Homicide and Legal Intervention	30	3	5	13	5	11	4	20	92
Pneumonia and Influenza	22	<3	6	6	12	9	4	25	87
Suicide	42	7	4	30	30	7	34	48	205
Unintentional Injuries	150	16	40	63	38	36	41	104	494
Total - All Causes	1167	119	177	371	219	422	286	612	3401

† Data for Service Regions may be slightly different from those reported in the Statewide tables in this book which are using SEER data. There were an additional 28 Alaska Native deaths that occurred during the 1999-2003 period that had unknown Service Region.

**TABLE 7b. Number of Deaths by Cause by Service Region
Alaska Natives, 1999-2003
Males**

Cause of Death	Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Total†
Cancer	110	17	21	25	19	45	40	70	351
Cerebrovascular Disease	27	3	5	7	6	7	7	13	75
Chronic Liver Disease	13	0	<3	3	0	<3	<3	<3	23
Chronic Obstructive Pulmonary	29	5	<3	5	3	10	7	11	74
Diabetes	7	<3	<3	4	0	7	0	<3	25
Heart Disease	92	10	14	32	16	48	22	49	286
Homicide and Legal Intervention	15	<3	3	11	5	8	0	12	57
Pneumonia and Influenza	12	0	4	5	4	4	<3	12	43
Suicide	30	7	<3	24	25	6	26	40	163
Unintentional Injuries	93	15	27	49	29	26	29	78	351
Total - All Causes	616	78	104	213	133	218	175	374	1936

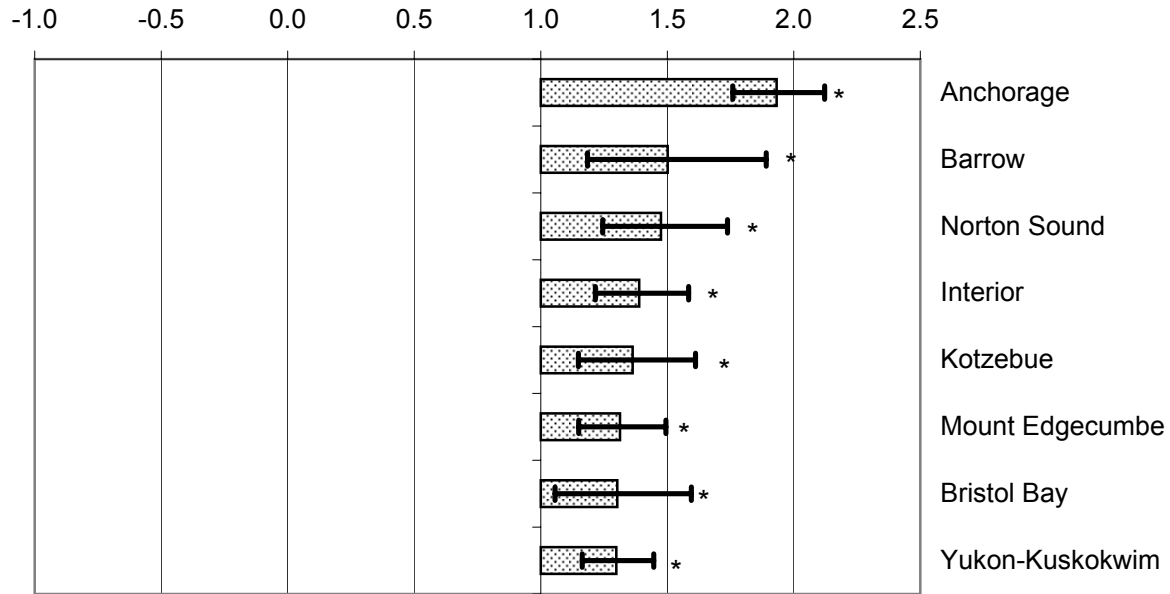
† Data for Service Regions may be slightly different from those reported in the Statewide tables in this book which are using SEER data. There were an additional 25 Alaska Native male deaths that occurred during the 1999-2003 period that had unknown Service Region.

**TABLE 7c. Number of Deaths by Cause by Service Region
Alaska Natives, 1999-2003
Females**

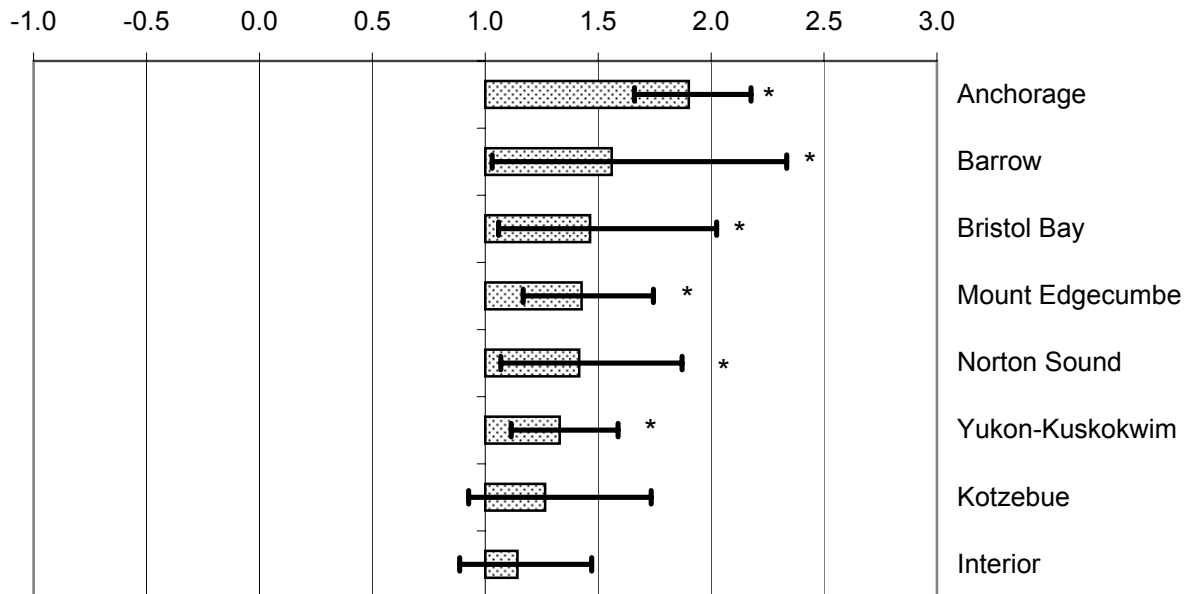
Cause of Death	Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Total†
Cancer	118	11	18	38	19	49	15	49	318
Cerebrovascular Disease	30	3	6	10	6	17	5	9	87
Chronic Liver Disease	26	<3	3	7	0	7	3	<3	49
Chronic Obstructive Pulmonary	30	3	7	10	5	6	6	15	82
Diabetes	14	0	<3	<3	0	5	<3	<3	25
Heart Disease	86	5	9	20	12	43	14	33	222
Homicide and Legal Intervention	15	<3	<3	<3	0	3	4	8	35
Pneumonia and Influenza	10	<3	<3	<3	8	5	3	13	44
Suicide	12	0	<3	6	5	<3	8	8	42
Unintentional Injuries	57	<3	13	14	9	10	12	26	143
Total - All Causes	551	41	73	158	86	204	111	238	1465

† Data for Service Regions may be slightly different from those reported in the Statewide tables in this book which are using SEER data. There were an additional 3 Alaska Native female deaths that occurred during the 1999-2003 period that had unknown Service Region.

**FIGURE 26. Ratio of Alaska Native vs U.S. White
All-Cause Mortality by Service Region, 1999-2003
Both Genders Combined**



**FIGURE 27. Ratio of Alaska Native vs U.S. White
Cancer Mortality by Service Region, 1999-2003
Both Genders Combined**



* p<0.05

FIGURE 28. Ratio of Alaska Native vs U.S. White Cerebrovascular Disease Mortality by Service Region, 1999-2003 Both Genders Combined

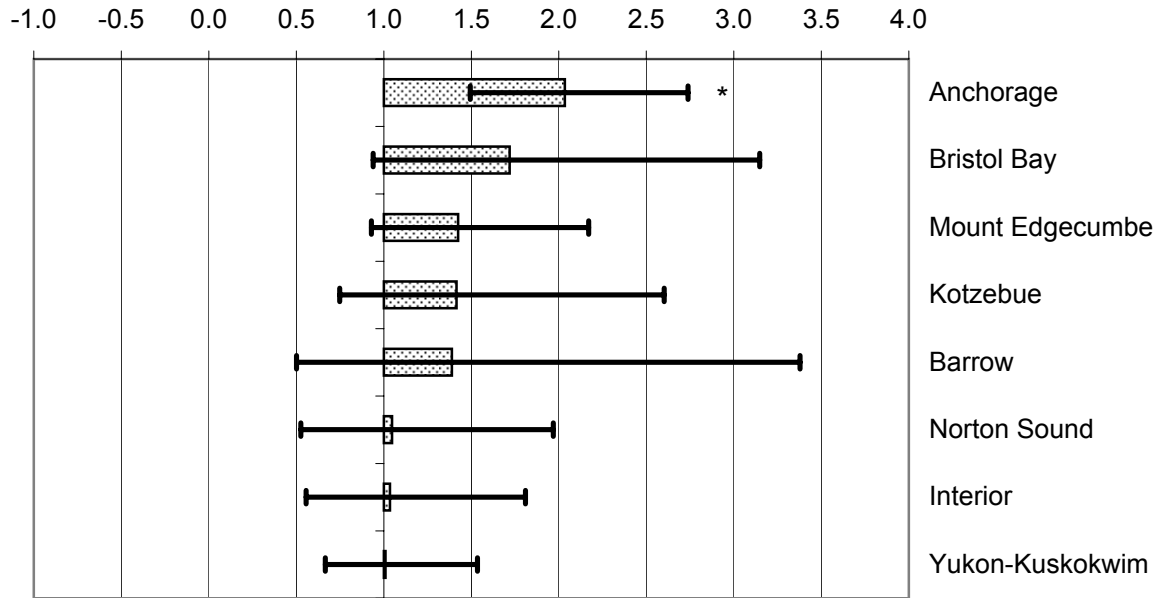
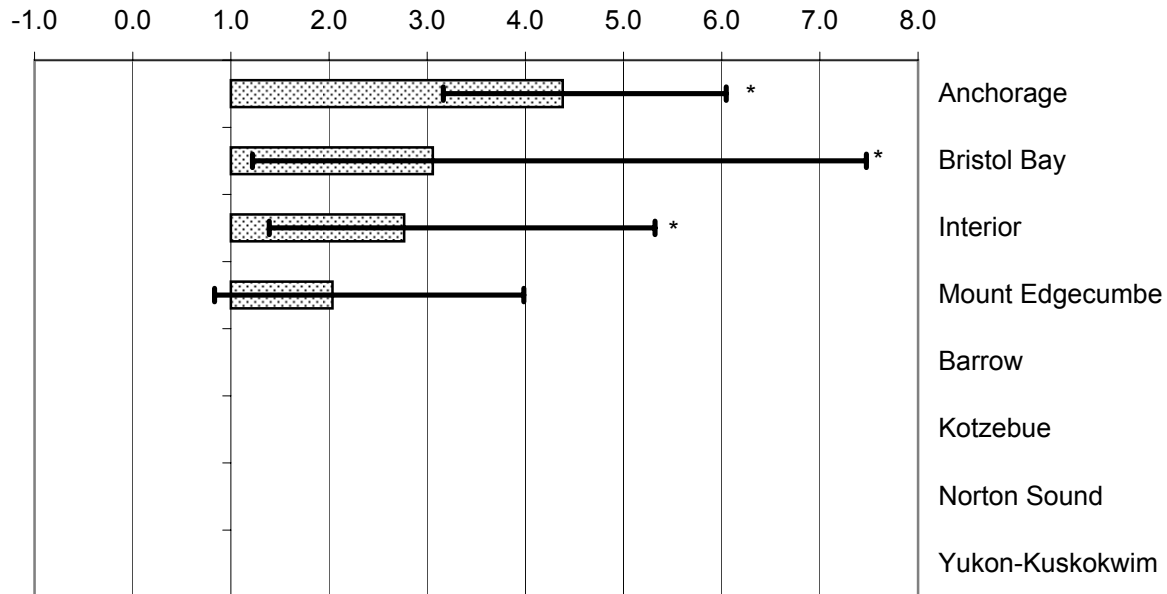
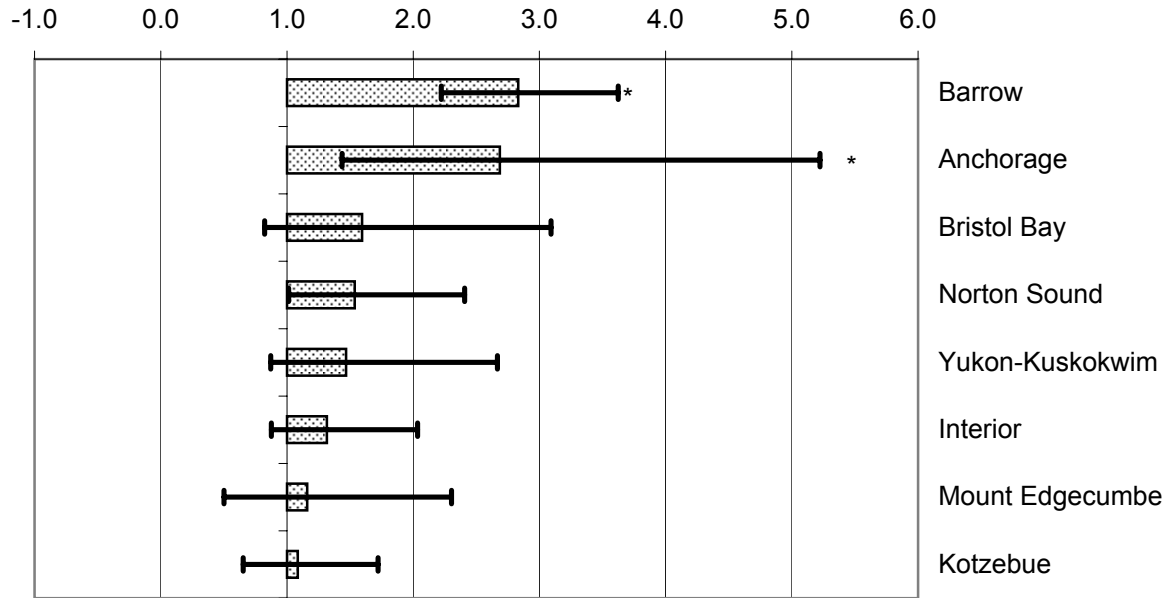


FIGURE 29. Ratio of Alaska Native vs U.S. White Chronic Liver Disease Mortality by Service Region, 1999-2003 Both Genders Combined

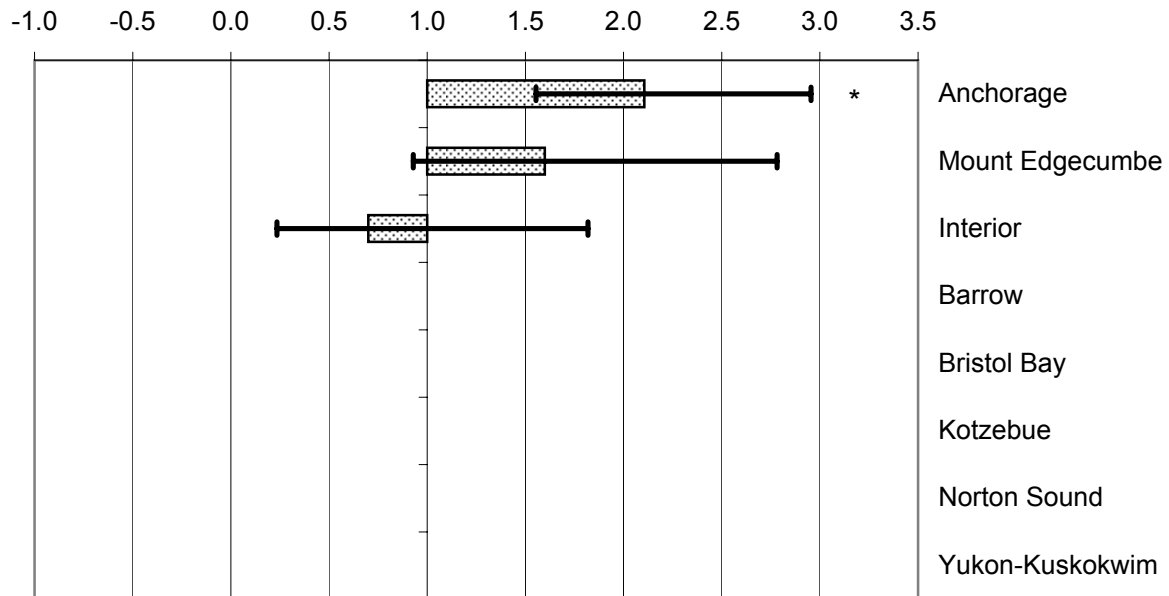


* p<0.05

**FIGURE 30. Ratio of Alaska Native vs U.S. White
Chronic Obstructive Pulmonary Disease Mortality by Service Region, 1999-2003
Both Genders Combined**



**FIGURE 31. Ratio of Alaska Native vs U.S. White
Diabetes Mellitus Mortality by Service Region, 1999-2003
Both Genders Combined**



* p<0.05

FIGURE 32. Ratio of Alaska Native vs U.S. White Heart Disease Mortality by Service Region, 1999-2003 Both Genders Combined

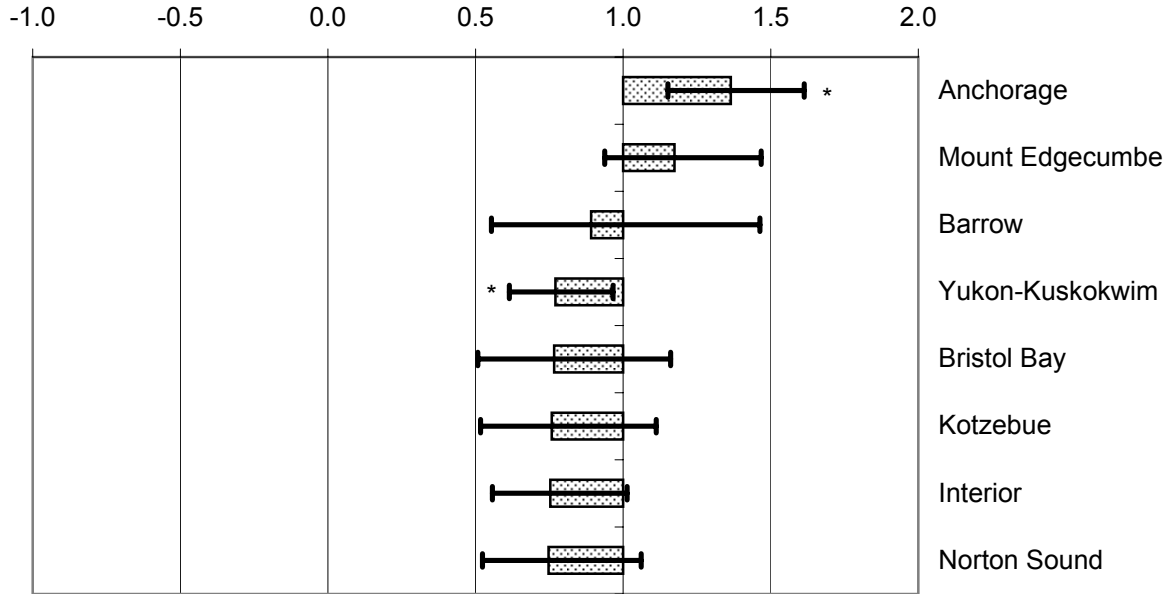
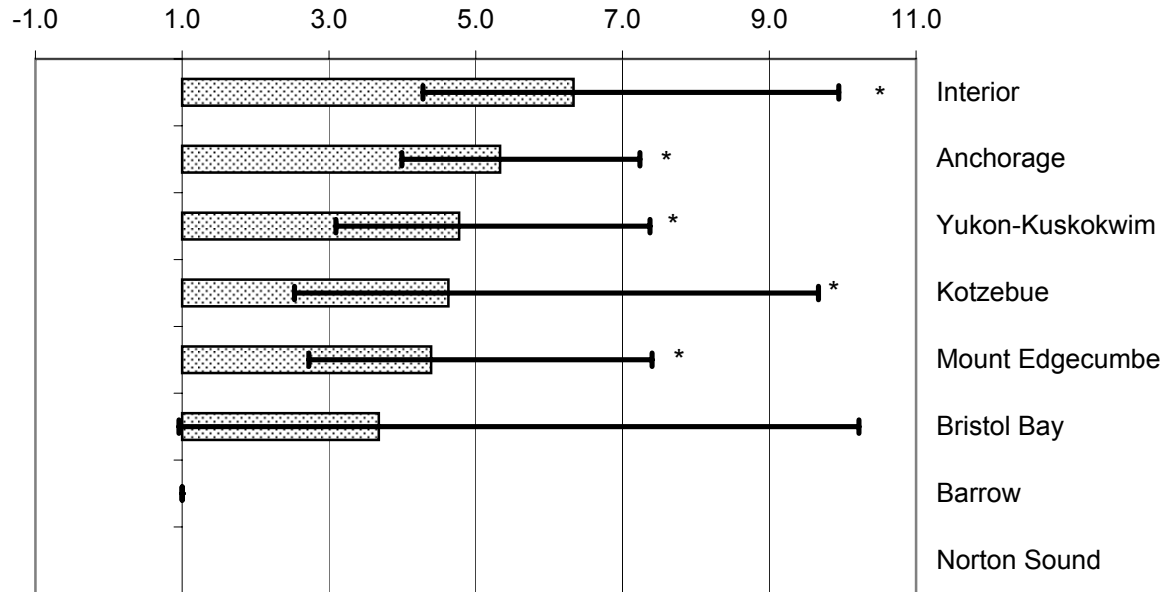
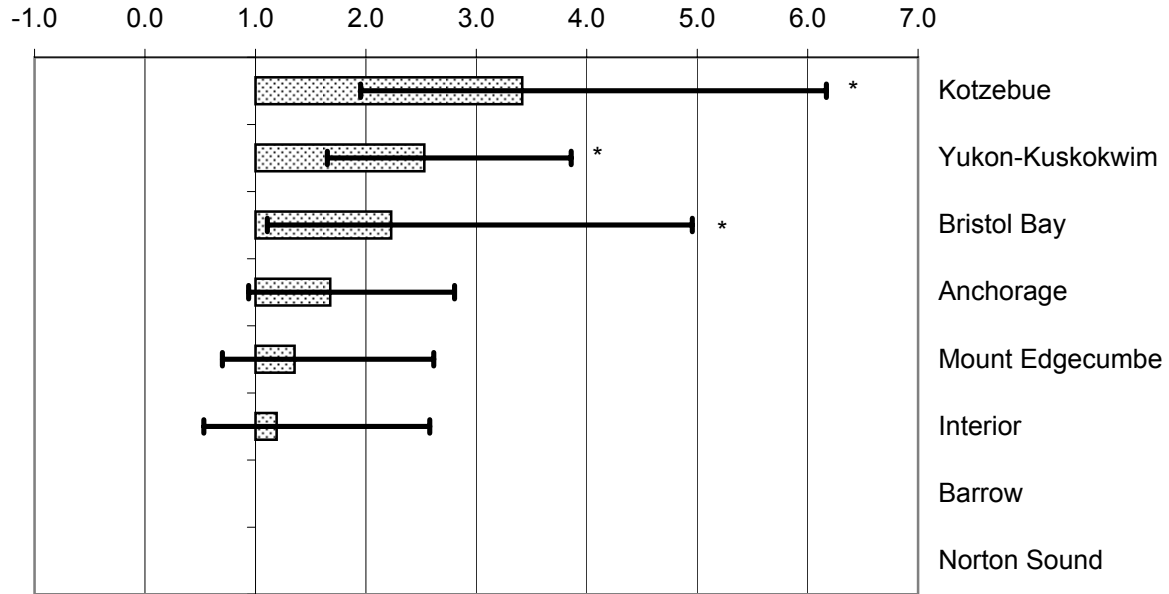


FIGURE 33. Ratio of Alaska Native vs U.S. White Homicide and Legal Intervention by Service Region, 1999-2003 Both Genders Combined

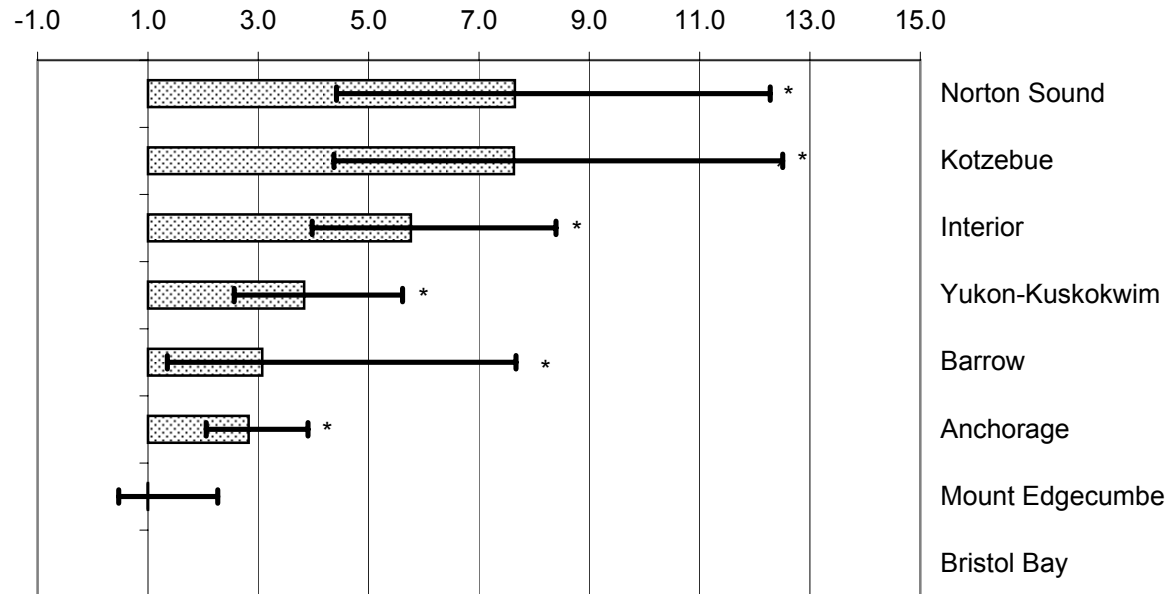


* p<0.05

**FIGURE 34. Ratio of Alaska Native vs U.S. White
Pneumonia and Influenza Mortality by Service Region, 1999-2003
Both Genders Combined**

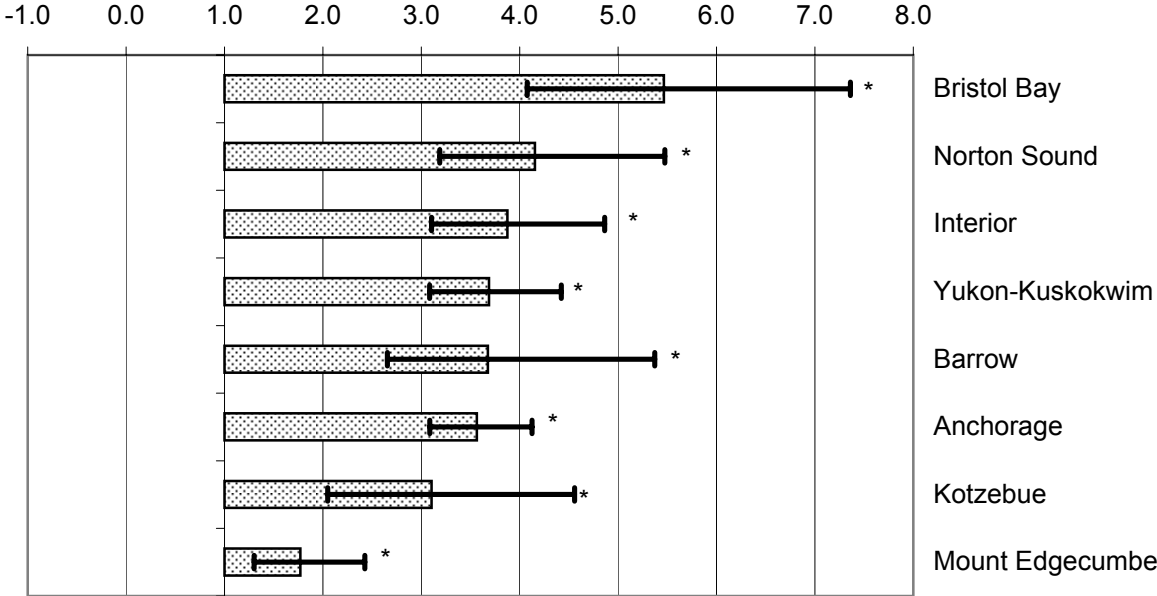


**FIGURE 35. Ratio of Alaska Native vs U.S. White
Suicide by Service Region, 1999-2003
Both Genders Combined**



* p<0.05

**FIGURE 36. Ratio of Alaska Native vs U.S. White
Unintentional Injury Mortality by Service Region, 1999-2003
Both Genders Combined**



* p<0.05

**TABLE 8. Age-Adjusted Mortality Rates[§] for Leading Causes of Death
Alaska Natives vs U.S. Whites for 5-Year Intervals, 1979-2003
Both Genders Combined**

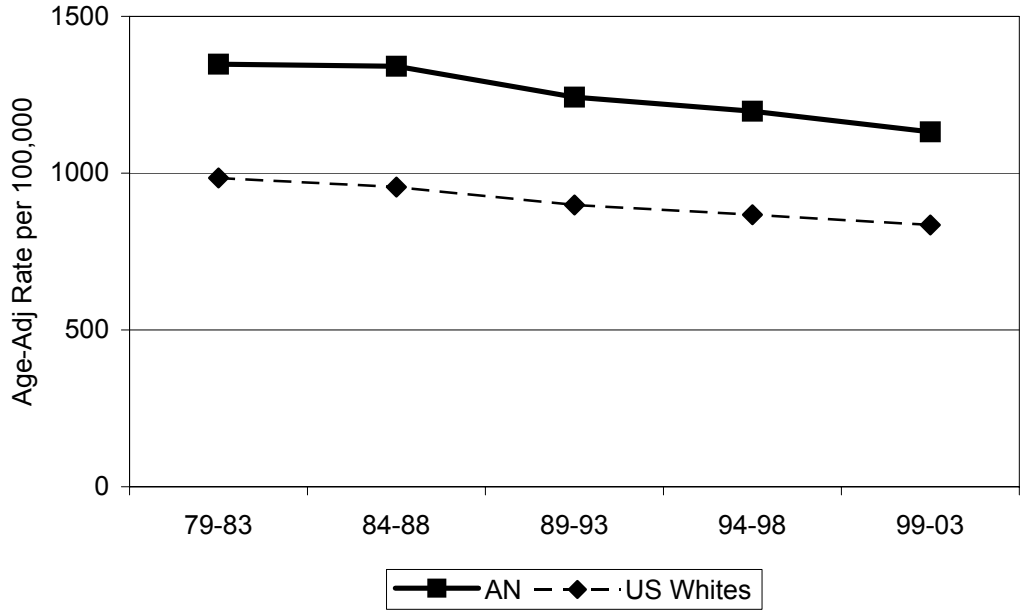
	Time Period	Cancer	Unintentional Injuries	Heart Disease	Suicide	Chronic Obstructive Pulmonary Diseases	Cerebrovascular Diseases	Homicide and Legal Intervention	Pneumonia and Influenza	Chronic Liver Disease and Cirrhosis	Diabetes Mellitus	All Causes
Alaska Natives	1979-1983	246.1	189.5	279.9	39.9	22.3	62.1	35.7	49.4	28.1	7.1	1347.3
	1984-1988	266.6	188.4	317.0	50.0	49.4	71.1	25.1	63.4	20.4	13.5	1341.0
	1989-1993	255.9	140.5	277.8	47.7	62.0	67.5	19.7	57.6	26.8	24.2	1242.6
	1994-1998	268.5	116.3	261.7	42.4	72.6	81.2	15.8	39.4	18.3	21.7	1197.2
	1999-2003	242.3	108.6	210.4	36.1	65.1	70.0	17.7	36.1	19.4	20.9	1131.5
	% Change*	NS	-43%	-25%	NS	192%	NS	-50%	-27%	-31%	194%	-16%
US Whites	1979-1983	203.4	43.4	396.7	13.1	29.8	87.3	6.2	28.6	13.0	16.3	984.9
	1984-1988	207.6	39.1	362.5	13.5	35.8	72.0	5.3	34.2	11.3	15.9	955.8
	1989-1993	209.9	35.5	310.2	13.0	39.2	61.5	5.6	34.6	10.3	18.9	898.6
	1994-1998	202.9	35.1	280.2	12.4	42.2	59.6	4.7	33.2	9.6	21.1	867.5
	1999-2003	193.5	36.4	243.6	11.6	45.8	55.6	4.0	22.5	9.6	22.8	834.6
	% Change*	-4%	-16%	-39%	-12%	54%	-36%	-35%	-21%	-26%	40%	-15%

% Change = (Rate of 1999-2002 - Rate of 1979-1983)/Rate of 1979-1983

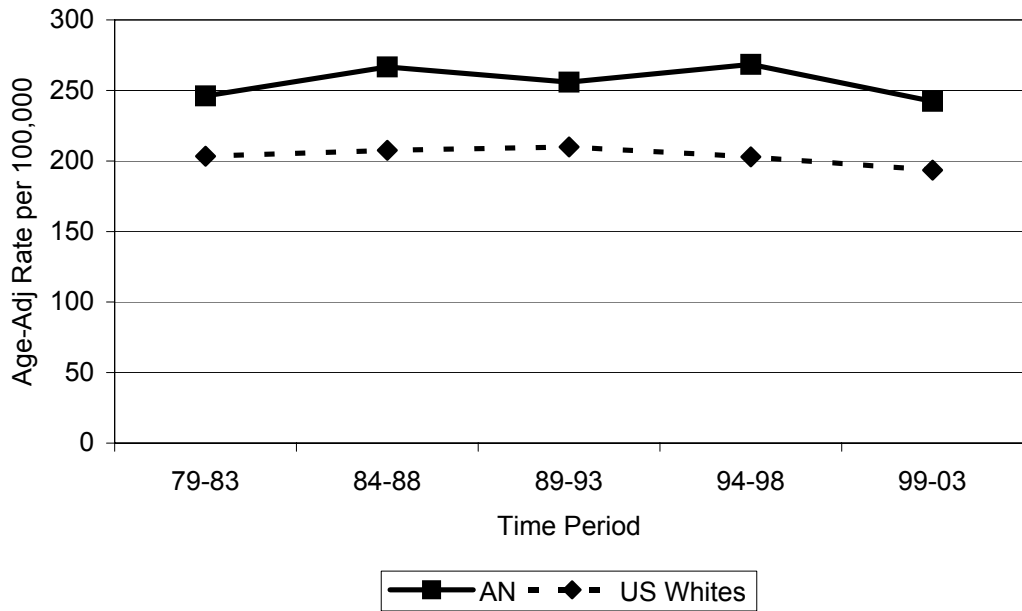
[§] Age-adjusted to the US 2000 Standard population

*A value for % change is given only when a Chi-square test for trend had significance at p<0.05.

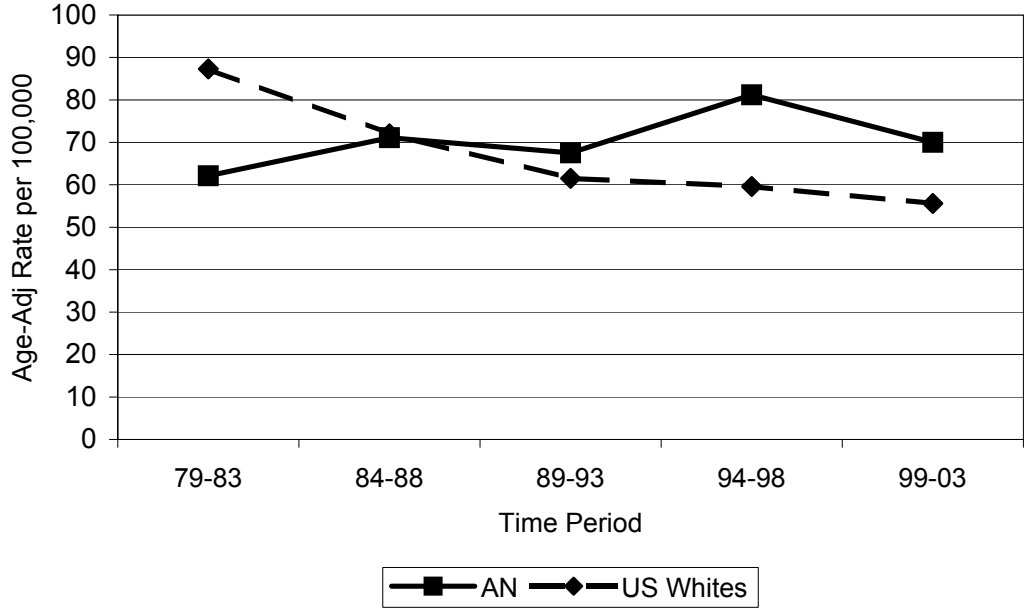
**FIGURE 37. Age-Adjusted Mortality Rates for All Causes
Alaska Natives vs U.S. Whites by Five Year Intervals
1979-2003, Both Genders Combined**



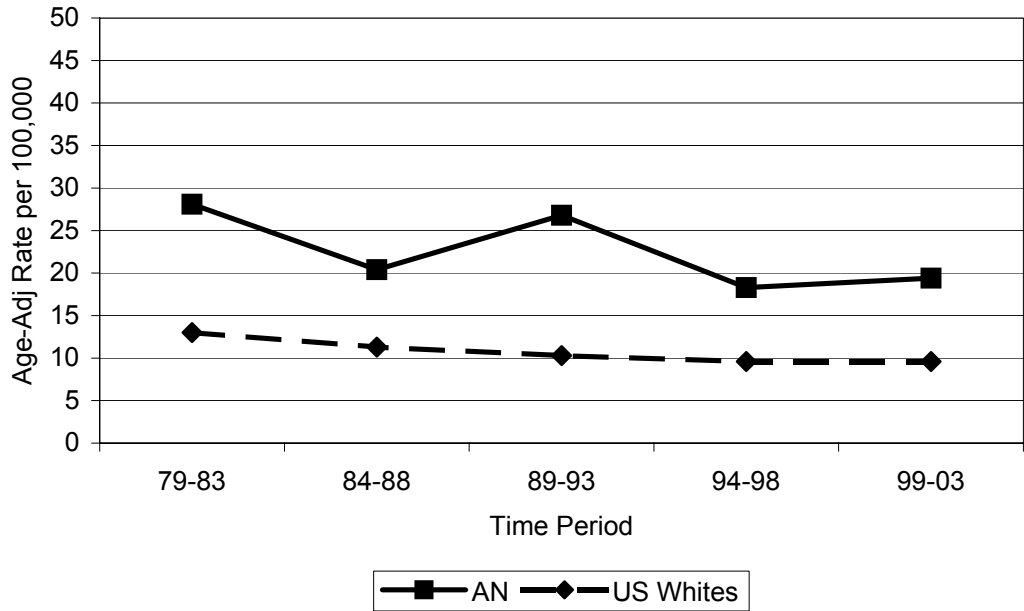
**FIGURE 38. Age-Adjusted Mortality Rates for Cancer
Alaska Natives vs U.S. Whites by Five Year Intervals
1979-2003, Both Genders Combined**



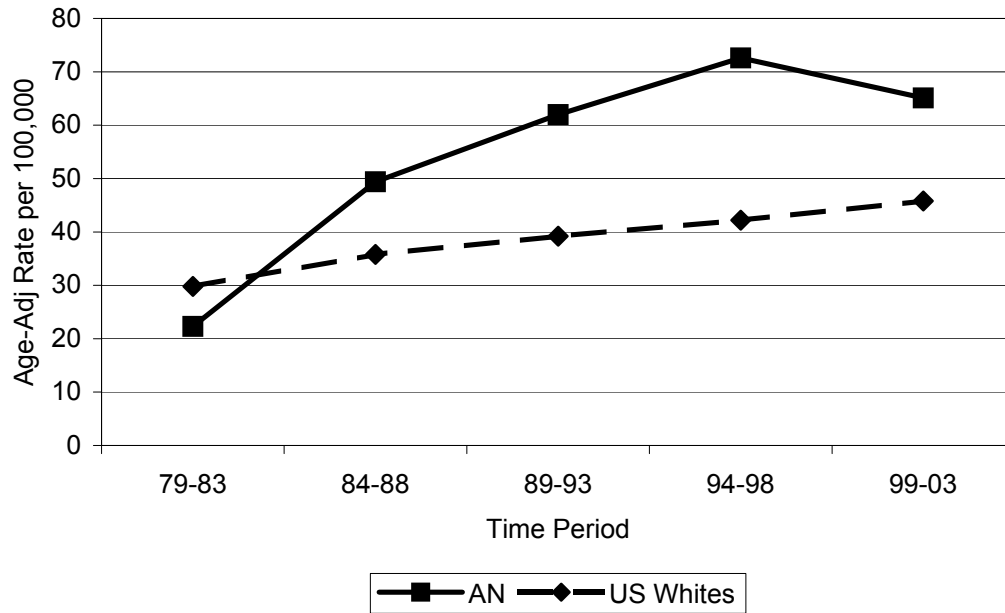
**FIGURE 39. Age-Adjusted Mortality Rates for Cerebrovascular Disease
Alaska Natives vs U.S. Whites by Five Year Intervals
1979-2003, Both Genders Combined**



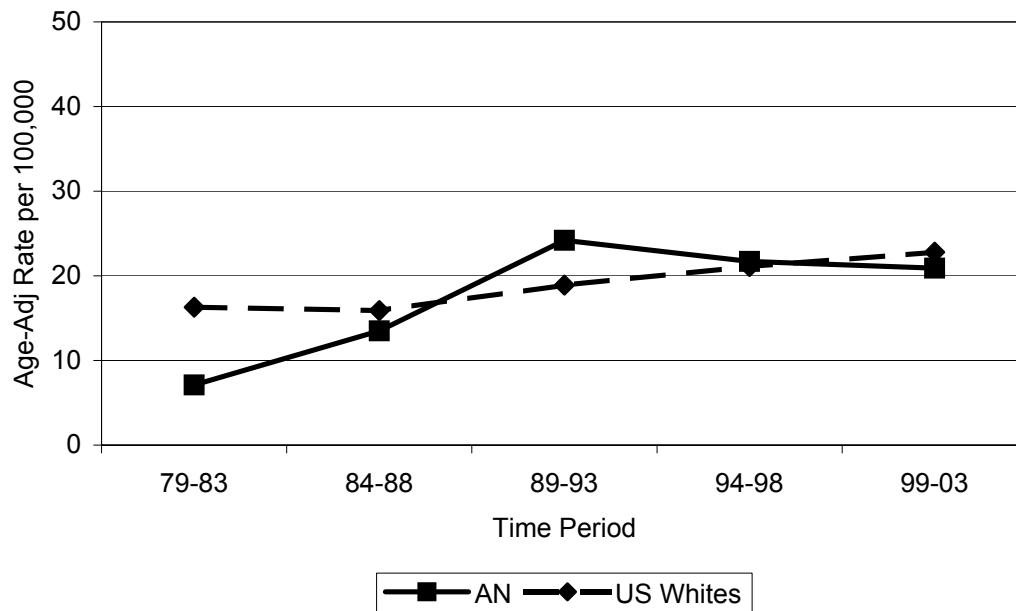
**FIGURE 40. Age-Adjusted Mortality Rates for Chronic Liver Disease
Alaska Natives vs U.S. Whites by Five Year Intervals
1979-2003, Both Genders Combined**



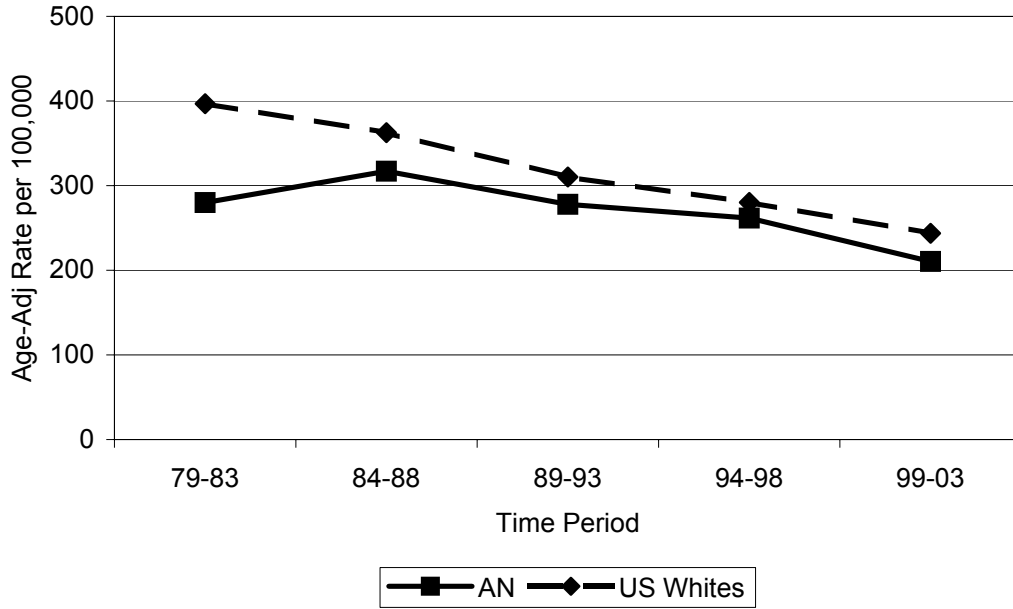
**FIGURE 41. Age-Adjusted Mortality Rates for Chronic Obstructive Pulmonary
Alaska Natives vs U.S. Whites by Five Year Intervals
1979-2003, Both Genders Combined**



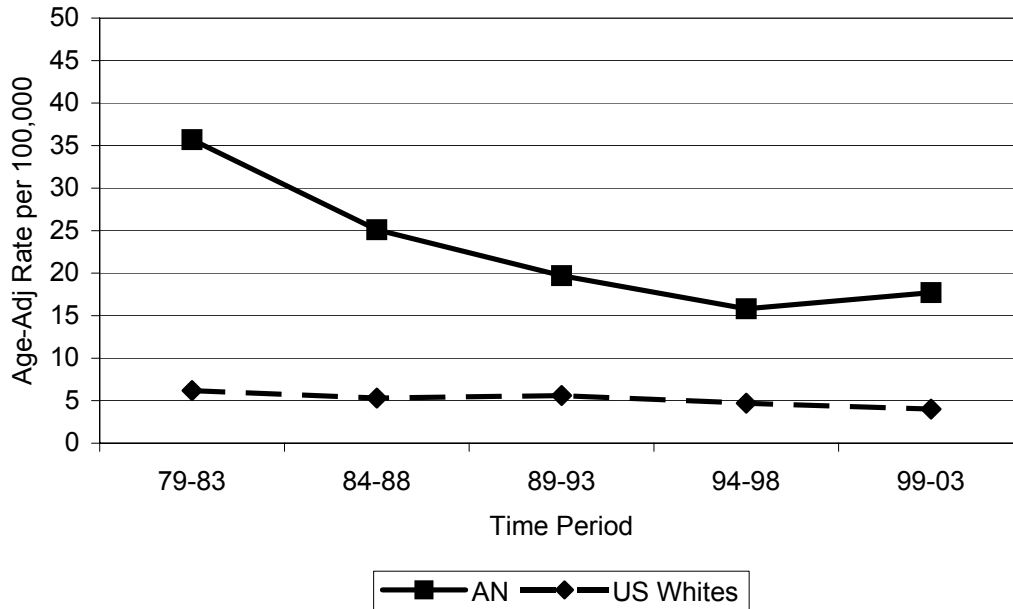
**FIGURE 42. Age-Adjusted Mortality Rates for Diabetes Mellitus
Alaska Natives vs U.S. Whites by Five Year Intervals
1979-2003, Both Genders Combined**



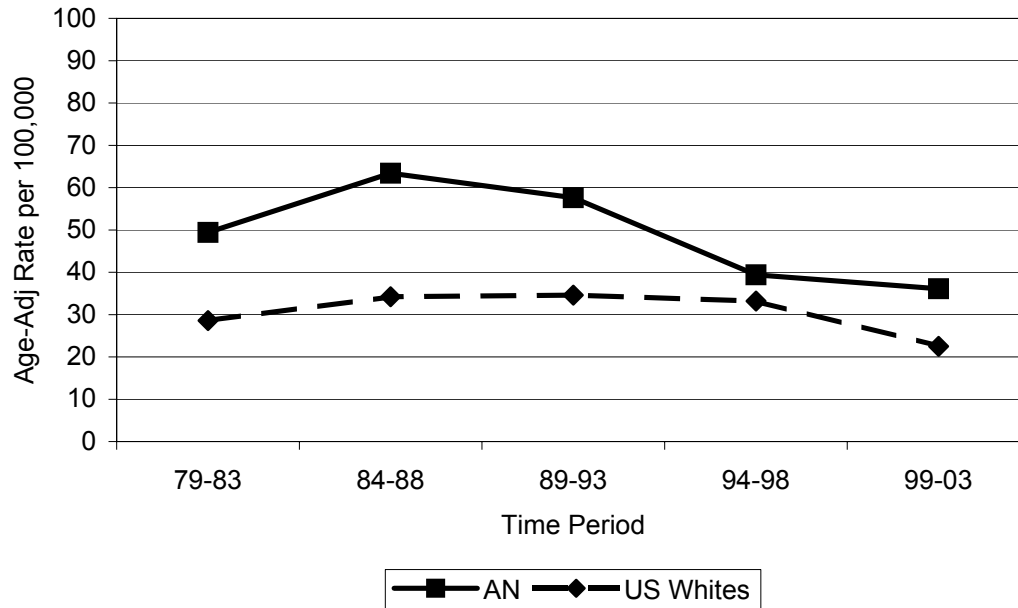
**FIGURE 43. Age-Adjusted Mortality Rates for Heart Disease
Alaska Natives vs U.S. Whites by Five Year Intervals
1979-2003, Both Genders Combined**



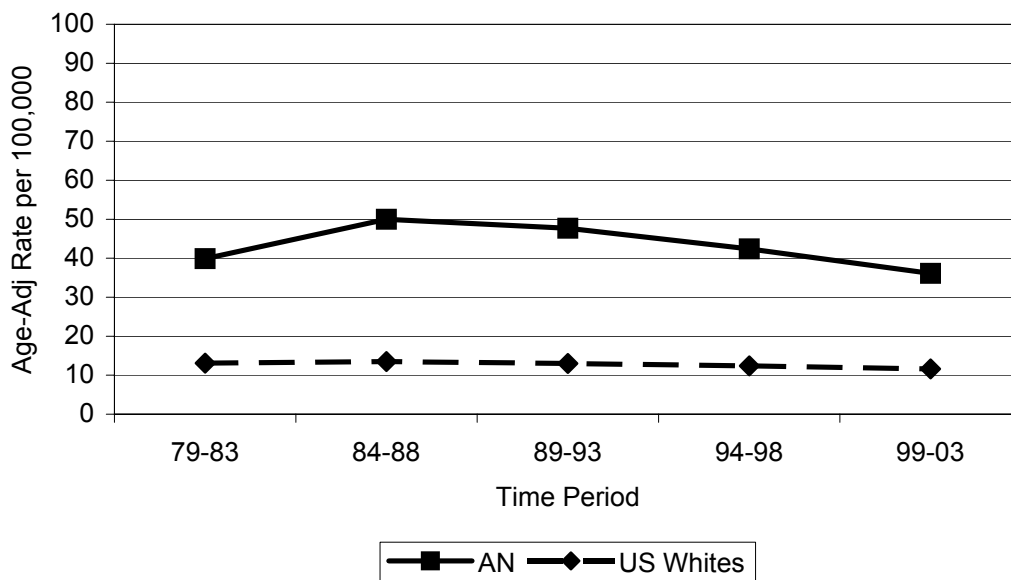
**FIGURE 44. Age-Adjusted Mortality Rates for Homicide and Legal Intervention
Alaska Natives vs U.S. Whites by Five Year Intervals
1979-2003, Both Genders Combined**



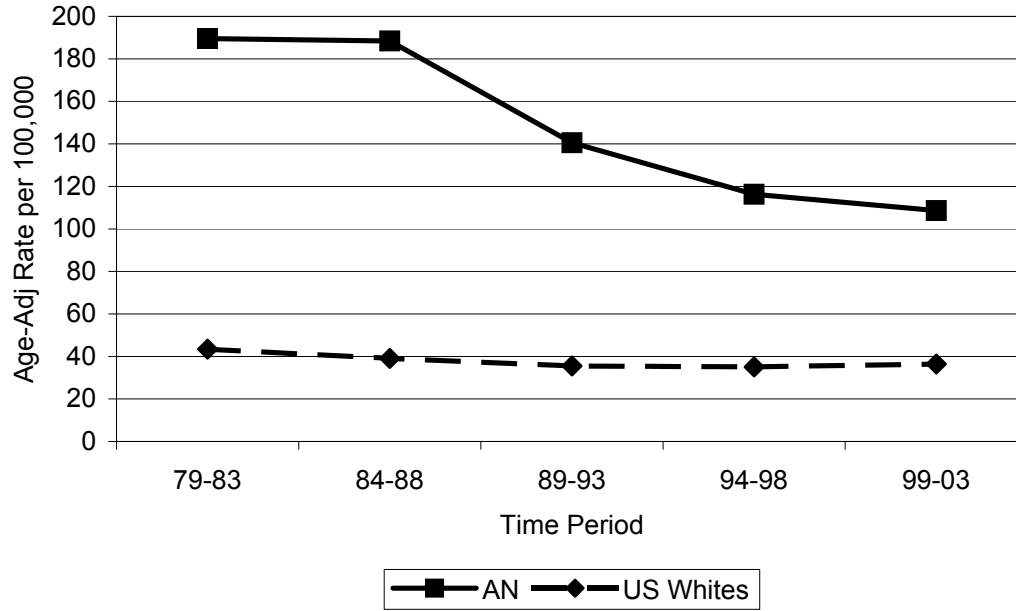
**FIGURE 45. Age-Adjusted Mortality Rates for Pneumonia and Influenza
Alaska Natives vs U.S. Whites by Five Year Intervals
1979-2003, Both Genders Combined**



**FIGURE 46. Age-Adjusted Mortality Rates for Suicide
Alaska Natives vs U.S. Whites by Five Year Intervals
1979-2003, Both Genders Combined**



**FIGURE 47. Age-Adjusted Mortality Rates for Unintentional Injury
Alaska Natives vs U.S. Whites by Five Year Intervals
1979-2003, Both Genders Combined**



ALL-CAUSE MORTALITY

During the period, 1999-2003, a total of 3404 AN deaths were reported. Average annual age-adjusted mortality from all causes for AN, both genders combined, was 1131.5 compared to 834.6 per 100,000 population for USW; a statistically significant rate ratio (RR) of 1.36. The rate for AN men and women were both significantly higher than USW – RR 1.39 and 1.33, respectively.

The three leading causes of death for AN; cancer, unintentional injury and heart disease were responsible for 1663 deaths, nearly half (49%) of the total 3404 deaths. The AN and USW populations shared eight of the ten leading causes of death, although in different rank order. Mortality rates for AN for both genders combined were significantly higher than USW for eight of the leading causes of death (cancer, unintentional injury, suicide, cerebrovascular disease, chronic pulmonary disease, homicide and legal intervention, pneumonia/influenza, and chronic liver disease). Rate ratios of AN compared to USW were highest for unintentional injury (2.98), suicide (3.11) and homicide (4.43). Compared to USW, rate ratios for diabetes mellitus (0.92) and heart disease (0.86) mortality rates were lower, but only heart disease rates were significantly different from USW rates.

Compared to USW, rate ratios were higher among both AN men and women for seven of the ten leading causes of death with one

exception. For chronic liver disease the rate ratio was 0.99 among men and 4.06 among women. In some categories the rate ratios for AN women were higher than men e.g. homicide (6.05 vs 3.81), suicide (3.42 vs. 2.92) and chronic liver disease (4.06 and 0.99).

Age-specific mortality rates for all causes combined showed significantly higher mortality rates among AN than among USW for all age categories except those 75 years and older. Disparities between the two populations were highest under 45 years of age, and appeared to decline progressively in both genders in age groups 45 and over. The decrease in rate ratios with increasing age occurred in both men and women. Age specific rates were higher among men than women for all ages.

All-cause mortality rates were significantly higher than USW rates for all eight service regions (Anchorage, Barrow, Bristol Bay, Interior, Kotzebue, Mt. Edgecumbe, Norton Sound, Yukon-Kuskokwim).

The all-cause mortality rate for AN significantly declined by 16% between 1979 and 2003; similar to the significant 15% decline among USW. Change in rates over time for specific causes of death among AN varied.

Cause of Death Among Alaska Natives, 1999-2003
All-Cause

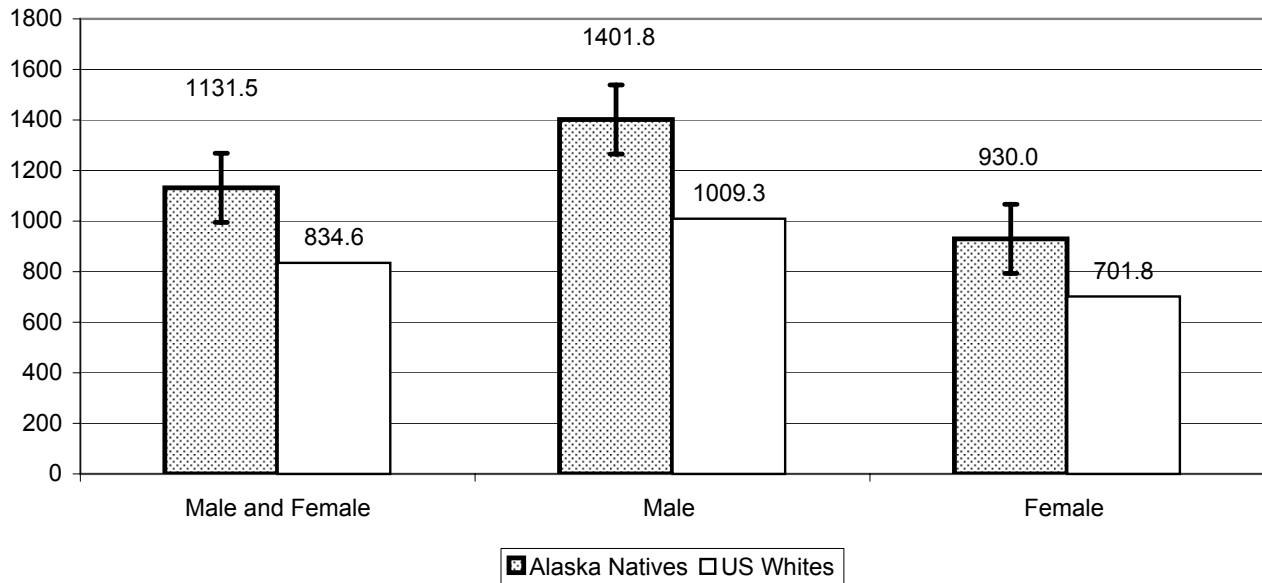
**TABLE 9. Annual Average Age-Adjusted All-Cause Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

	Alaska Natives		Rate [†] per 100,000	U.S. Whites		Rate [†] per 100,000	SMR	Lower 95%	Upper 95%
	#	%		#	%				
Male and Female	3404	100.0%	1131.5	10417185	100.0%	834.6	1.36*	1.31	1.41
Male	1930	100.0%	1401.8	5073433	100.0%	1009.3	1.39*	1.32	1.46
Female	1474	100.0%	930.0	5343752	100.0%	701.8	1.33*	1.26	1.40

* p<0.05

† Age-adjusted to the US 2000 Standard population.

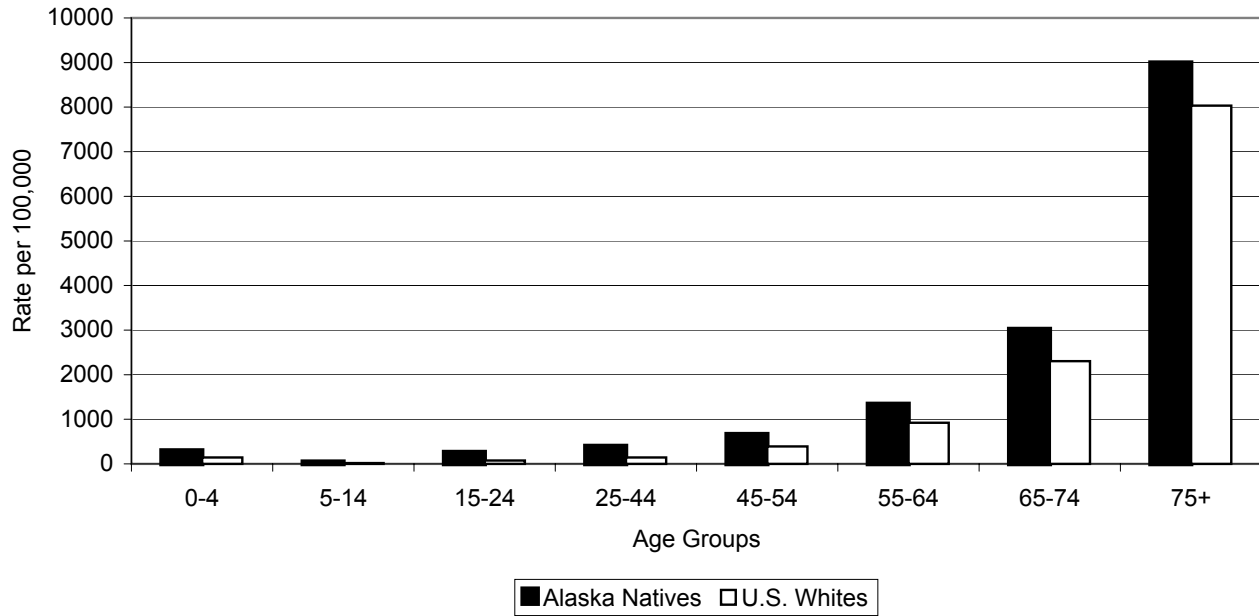
**FIGURE 48. Annual Average Age-Adjusted All-Cause Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**



**TABLE 10a. Annual Average Age-Specific All-Cause Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	297.5	45.6	263	397.4	664.4	1342.6	3022.0	8997.1
U.S. Whites	141.8	16.5	75	142.0	389.5	921.2	2301.9	8032.4

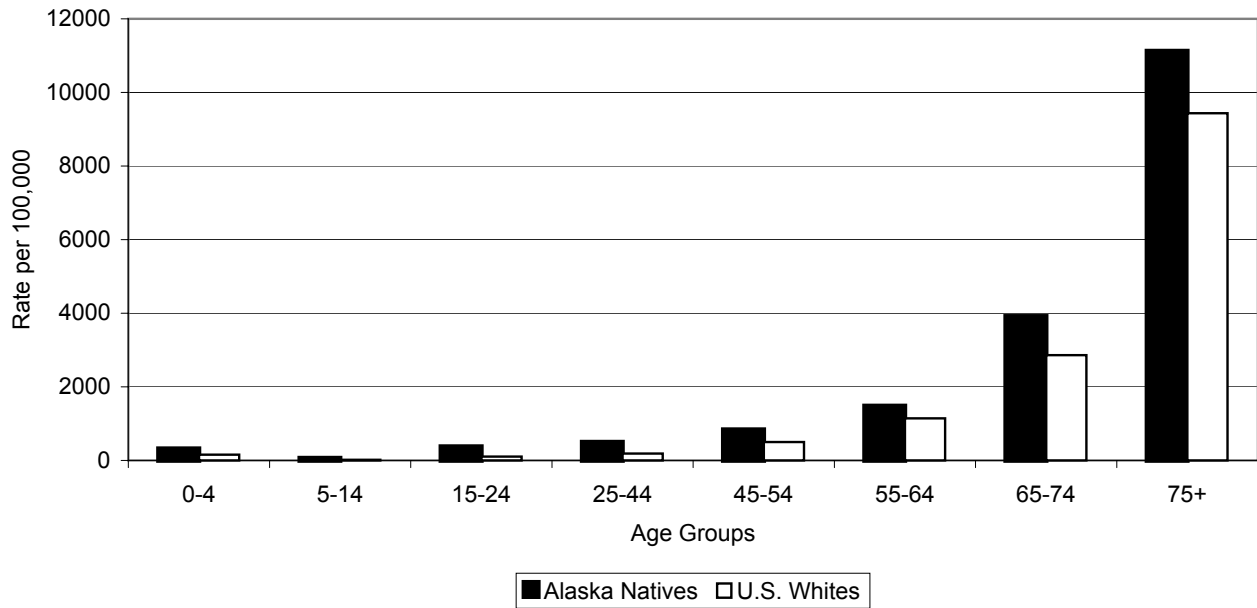
**FIGURE 49a. Annual Average Age-Specific All-Cause Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**



**TABLE 10b. Annual Average Age-Specific All-Cause Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	316.9	62.7	373	495.6	836.4	1478.5	3912.0	11120.4
U.S. Whites	156.7	18.9	106	186.6	498.0	1142.6	2862.7	9436.3

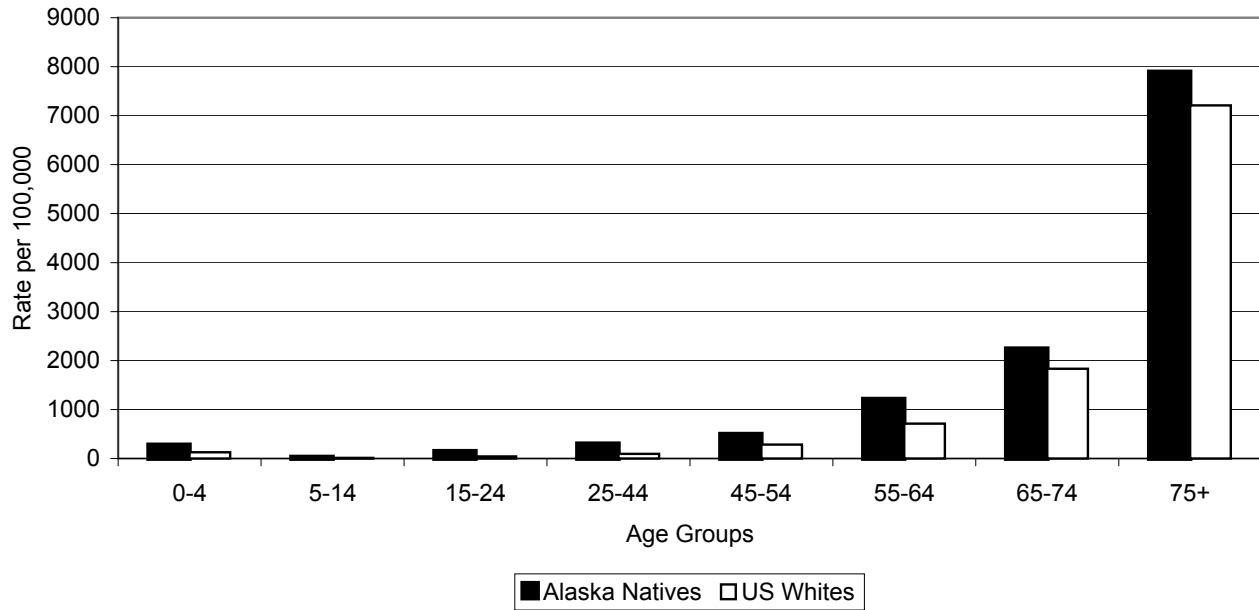
**FIGURE 49b. Annual Average Age-Specific All-Cause Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**



**TABLE 10c. Annual Average Age-Specific All-Cause Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	276.1	27.8	145	300.7	497.1	1212.2	2240.8	7892.4
US Whites	126.2	13.9	42	96.2	282.7	713.6	1832.8	7210.4

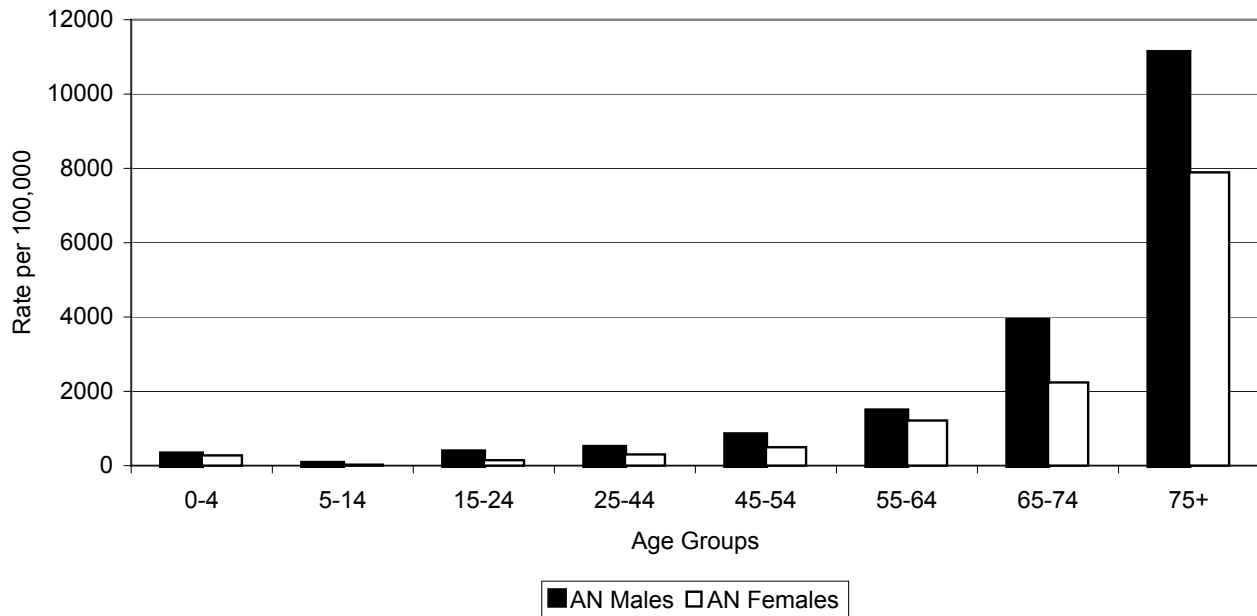
**FIGURE 49c. Annual Average Age-Specific All-Cause Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**



**TABLE 11. Annual Average Age-Specific All-Cause Mortality Rates
Alaska Natives, Males vs Females, 1999-2003**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	316.9	62.7	373	495.6	836.4	1478.5	3912.0	11120.4
AN Females	276.1	27.8	145	300.7	497.1	1212.2	2240.8	7892.4

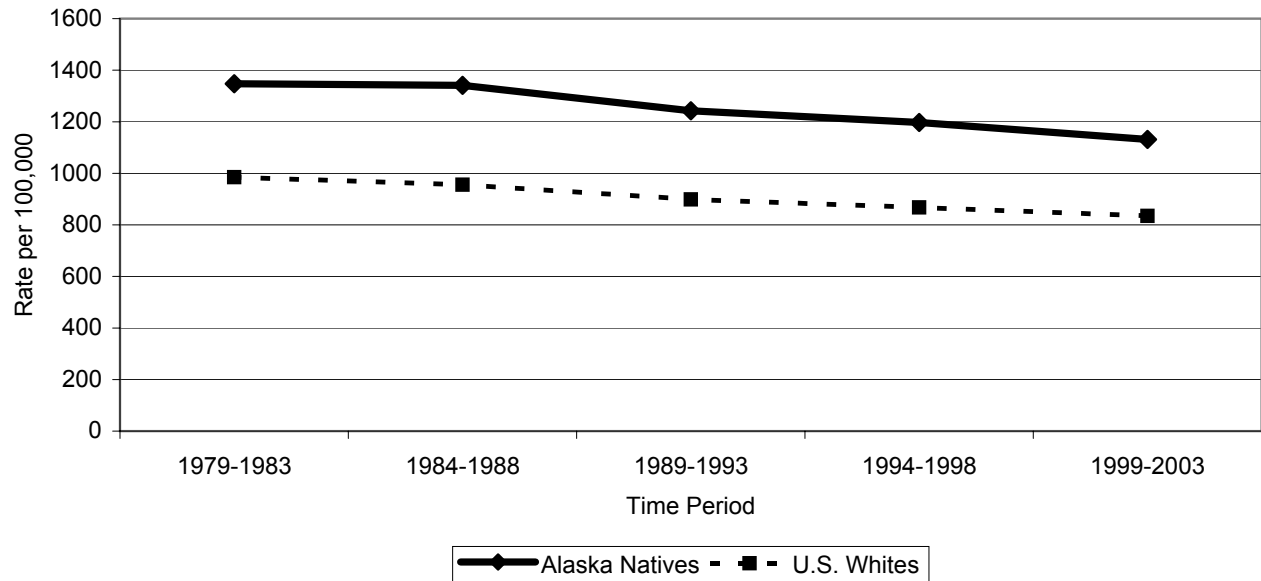
**FIGURE 50. Annual Average Age-Specific All-Cause Mortality Rates
Alaska Natives, Males vs Females, 1999-2003**



**TABLE 12. Trends Over Time in Age-Adjusted All-Cause Mortality Rates
Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined**

Time Period	1979-1983	1984-1988	1989-1993	1994-1998	1999-2003	% Change
Alaska Natives	1347.3	1341.0	1242.6	1197.2	1131.5	-16%
U.S. Whites	984.9	956	898.6	867.5	834.6	-15%

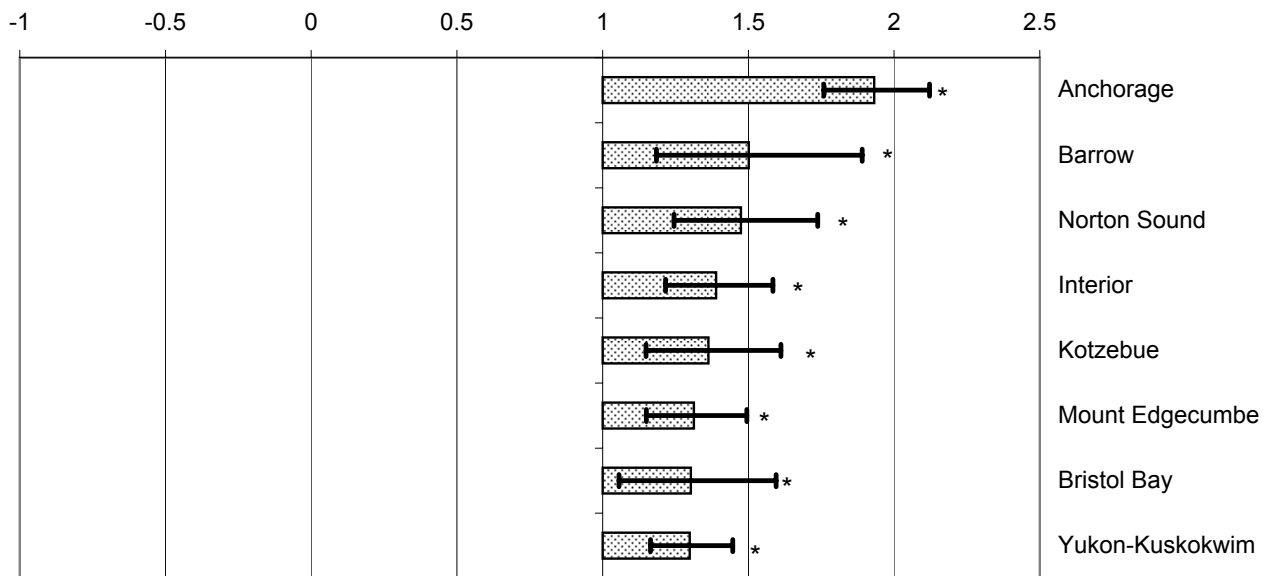
**FIGURE 51. Trends Over Time in Age-Adjusted All-Cause Mortality Rates
Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined**



**TABLE 13. Age-Adjusted All-Cause Mortality Rates by Service Region 1999-2003
Alaska Natives, Both Genders Combined**

Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives	U.S. Whites
1690.4	1241.5	1124.1	1097.1	1030	1193.5	1234.8	1089.1	1133.4	839.3

FIGURE 52. Ratio of All-Cause Mortality For Alaska Natives vs U.S. Whites by Service Region 1999-2003, Both Genders Combined



* p<0.05

#1 CAUSE OF DEATH

CANCER

Cancer was the leading cause of death among AN, both genders combined, for the time period 1999-2003, and was the number one cause of death for AN women and second for AN men. Cancer accounted for 19.4% (n= 660) of all deaths. The cancer mortality rate for AN, both genders combined, was twenty-five percent higher than for USW; 25% higher among AN men, 26% higher for AN women.

There were 126 excess deaths from cancer among AN, both genders combined, during this five year period, comprising 10.3% of all excess deaths. Among AN men (n=64) cancer accounted for 8.6% of excess deaths, the third largest cause of excess deaths. Among AN women (n=62), cancer accounted for 13.0% of all excess deaths, the second largest cause of excess death.

Age-specific cancer mortality rate ratios for AN, both genders combined, compared to USW, ranged from 1.0 to 1.8, and were highest in the 15-24 year age group. Rates were significantly higher for AN compared to USW for the 55-64 year old, and 75 years and older groups. Among AN men, cancer mortality rates were significantly higher than USW men's rates for those age groups 65 years and older. Among AN women, cancer mortality rates were significantly higher than those for USW women for the 55-64 year old and 75 and older age groups. Cancer

mortality rates were significantly higher among AN men as compared to AN women for all age groups 65 years and older.

Examining cancer mortality rates by service region, showed that all service regions had higher rates than USW ranging from 1.1 for the Interior to 1.9 for Anchorage. Differences in rates were significant for all service regions except for Kotzebue and the Interior.

There was little change in AN cancer mortality rates between 1979 and 2003 (246.1 vs. 242.3). USW rates declined significantly (4%) during this time period.

Among AN, both genders combined, three cancers comprised almost half (47%) of all cancer deaths; cancer of the lung and bronchus 25%; colon and rectum 15%; and stomach 7%. Among AN men, the leading cancer deaths were lung and bronchus (29%), colon and rectum (14%), and pancreas (7%). Among AN women, the leading cancer deaths were lung and bronchus (21%), colon and rectum (15%), and breast (12%).

**#1 Cause of Death Among Alaska Natives, 1999-2003
Cancer**

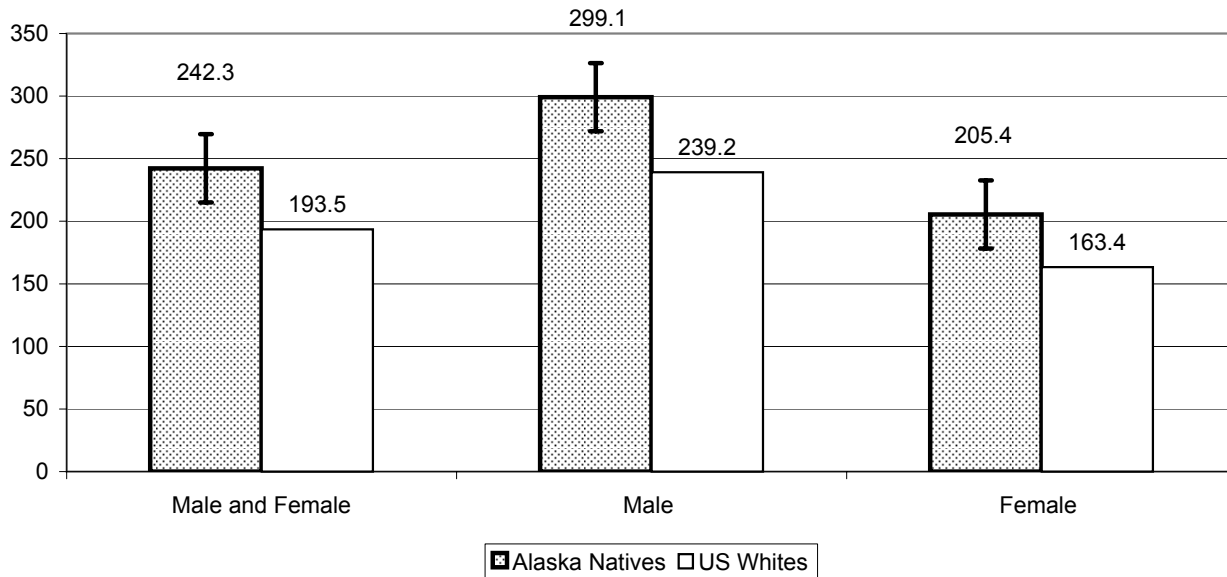
**TABLE 14. Annual Average Age-Adjusted Cancer Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

	Alaska Natives		Rate [†] per 100,000	U.S. Whites		Rate [†] per 100,000	SMR	Lower 95%	Upper 95%
	#	%		#	%				
Male and Female	660	19.4%	242.3	2400904	23.0%	193.5	1.25*	1.16	1.36
Male	349	18.1%	299.1	1241839	24.5%	239.2	1.25*	1.11	1.41
Female	311	21.1%	205.4	1159065	21.7%	163.4	1.26*	1.12	1.41

* p<0.05

† Age-adjusted to the US 2000 Standard population.

**FIGURE 53. Annual Average Age-Adjusted Cancer Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

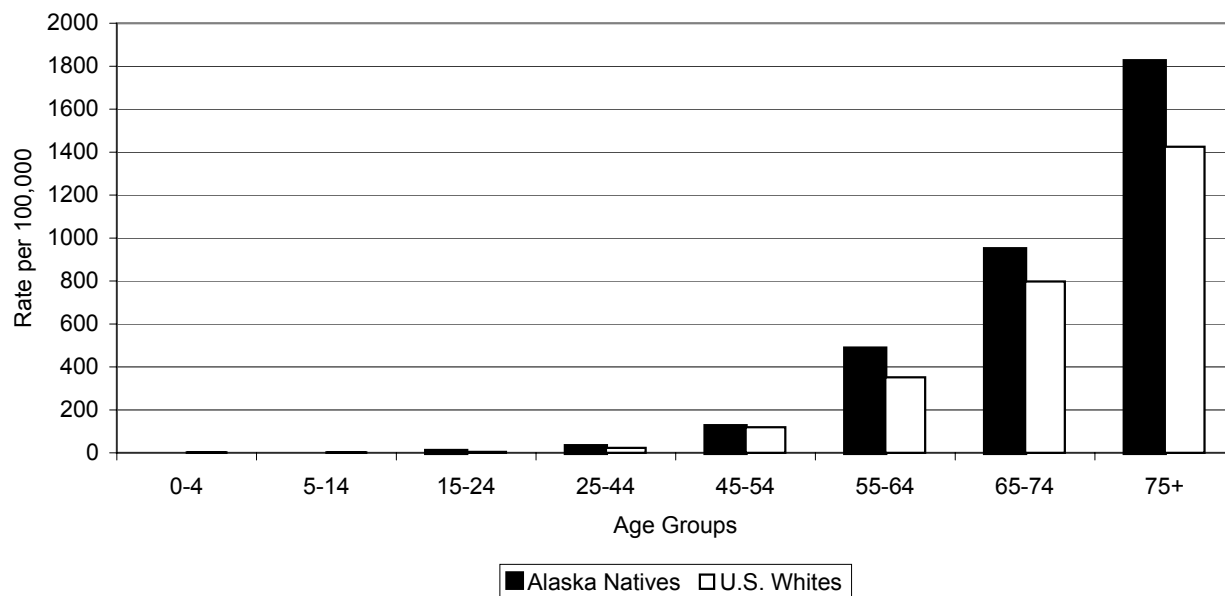


**TABLE 15a. Annual Average Age-Specific Cancer Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	7.9	30.7	123.9	484.7	947.5	1822.9
U.S. Whites	2.6	2.6	4.3	23.2	119.2	351.4	797.8	1425.0

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 54a. Annual Average Age-Specific Cancer Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

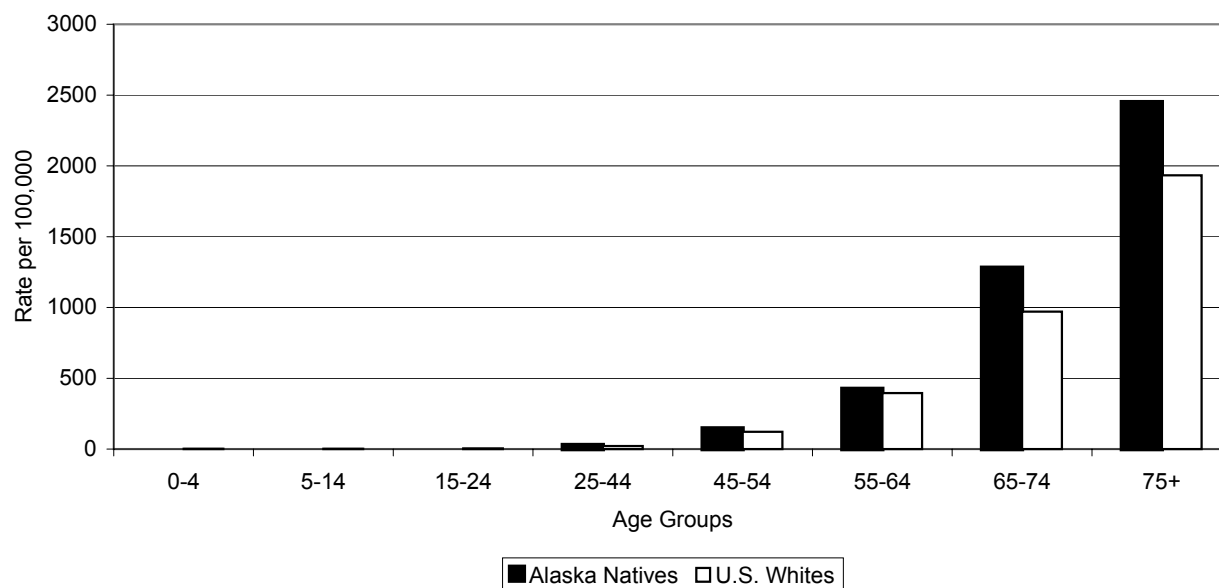


**TABLE 15b. Annual Average Age-Specific Cancer Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	27.9	145.9	424.4	1280.6	2449.3
U.S. Whites	2.8	2.7	4.9	21.0	121.8	395.2	970.3	1932.8

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 54b. Annual Average Age-Specific Cancer Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

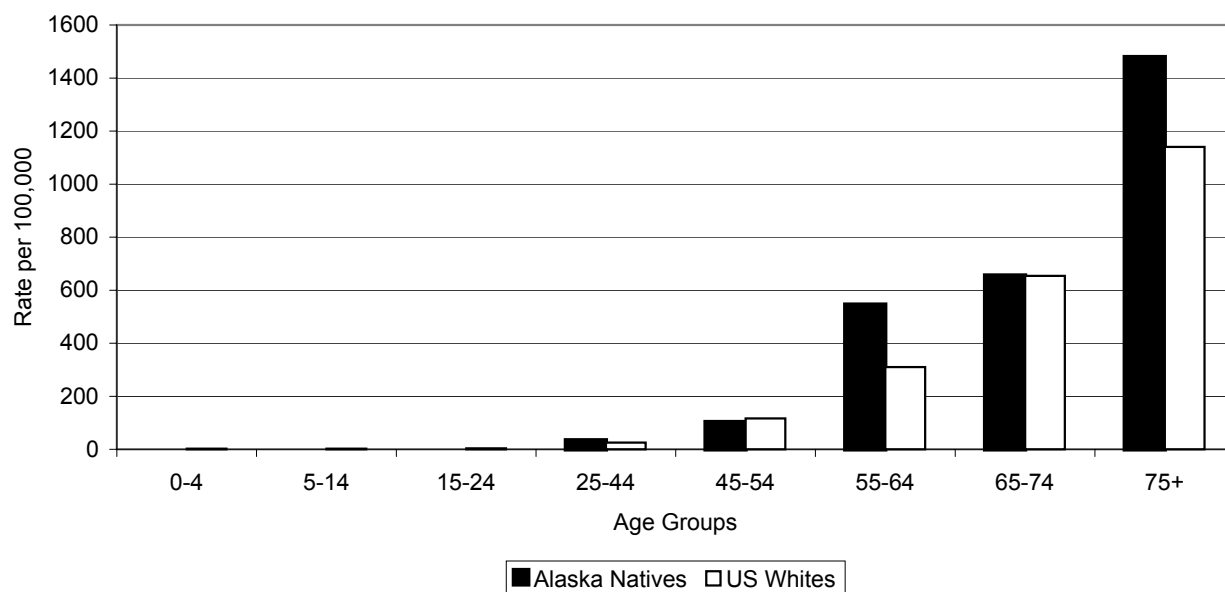


**TABLE 15c. Annual Average Age-Specific Cancer Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	33.6	102.5	545.5	655.4	1479.0
US Whites	2.4	2.4	3.5	25.4	116.5	310.4	653.7	1140.3

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 54c. Annual Average Age-Specific Cancer Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

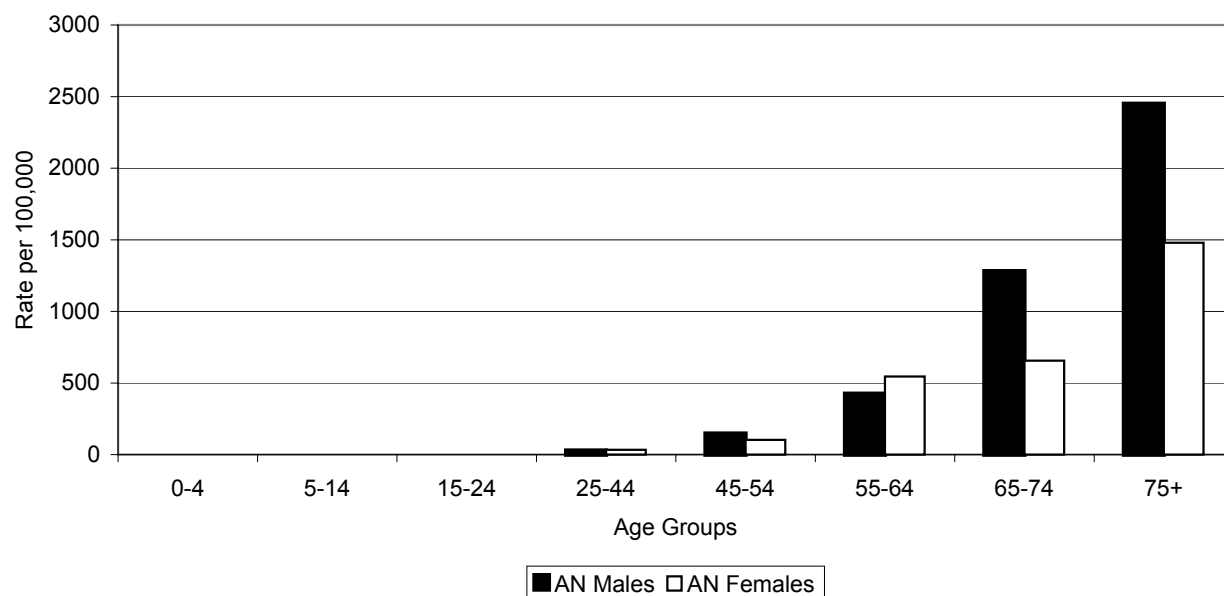


**TABLE 16. Annual Average Age-Specific Cancer Mortality Rates
Alaska Natives, Males vs Females, 1999-2003**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	27.9	145.9	424.4	1280.6	2449.3
AN Females	-	-	-	33.6	102.5	545.5	655.4	1479.0

(-) Rate not calculated for fewer than 5 deaths.

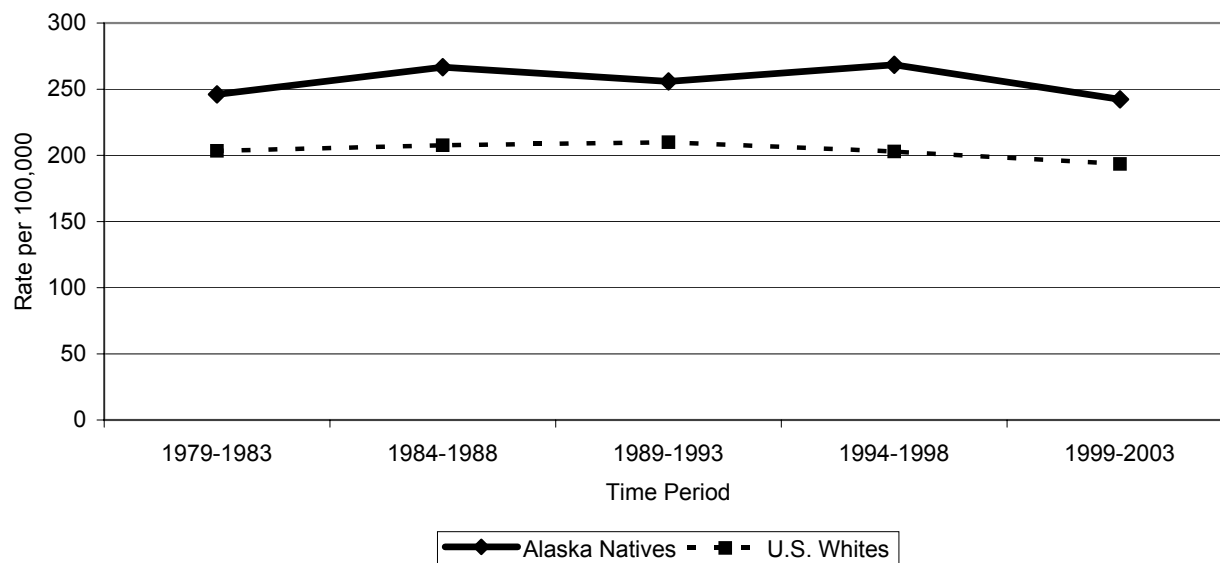
**FIGURE 55. Annual Average Age-Specific Cancer Mortality Rates
Alaska Natives, Males vs Females, 1999-2003**



**TABLE 17. Trends Over Time in Age-Adjusted Cancer Mortality Rates
Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined**

Time Period	1979-1983	1984-1988	1989-1993	1994-1998	1999-2003	% Change
Alaska Natives	246.1	266.6	255.9	268.5	242.3	NS
U.S. Whites	203.4	207.6	209.9	202.9	193.5	-4%

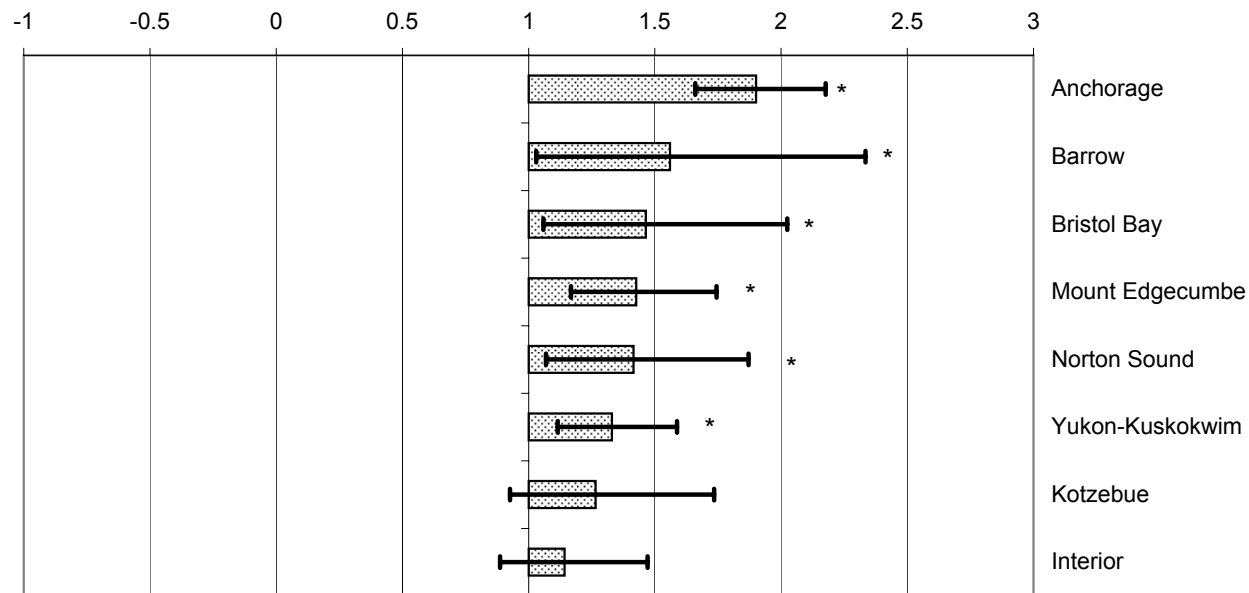
**FIGURE 56. Trends Over Time in Age-Adjusted Cancer Mortality Rates
Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined**



**TABLE 18. Age-Adjusted Cancer Mortality Rates by Service Region 1999-2003
Alaska Natives, Both Genders Combined**

Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives	U.S. Whites
370.2	303.7	285.1	222.4	246.3	277.7	275.6	258.9	245.4	193.5

**FIGURE 57. Ratio of Cancer Mortality For Alaska Natives vs U.S. Whites by
Service Region 1999-2003, Both Genders Combined**



* p<0.05

#2 CAUSE OF DEATH

HEART DISEASE

Heart disease was the second leading cause of death among AN, both genders combined. It ranked third among AN men, but second among AN women. Heart disease accounted for 14.8% (n=504) of all deaths among AN. Heart disease mortality rates for AN, both genders combined, were significantly lower than USW rates as were rates for AN women. Heart disease mortality rates among AN men were lower, but not significantly lower than USW men.

Because of the relatively low mortality rate from heart disease among AN, 54 fewer deaths (26 men, 28 women) occurred among this population than would have been expected.

Compared to USW, age-specific rates of heart disease mortality for AN males and females were not significantly different except among the 75 and older age groups. Comparing AN men to women, AN men had significant rate ratios 1.6 to 3.3 times higher than AN women for age groups 25 -74 years.

Examining heart disease mortality rates by service region showed that the Anchorage service region (RR=1.4) had a significantly higher rate ratio and Yukon-Kuskokwim (RR=0.8) had a significantly lower rate ratio than USW. No other service regions had

significantly different rates although all the others had lower rates.

Heart disease mortality rates for AN declined 25% between 1979 and 2003. Most of this decline (20%) occurred during the 1999-2003 time period. Heart disease mortality for USW declined 39% between 1979 and 2003.

**#2 Cause of Death Among Alaska Natives, 1999-2003
Heart Disease**

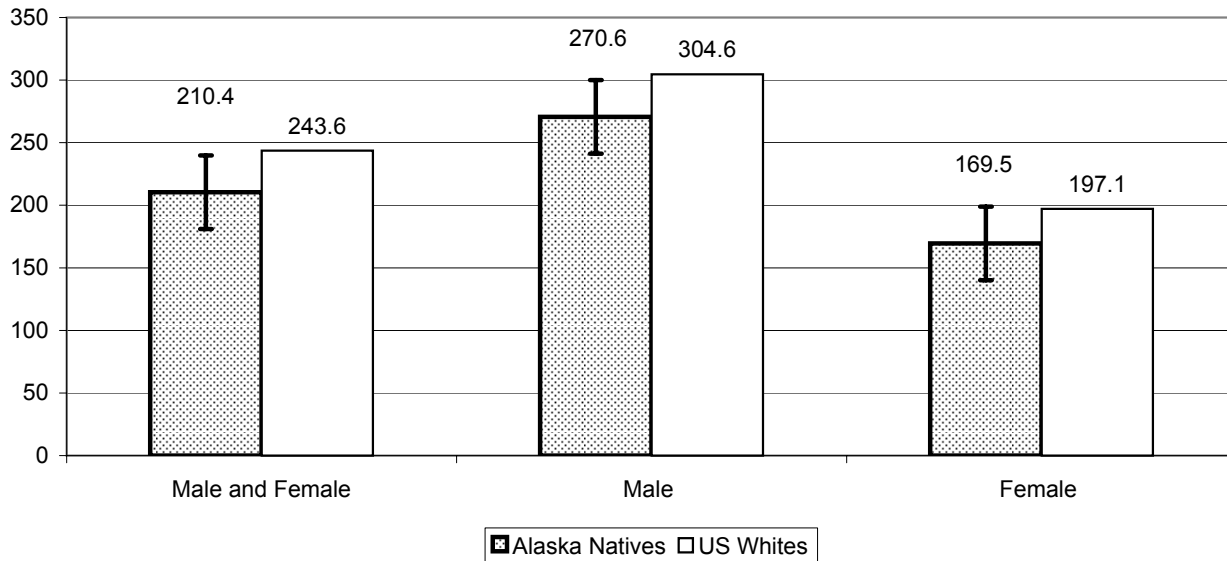
**TABLE 19. Annual Average Age-Adjusted Heart Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

	Alaska Natives		Rate [†] per 100,000	U.S. Whites		Rate [†] per 100,000	SMR	Lower 95%	Upper 95%
	#	%		#	%				
Male and Female	504	14.8%	210.4	3069015	29.5%	243.6	0.86*	0.79	0.95
Male	281	14.6%	270.6	1493023	29.4%	304.6	0.89	0.78	1.02
Female	223	15.1%	169.5	1575992	29.5%	197.1	0.86*	0.75	0.98

* 95% CI does not include 1.

† Age-adjusted to the US 2000 Standard population.

**FIGURE 58. Annual Average Age-Adjusted Heart Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

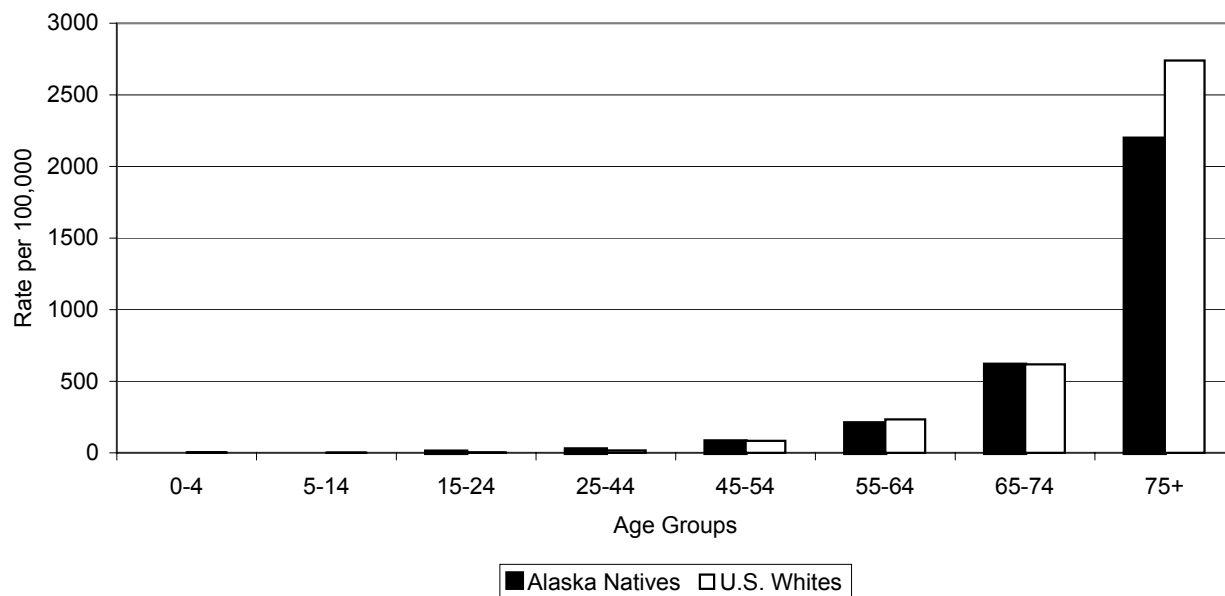


**TABLE 20a. Annual Average Age-Specific Heart Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	8.1	24.0	79.5	205.7	614.9	2193.0
U.S. Whites	2.9	0.6	2.1	17.3	84.3	233.1	617.9	2739.6

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 59a. Annual Average Age-Specific Heart Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

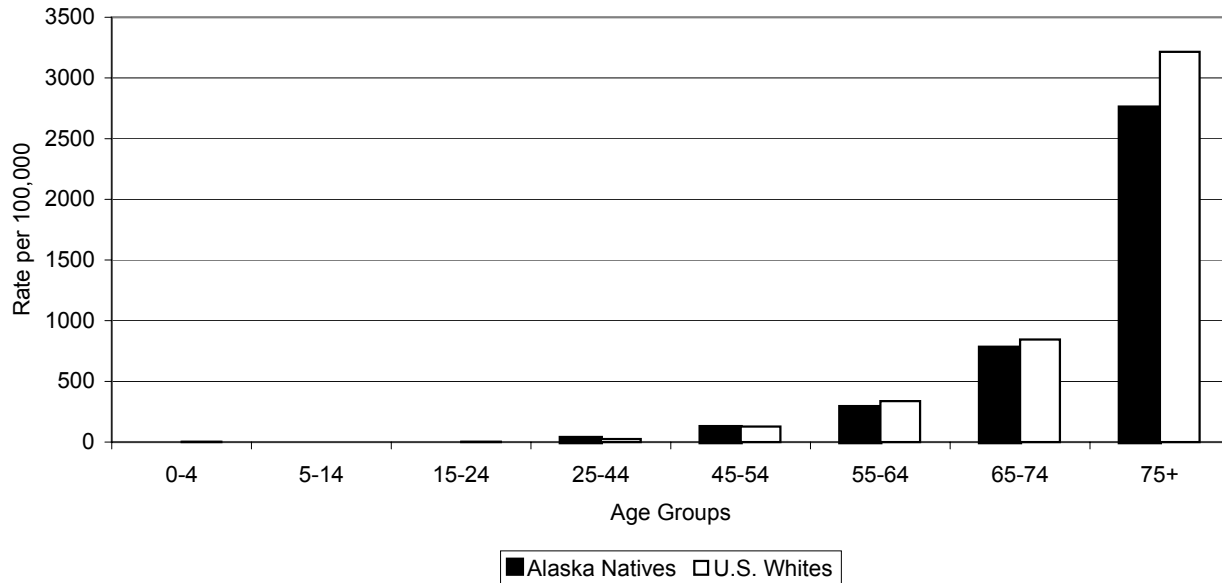


**TABLE 20b. Annual Average Age-Specific Heart Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	33.4	122.6	287.6	776.9	2755.5
U.S. Whites	3.1	0.6	2.7	24.9	128.1	337.0	844.8	3214.9

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 59b. Annual Average Age-Specific Heart Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

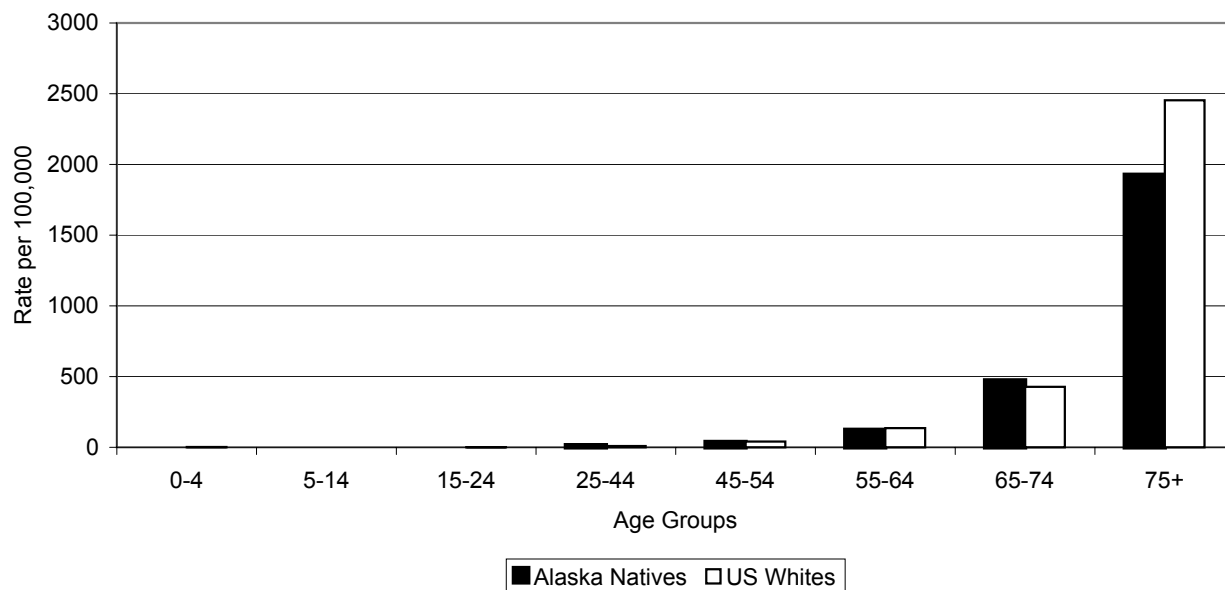


**TABLE 20c. Annual Average Age-Specific Heart Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	14.9	37.6	123.3	473.3	1926.0
US Whites	2.7	0.5	1.6	9.6	41.2	135.6	427.8	2453.7

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 59c. Annual Average Age-Specific Heart Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

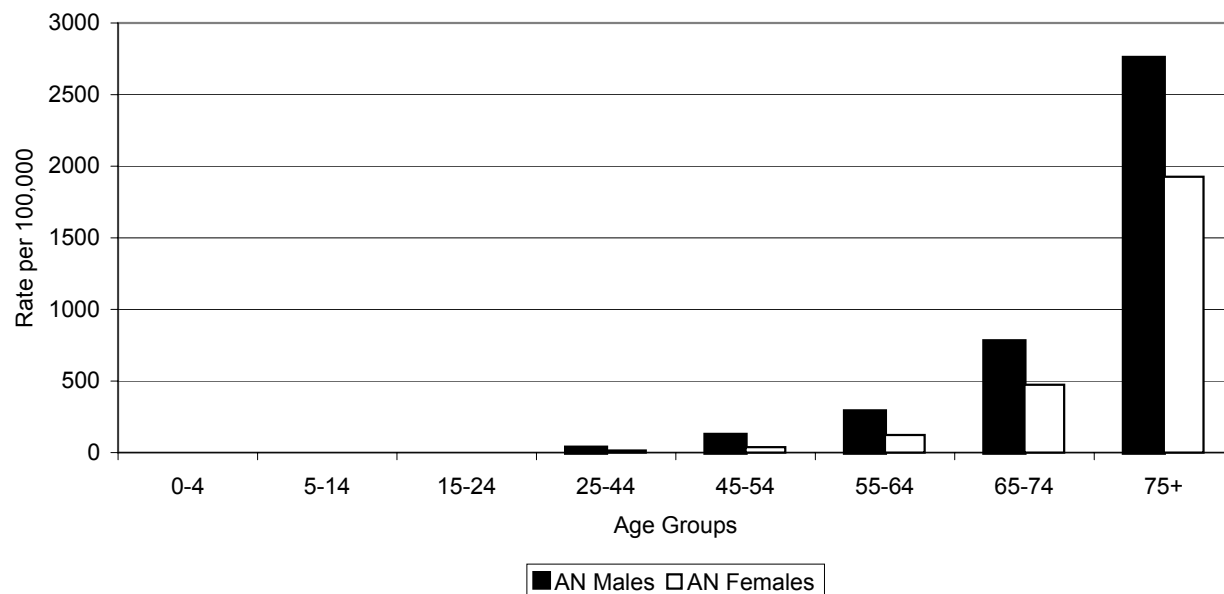


**TABLE 21. Annual Average Age-Specific Heart Disease Mortality Rates
Alaska Natives, Males vs Females, 1999-2003**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	33.4	122.6	287.6	776.9	2755.5
AN Females	-	-	-	14.9	37.6	123.3	473.3	1926.0

(-) Rate not calculated for fewer than 5 deaths.

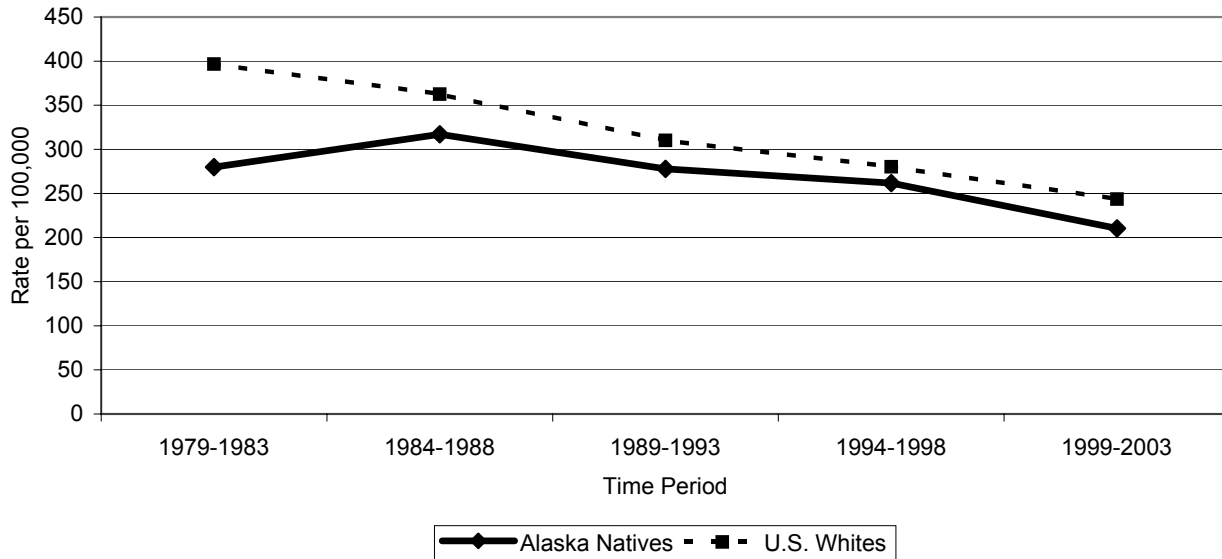
**FIGURE 60. Annual Average Age-Specific Heart Disease Mortality Rates
Alaska Natives, Males vs Females, 1999-2003**



**TABLE 22. Trends Over Time in Age-Adjusted Heart Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined**

Time Period	1979-1983	1984-1988	1989-1993	1994-1998	1999-2003	% Change
Alaska Natives	279.9	317.0	277.8	261.7	210.4	-25%
U.S. Whites	396.7	362.5	310.2	280.2	243.6	-39%

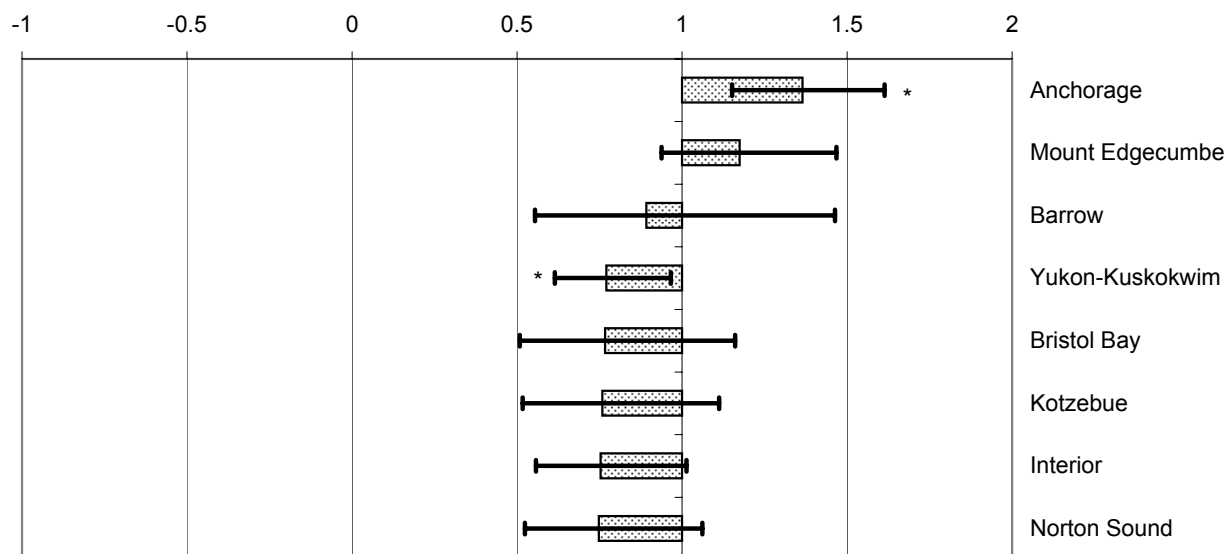
**FIGURE 61. Trends Over Time in Age-Adjusted Heart Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined**



**TABLE 23. Age-Adjusted Heart Disease Mortality Rates by Service Region 1999-2003
Alaska Natives, Both Genders Combined**

Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives	U.S. Whites
338.1	220.9	189.9	186.6	187.8	290.9	185.2	190.9	211.4	243.6

FIGURE 62. Ratio of Heart Disease Mortality For Alaska Natives vs U.S. Whites by Service Region 1999-2003, Both Genders Combined



* p<0.05

#3 CAUSE OF DEATH

UNINTENTIONAL INJURIES

Unintentional injury was the third leading cause of death for AN, both genders combined. It ranked first among causes of death for AN men, and third among AN women. Unintentional injury comprised 14.7% (n= 499) of all AN deaths. For AN, both genders combined, unintentional injury mortality rates were 3.0 times higher than USW rates. Rates for AN men were 3.1 times higher than USW rates for men. Rates for AN women were 2.7 times higher than those for USW women.

Unintentional injury accounted for the largest number (28.4%) of excess deaths among AN, both genders combined, and for both genders separately. However, there were large gender differences. Unintentional injury comprised 33.4% of all excess deaths among AN men (n=248), and 20.2% of excess deaths among AN women (n=96).

Unintentional injury mortality rates were significantly higher for every age group except the 75 and older age group among AN, both genders combined, as compared to USW. Rate ratios ranged from 1.8 among those 75 years of age and older to 5.1 times higher among 0 to 4 year olds. Unintentional injury mortality rates were significantly higher for all age groups under 75 years among AN men as compared to USW men, and for all age groups under 65 years for AN women as compared USW women.

Comparing AN men to women, AN men experienced unintentional injury mortality rates that were 2.2 to 5.1 times higher than AN women for all age groups between 5 and 74 years of age. There was no significant difference in unintentional injury mortality rates between AN men and women for age groups 0 to 4 years and for those 75 years of age and older.

Examining unintentional injury mortality rates by service region, showed that all eight service regions in Alaska had rates significantly higher than USW. Rate ratios ranged from 1.8 for Mt. Edgecumbe service region to 5.5 for Bristol Bay service region.

Unintentional injury mortality rates declined 43% for AN, both genders combined, between 1979 and 2003. USW experienced a 16% decline during this period.

The top five causes of unintentional injury deaths among AN, both genders combined, accounted for 77% of all unintentional injury deaths. The leading causes were: drowning and watercraft injuries (21%), poisoning (19%) - over half of which were overdoses of alcohol or drugs, motor vehicle traffic injuries (16%), ATV injuries (13%), and exposure to the elements (8%). Firearm injuries comprised less than 1% of all unintentional injury mortality. There was a significant decline in unintentional firearm mortality since the last time period, 1989-1998 (0.7% vs. 3%).

**#3 Cause of Death Among Alaska Natives, 1999-2003
Unintentional Injury**

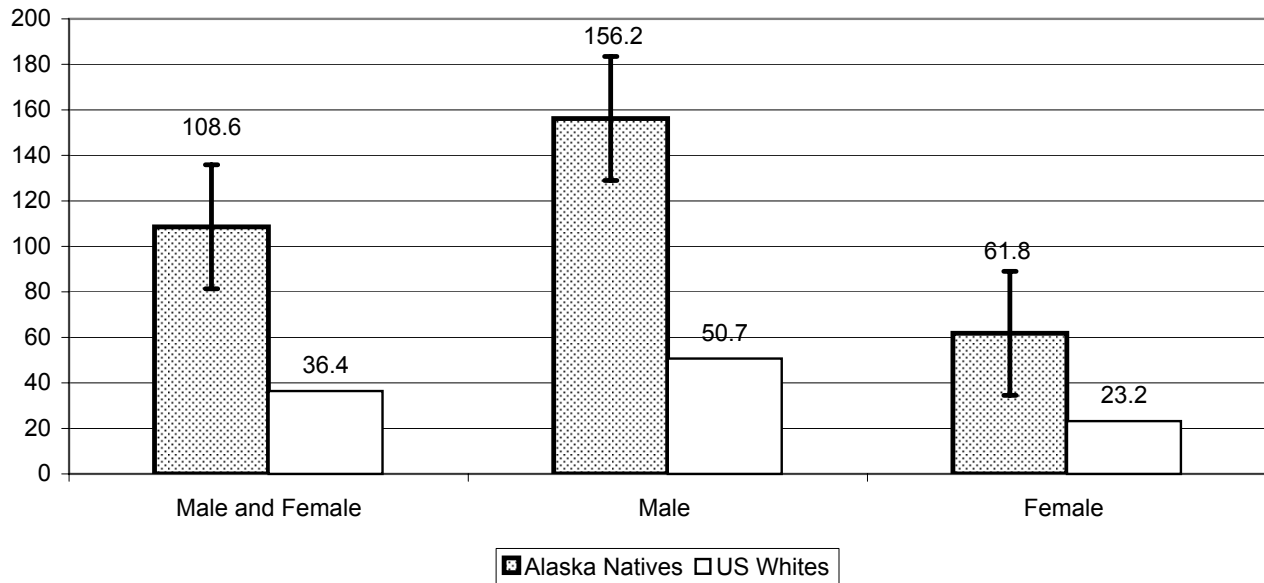
**TABLE 24. Annual Average Age-Adjusted Unintentional Injury Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

	Alaska Natives		Rate [†] per 100,000	U.S. Whites		Rate [†] per 100,000	SMR	Lower 95%	Upper 95%
	#	%		#	%				
Male and Female	499	14.7%	108.6	434629	4.2%	36.4	2.98*	2.71	3.29
Male	355	18.4%	156.2	279721	5.5%	50.7	3.08*	2.74	3.46
Female	144	9.8%	61.8	154908	2.9%	23.2	2.66*	2.24	3.18

* 95% CI does not include 1.

† Age-adjusted to the US 2000 Standard population.

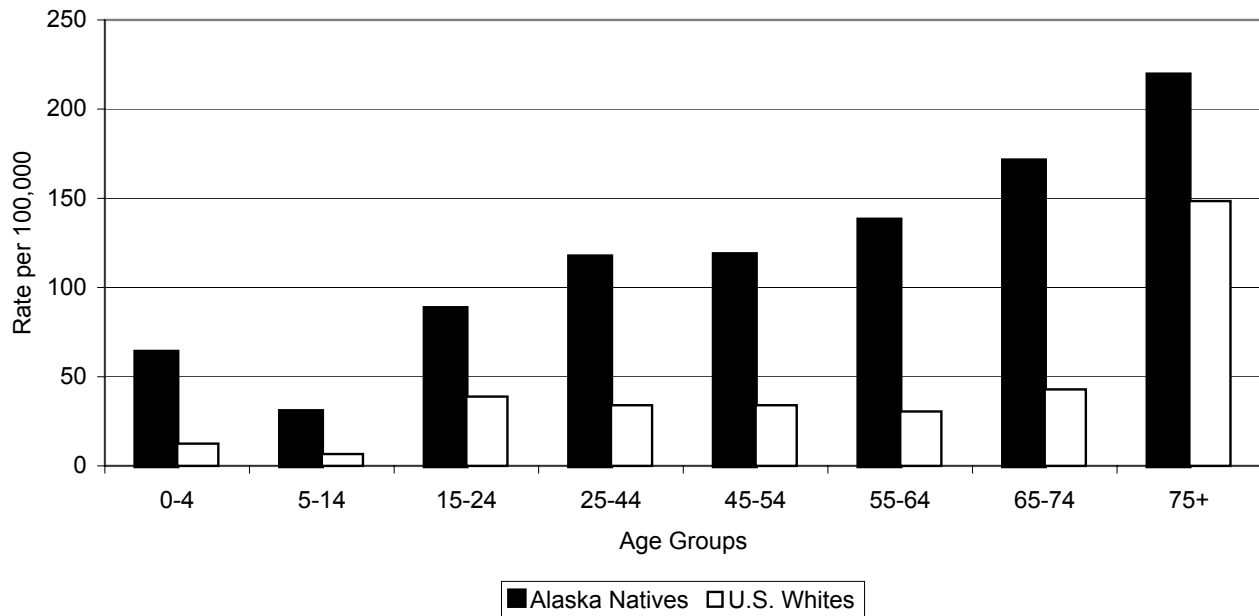
**FIGURE 63. Annual Average Age-Adjusted Unintentional Injury Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**



**TABLE 25a. Annual Average Age-Specific Unintentional Injury Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	63.8	30.5	88.3	117.2	118.5	137.9	171.1	219.2
U.S. Whites	12.5	6.6	38.8	34.0	34.0	30.5	42.9	148.5

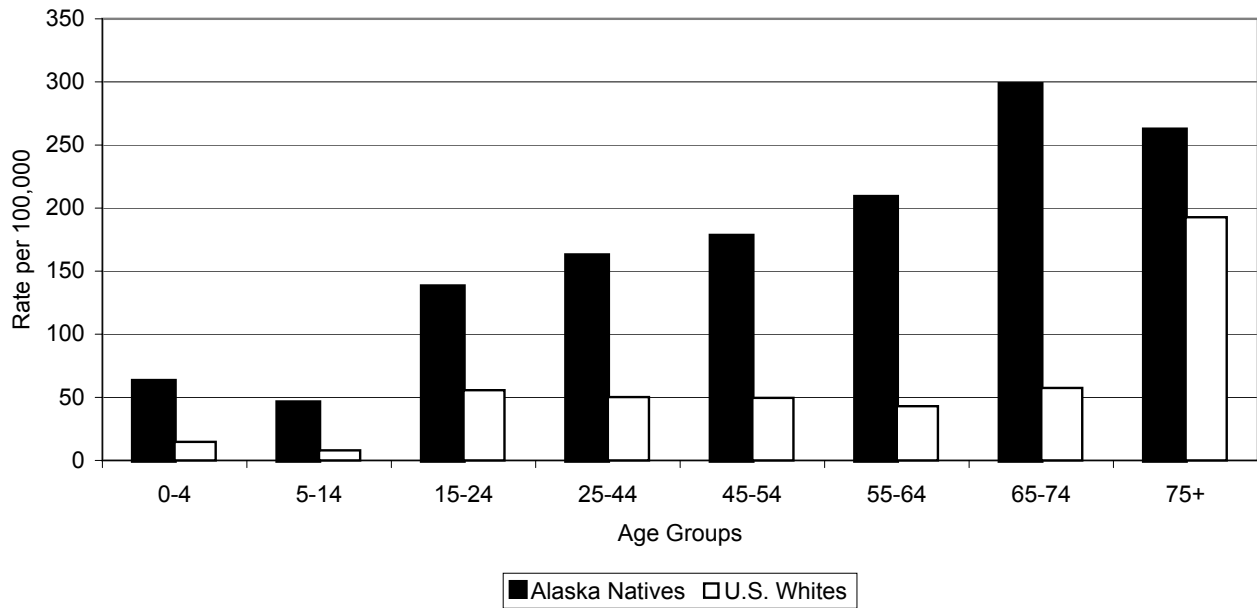
**FIGURE 64a. Annual Average Age-Specific Unintentional Injury Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**



**TABLE 25b. Annual Average Age-Specific Unintentional Injury Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	62.8	45.8	137.7	162.3	177.8	208.6	298.0	262.0
U.S. Whites	14.7	8.0	55.7	50.2	49.6	43.0	57.4	192.8

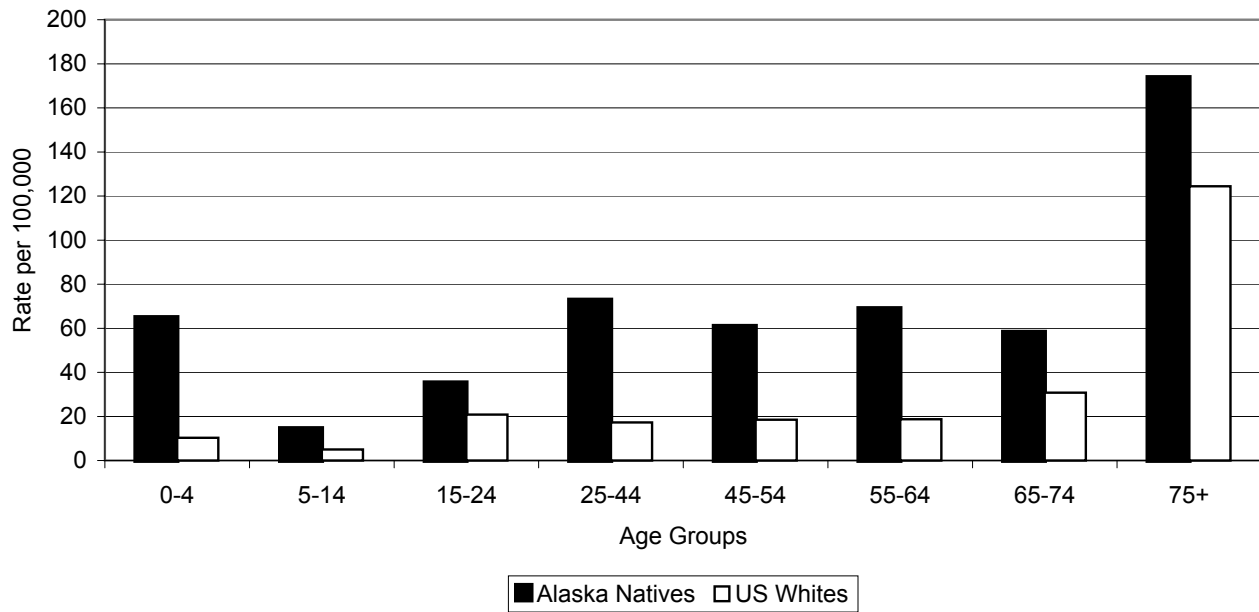
**FIGURE 64b. Annual Average Age-Specific Unintentional Injury Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**



**TABLE 25c. Annual Average Age-Specific Unintentional Injury Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	64.9	14.5	35.3	72.8	60.9	69.0	58.2	173.8
US Whites	10.3	5.0	20.8	17.3	18.5	18.7	30.8	124.4

**FIGURE 64c. Annual Average Age-Specific Unintentional Injury Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**



**TABLE 26. Annual Average Age-Specific Unintentional Injury Mortality Rates
Alaska Natives, Males vs Females, 1999-2003**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	62.8	45.8	137.7	162.3	177.8	208.6	298.0	262.0
AN Females	64.9	14.5	35.3	72.8	60.9	69.0	58.2	173.8

**FIGURE 65. Annual Average Age-Specific Unintentional Injury Mortality Rates
Alaska Natives, Males vs Females, 1999-2003**

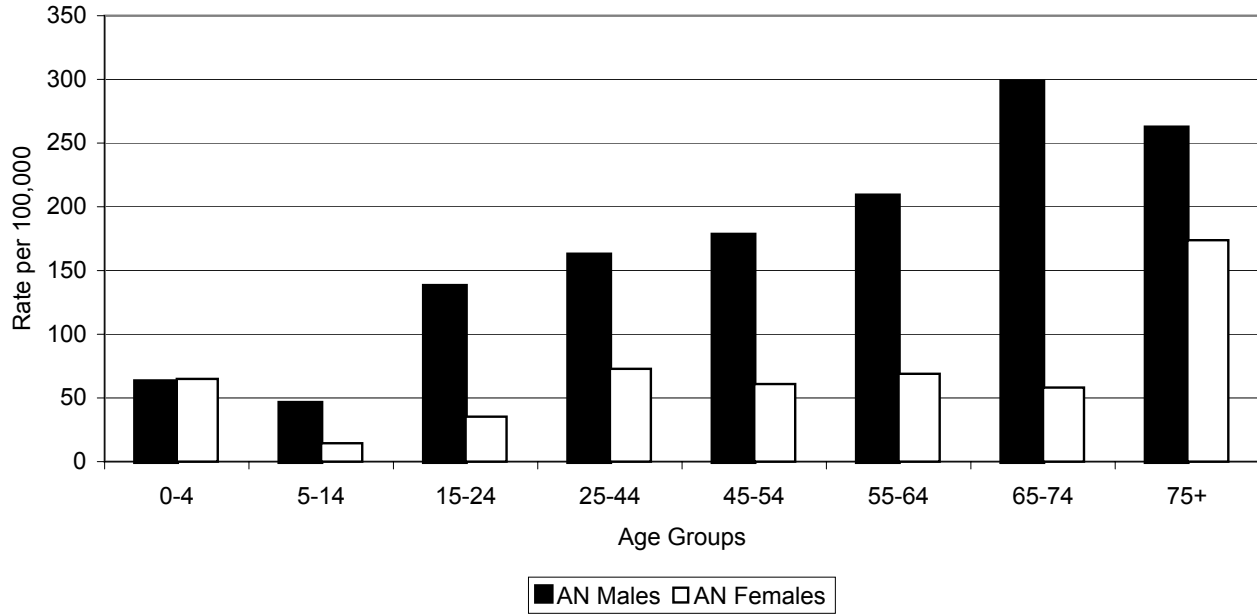
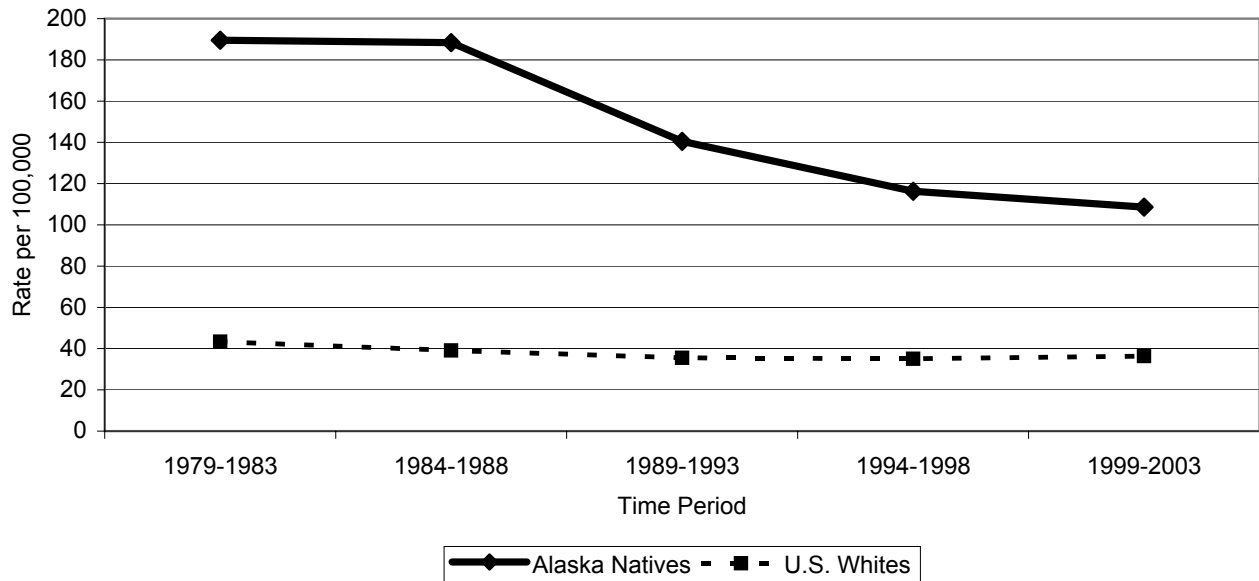


TABLE 27. Trends Over Time in Age-Adjusted Unintentional Injury Mortality Rates Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined

Time Period	1979-1983	1984-1988	1989-1993	1994-1998	1999-2003	% Change
Alaska Natives	189.5	188.4	140.5	116.3	108.6	-43%
U.S. Whites	43.4	39.1	35.5	35.1	36.4	-16%

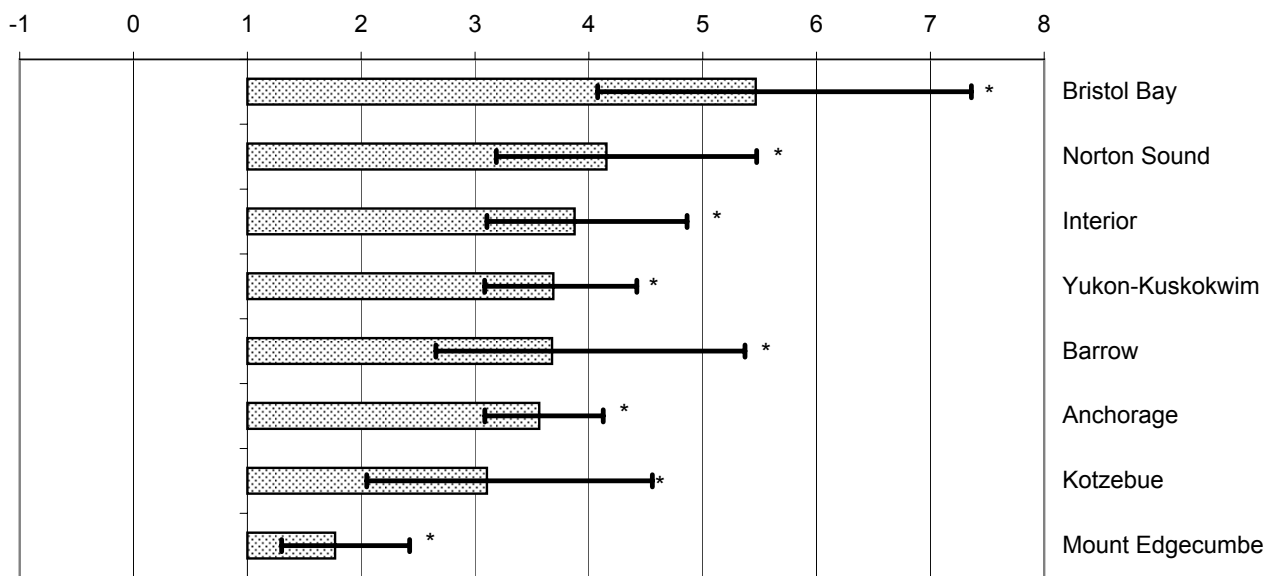
FIGURE 66. Trends Over Time in Age-Adjusted Unintentional Injury Mortality Rates Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined



**TABLE 28. Age-Adjusted Unintentional Injury Mortality Rates by Service Region 1999-2003
Alaska Natives, Both Genders Combined**

Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives	U.S. Whites
118.0	112.3	180.0	132.8	125.0	58.6	140.5	119.6	116.1	36.4

FIGURE 67. Ratio of Unintentional Injury Mortality For Alaska Natives vs U.S. Whites by Service Region 1999-2003, Both Genders Combined



* p<0.05

#4 CAUSE OF DEATH

SUICIDE

Suicide was the fourth leading cause of death among AN, both genders combined. It ranked fourth among AN men and seventh among AN women. Among AN, both genders combined, 6% (n=204) of all deaths were suicides. The suicide rate for AN, both genders combined, was 3.1 times higher than among USW. The rate ratios were 2.9 and 3.4 for AN men and women, respectively, compared to USW.

Suicide accounted for 12.6% of all excess deaths among AN, both genders combined (n=153). Among AN men (n=118), suicide accounted for 15.9% of excess deaths, the second largest cause of excess death among AN men. Suicide accounted for 7.4% of excess deaths among AN women (n=35).

AN, both genders combined, experienced 1.1 to 9.5 times higher suicide rates than USW across various age groups. There were too few cases of suicide among AN, both genders combined, younger than 15 and older than 64 to calculate rates. AN men experienced suicide rates 1.3 to 8.2 times higher than USW men for age groups 15 to 64 years. AN women had significant rate ratios 3.6 to 17.2 times higher as compared to USW women for age groups 15 to 44 years. Comparing AN men to women, suicide was a significant 2.7 to 4.0 times more common among men than women for age groups 15 to 44 years.

Examining suicide rates by service region, showed that six of the eight service regions, Anchorage (RR=2.8), Barrow (RR=3.1), Interior (RR=5.8), Kotzebue (RR=7.6), Norton Sound (RR=7.8), and Yukon-Kuskokwim (RR=3.8) had rate ratios significantly different from USW.

There has been no significant change in AN suicide rates between 1979 and 2003. USW experienced a significant 12% decline.

The percentage of suicides involving firearms has declined significantly for AN, both genders combined, since the time period, 1989-1998 (61% vs. 72%; $X^2 < 0.05$). This change has been driven by a decline in firearm use by AN men (64% vs. 75%; $X^2 < 0.05$). There was no significant change in the percentage of suicides involving firearms among AN women (52% vs. 55%). In addition to firearm deaths, 31% of suicides among AN men involved hanging. For AN women, in addition to firearm deaths, 24% of suicides were due to poisoning, and 21% due to hanging.

**#4 Cause of Death Among Alaska Natives, 1999-2003
Suicide**

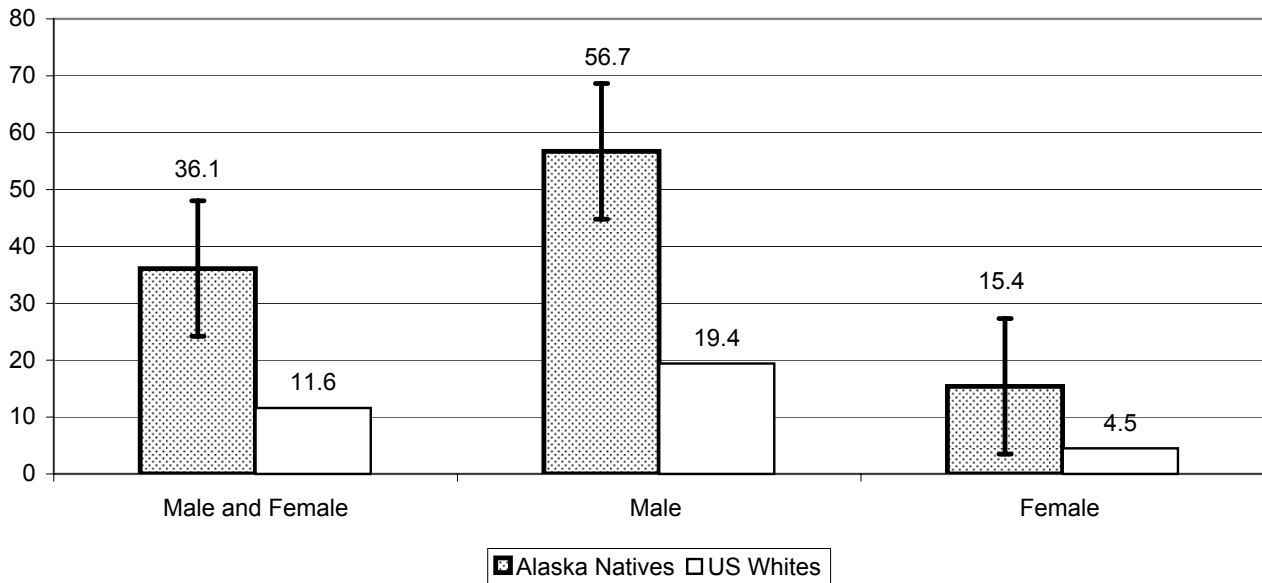
**TABLE 29. Annual Average Age-Adjusted Suicide Rates
Alaska Natives vs U.S. Whites, 1999-2003**

	Alaska Natives		Rate [†] per 100,000	U.S. Whites		Rate [†] per 100,000	SMR	Lower 95%	Upper 95%
	#	%		#	%				
Male and Female	204	6.0%	36.1	137651	1.3%	11.6	3.11*	2.69	3.58
Male	159	8.2%	56.7	110558	2.2%	19.4	2.92*	2.49	3.42
Female	45	3.1%	15.4	27093	0.5%	4.5	3.42*	2.54	4.60

* 95% CI does not include 1.

† Age-adjusted to the US 2000 Standard population.

**FIGURE 68. Annual Average Age-Adjusted Suicide Rates
Alaska Natives vs U.S. Whites, 1999-2003**

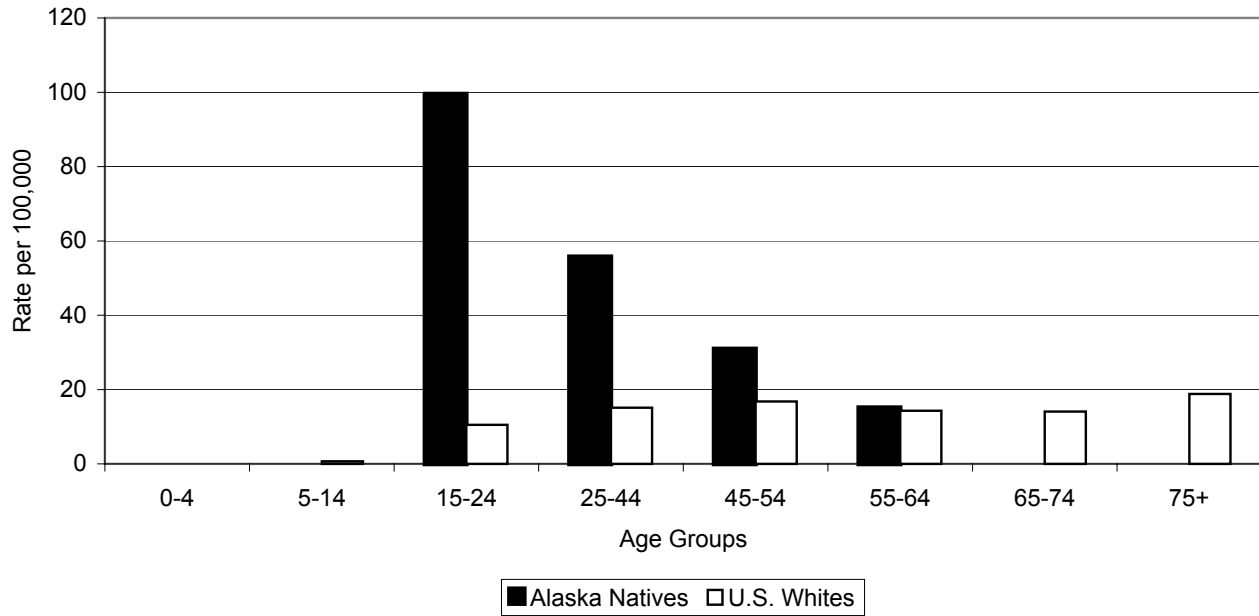


**TABLE 30a. Annual Average Age-Specific Suicide Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	99.5	55.7	30.9	15.1	-	-
U.S. Whites	-	0.7	10.5	15.1	16.8	14.3	14.1	18.8

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 69a. Annual Average Age-Specific Suicide Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

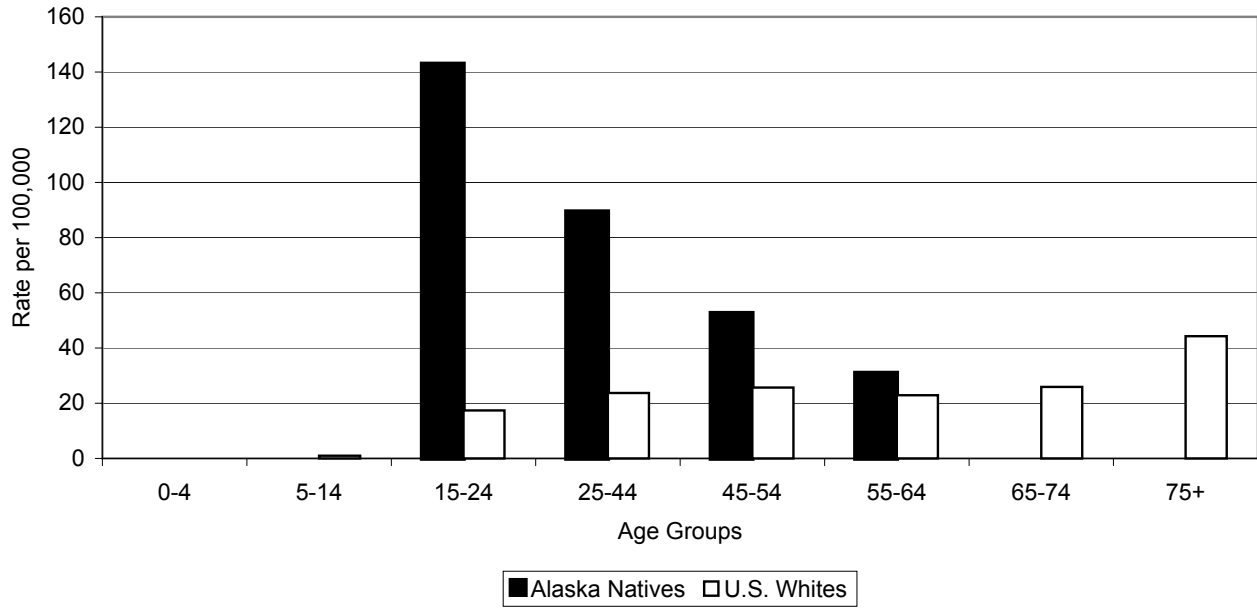


**TABLE 30b. Annual Average Age-Specific Suicide Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	142.9	89.4	52.6	30.9	-	-
U.S. Whites	-	1.0	17.4	23.7	25.7	22.9	25.9	44.3

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 69b. Annual Average Age-Specific Suicide Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

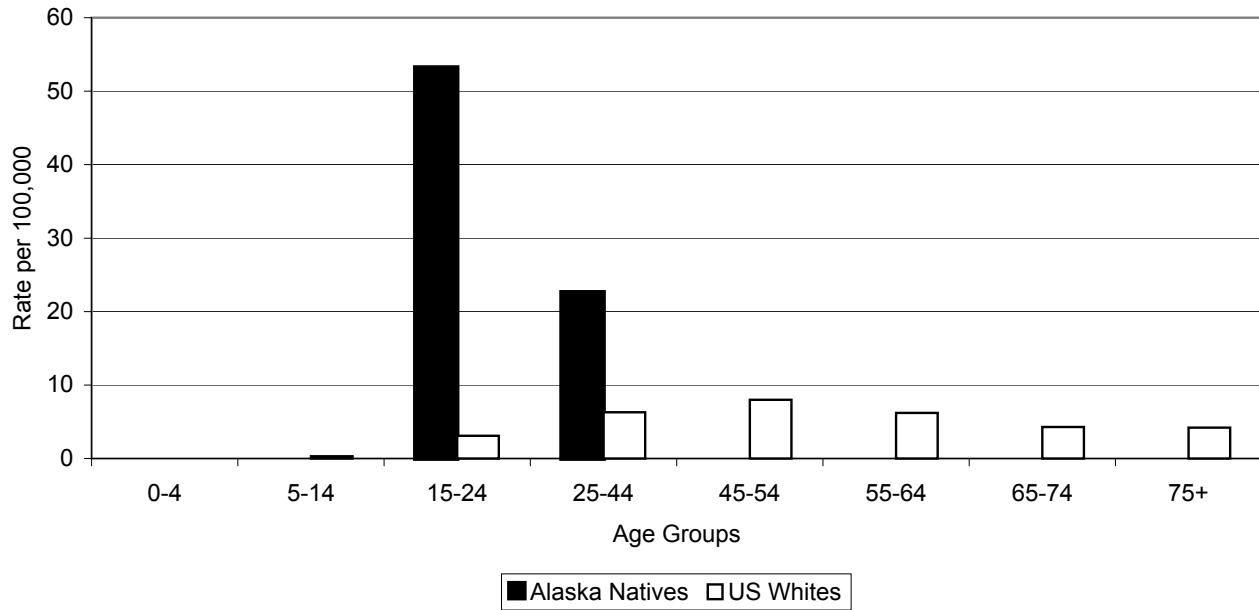


**TABLE 30c. Annual Average Age-Specific Suicide Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	53.2	22.6	-	-	-	-
US Whites	-	0.3	3.1	6.3	8.0	6.2	4.3	4.2

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 69c. Annual Average Age-Specific Suicide Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

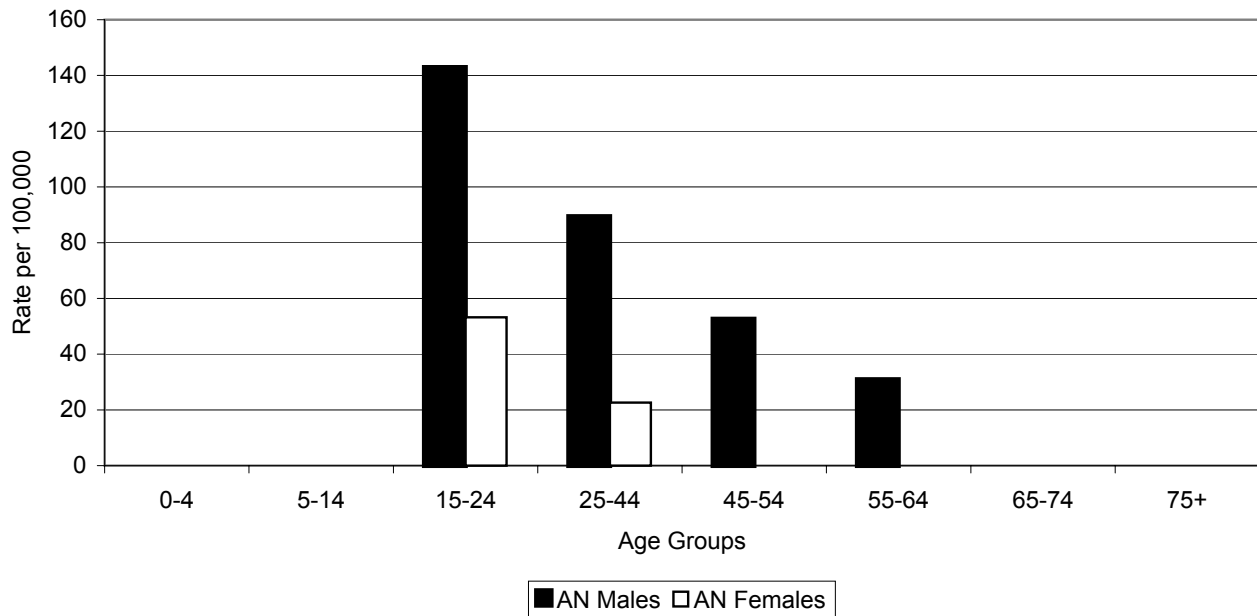


**TABLE 31. Annual Average Age-Specific Suicide Rates
Alaska Natives, Males vs Females, 1999-2003**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	142.9	89.4	52.6	30.9	-	-
AN Females	-	-	53.2	22.6	-	-	-	-

(-) Rate not calculated for fewer than 5 deaths.

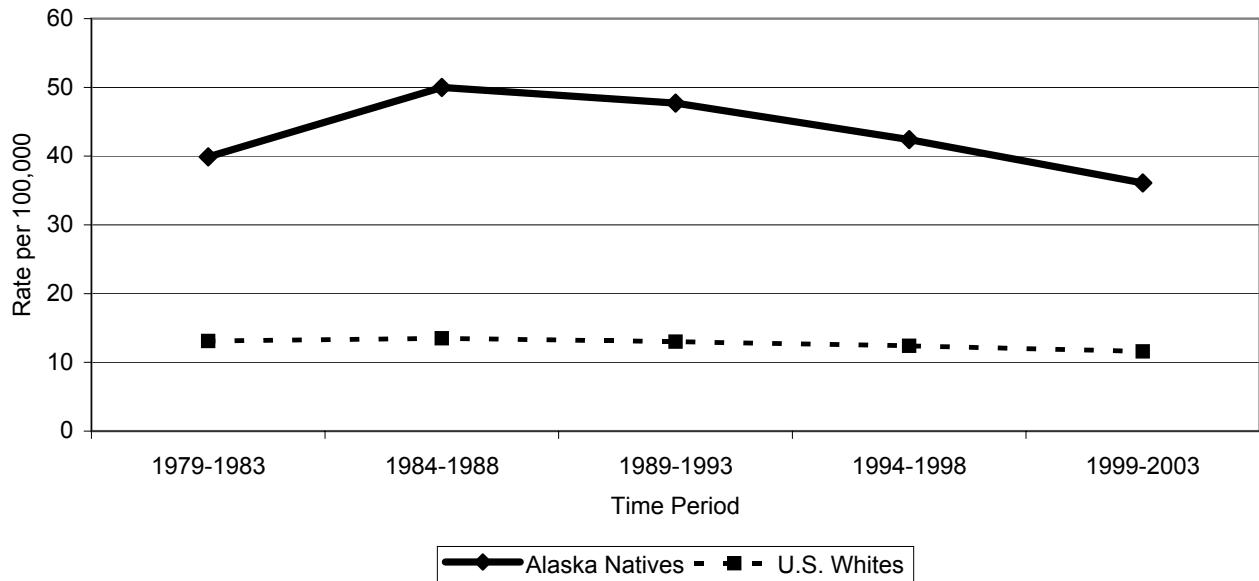
**FIGURE 70. Annual Average Age-Specific Suicide Rates
Alaska Natives, Males vs Females, 1999-2003**



**TABLE 32. Trends Over Time in Age-Adjusted Suicide Rates
Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined**

Time Period	1979-1983	1984-1988	1989-1993	1994-1998	1999-2003	% Change
Alaska Natives	39.9	50.0	47.7	42.4	36.1	NS
U.S. Whites	13.1	13.5	13.0	12.4	11.6	-12%

**FIGURE 71. Trends Over Time in Age-Adjusted Suicide Rates
Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined**

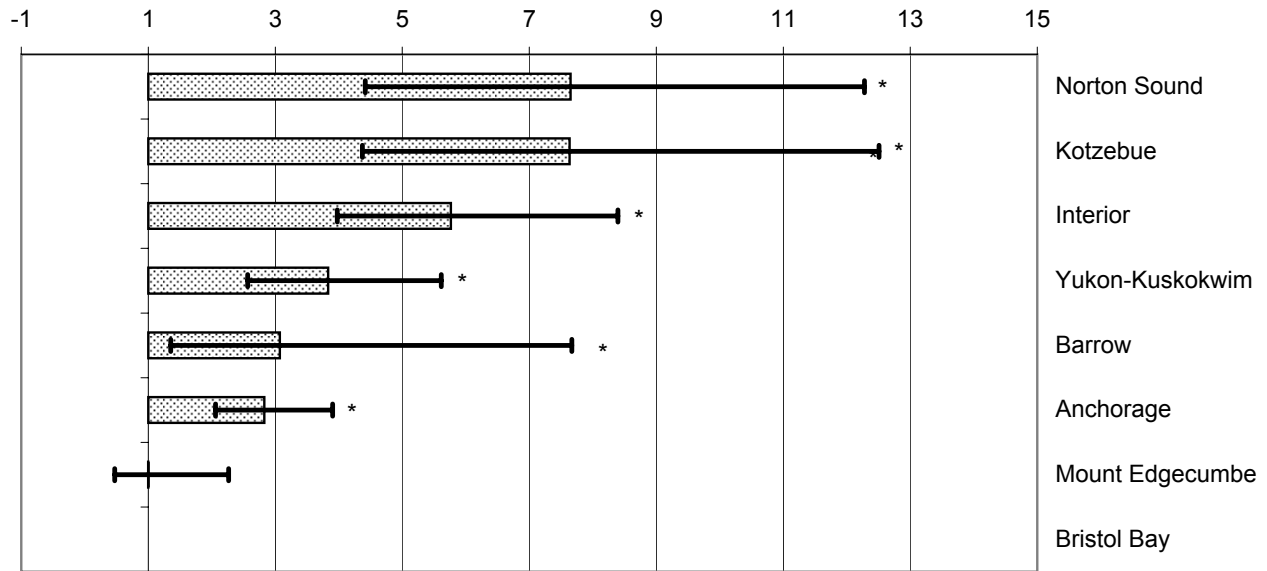


**TABLE 33. Age-Adjusted Suicide Rates by Service Region 1999-2003
Alaska Natives, Both Genders Combined**

Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives	U.S. Whites
32.8	35.6	-	66.9	88.6	11.6	88.8	44.5	36.3	11.6

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 72. Ratio of Suicide For Alaska Natives vs U.S. Whites by
Service Region 1999-2003, Both Genders Combined**



* p<0.05

#5 CAUSE OF DEATH

CEREBROVASCULAR DISEASE

Cerebrovascular disease was the fifth leading cause of death among AN, both genders combined. It ranked fifth among AN men and fourth among AN women. Cerebrovascular disease accounted for 4.8% of all deaths among AN (n=165) during 1999-2003. The cerebrovascular disease mortality rate for AN, both genders combined, was a significant 26% higher than the USW rate. Rates for AN men were a significant 38% higher than USW men. Cerebrovascular disease mortality rates for AN women were higher, but not significantly higher than USW women.

Cerebrovascular disease accounted for 3.9% of excess deaths among AN, both genders combined (n=47). One percent of all excess deaths among AN men (n=26) and 4.4% among AN women (n=21) were from cerebrovascular disease.

Among AN, both genders combined, rates were significantly higher than USW rates for age groups 25 to 54 years. Rate ratios between the two populations declined with increasing age, becoming non-significant for age groups over 55 years. This trend was true for both AN men and women. Comparing AN men to women, significant differences in rates existed only for the 65 to 74 year old age group. AN men in this age group were 3.4 times more likely to die from cerebrovascular disease as AN women.

Examining cerebrovascular disease mortality rates by service region, showed that only Anchorage (RR=1.8) had significantly different rate ratios from USW.

Cerebrovascular disease mortality rates for AN did not change significantly between 1979 and 2003 although rates declined 36% among USW.

**#5 Cause of Death Among Alaska Natives, 1999-2003
Cerebrovascular Disease**

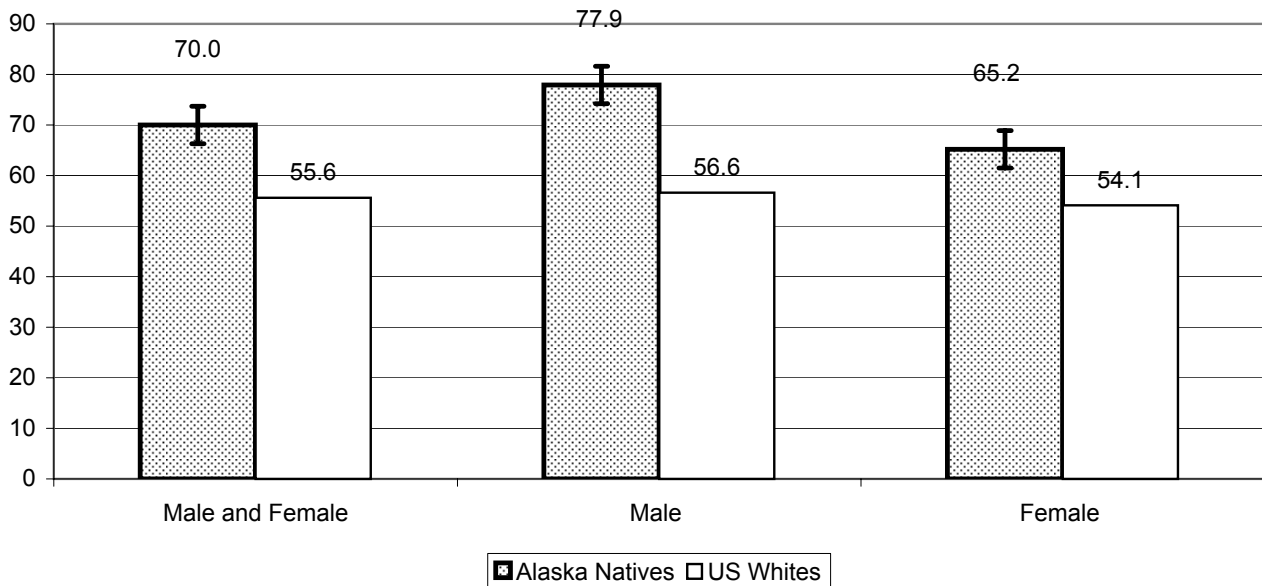
**TABLE 34. Annual Average Age-Adjusted Cerebrovascular Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

	Alaska Natives		Rate [†] per	U.S. Whites		Rate [†] per	SMR	Lower 95%	Upper 95%	*
	#	%	100,000	#	%	100,000				
Male and Female	165	4.8%	70.0	704290	6.8%	55.6	1.26*	1.07	1.48	*
Male	76	3.9%	77.9	267834	5.3%	56.6	1.38*	1.06	1.78	*
Female	89	6.0%	65.2	436456	8.2%	54.1	1.21	0.97	1.50	

* 95% CI does not include 1.

† Age-adjusted to the US 2000 Standard population.

**FIGURE 73. Annual Average Age-Adjusted Cerebrovascular Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

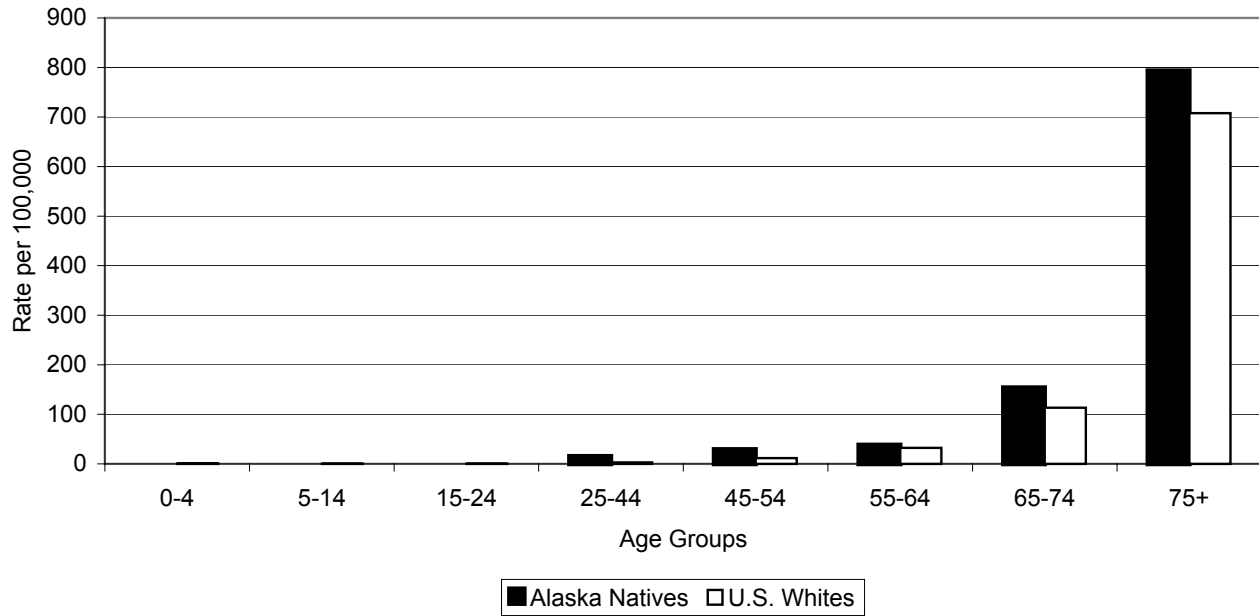


**TABLE 35a. Annual Average Age-Specific Cerebrovascular Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	15.3	29.2	38.0	153.6	793.4
U.S. Whites	0.7	0.2	0.4	2.9	11.7	32.3	113.5	708.0

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 74a. Annual Average Age-Specific Cerebrovascular Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

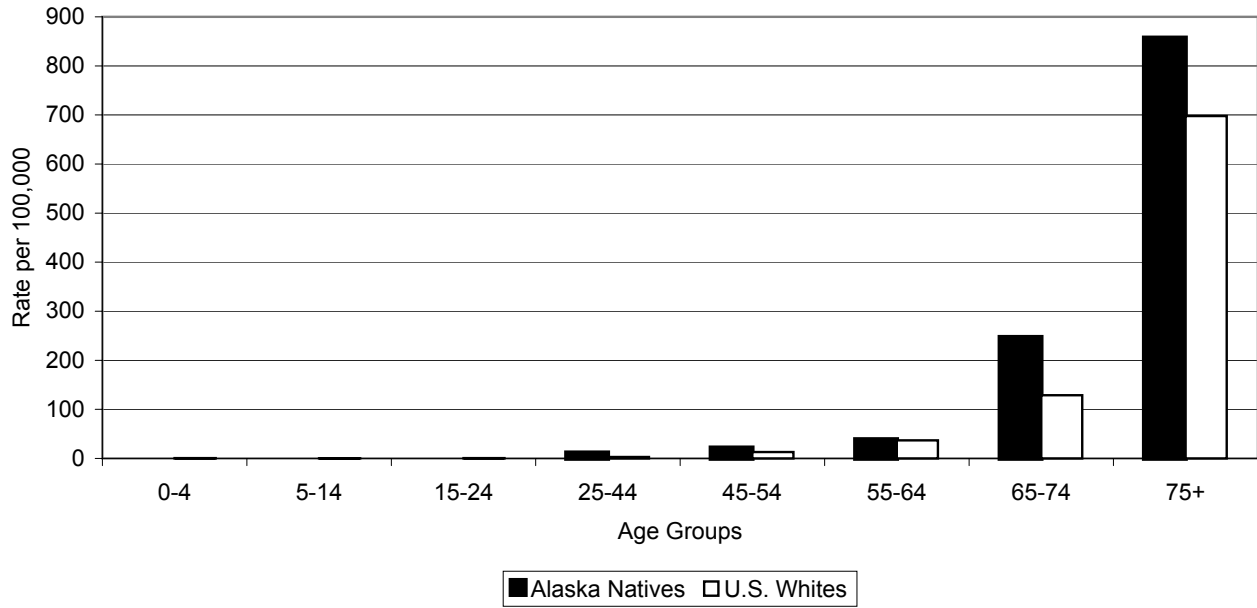


**TABLE 35b. Annual Average Age-Specific Cerebrovascular Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	11.3	21.4	38.4	247.0	857.1
U.S. Whites	0.7	0.2	0.5	3.0	12.9	36.8	128.7	697.9

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 74b. Annual Average Age-Specific Cerebrovascular Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

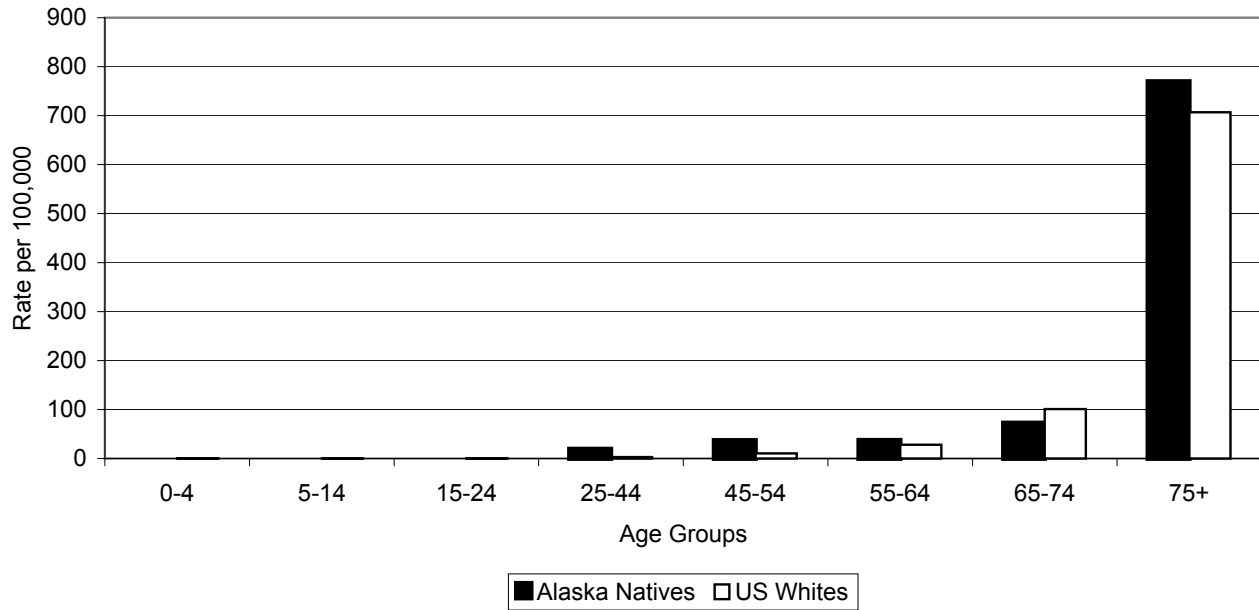


**TABLE 35c. Annual Average Age-Specific Cerebrovascular Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	19.2	36.9	37.4	72.6	769.8
US Whites	0.6	0.2	0.4	2.8	10.4	28.0	100.9	706.9

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 74c. Annual Average Age-Specific Cerebrovascular Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**



**TABLE 36. Annual Average Age-Specific Cerebrovascular Disease Mortality Rates
Alaska Natives, Males vs Females, 1999-2003**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	11.3	21.4	38.4	247.0	857.1
AN Females	-	-	-	19.2	36.9	37.4	72.6	769.8

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 75. Annual Average Age-Specific Cerebrovascular Disease Mortality Rates
Alaska Natives, Males vs Females, 1999-2003**

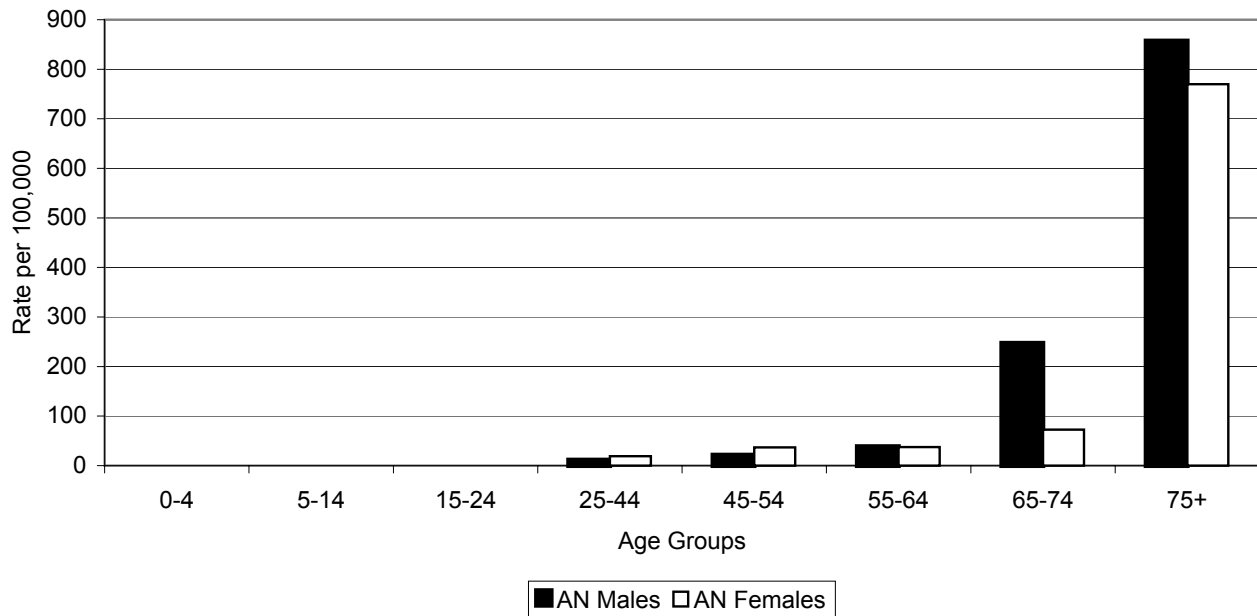


TABLE 37. Trends Over Time in Age-Adjusted Cerebrovascular Disease Mortality Rates Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined

Time Period	1979-1983	1984-1988	1989-1993	1994-1998	1999-2003	% Change
Alaska Natives	62.1	71.1	67.5	81.2	70.0	NS
U.S. Whites	87.3	72.0	61.5	59.6	55.6	-36%

FIGURE 76. Trends Over Time in Age-Adjusted Cerebrovascular Disease Mortality Rates Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined

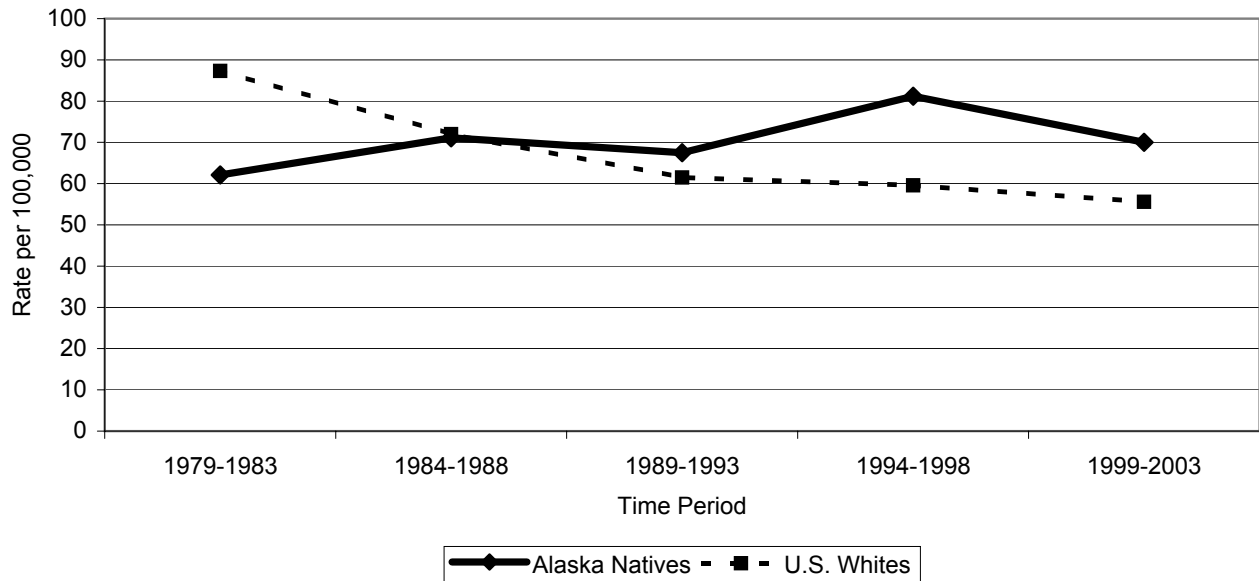
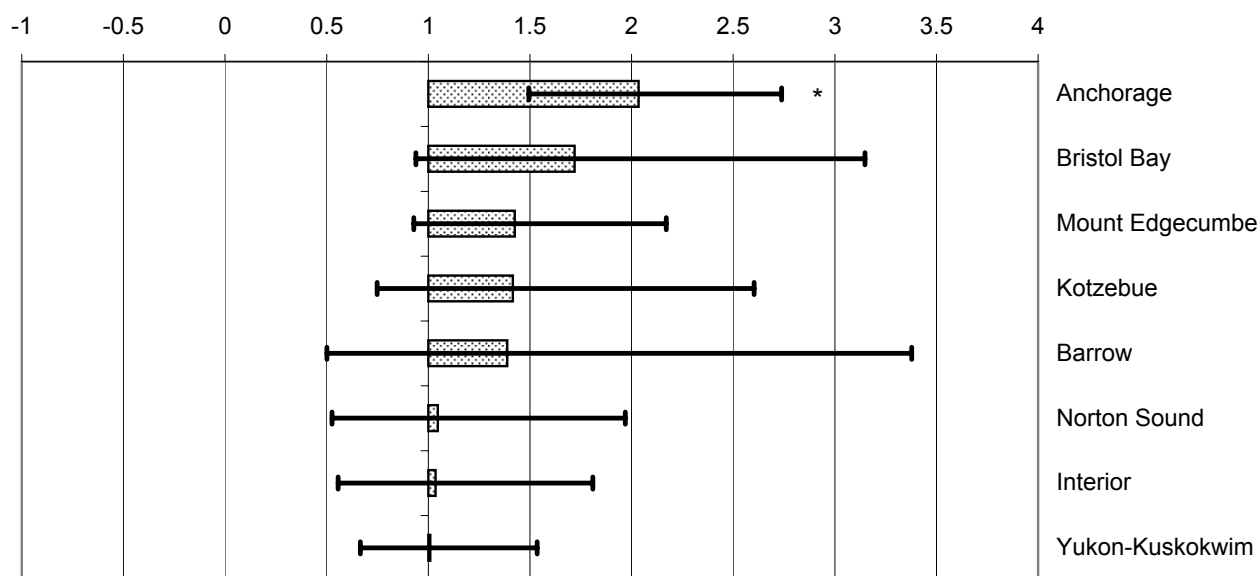


TABLE 38. Age-Adjusted Cerebrovascular Disease Mortality Rates by Service Region 1999- Alaska Natives, Both Genders Combined

Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives	U.S. Whites
115.5	78.9	97.7	58.8	80.4	80.9	59.5	57.4	64.4	55.6

FIGURE 77. Ratio of Cerebrovascular Disease Mortality For Alaska Natives vs U.S. Whites by Service Region 1999-2003, Both Genders Combined



* p<0.05

#6 CAUSE OF DEATH

CHRONIC OBSTRUCTIVE PULMONARY DISEASES (COPD)

COPD was the sixth leading cause of death among AN, both genders combined, and ranked sixth for AN men and fifth for women. AN, both genders combined, experienced a COPD mortality rate 1.4 times higher than USW. AN men had a mortality rate for COPD 1.4 times higher than USW men. AN women were 1.5 times higher than USW women.

COPD accounted for 3.8% of excess deaths among AN, both genders combined (n=46). Among AN men (n=19), COPD accounted for 2.6% of excess deaths, whereas among AN women (n=27), COPD accounted for 5.7% of excess deaths.

Age-specific COPD mortality rates were significantly higher for AN, both genders combined, compared to USW among those 55 years of age and older. This was true for AN men only among the 75 and older age group. AN women had significantly higher COPD mortality rates as compared to USW women for the 45 to 54 age group and the 65 to 74 age group. Comparing AN men to women, the only significant difference in rate occurred in the 75 and older age group. AN men were 1.7 greater risk of COPD mortality as AN women.

Examining COPD mortality rates by service region, showed that four service regions,

Anchorage (RR=2.7), Barrow (RR=2.8), Norton Sound (RR=1.5), and Yukon-Kuskokwim (RR=1.5) had significantly higher rate ratios than USW. There were no significant differences in COPD mortality rates for any other service regions compared to USW.

AN COPD mortality rates rose 192% between 1979 and 2003. COPD mortality rates increased 54% among USW between 1979 and 2003.

**#6 Cause of Death Among Alaska Natives, 1999-2003
Chronic Obstructive Pulmonary Diseases (COPD)**

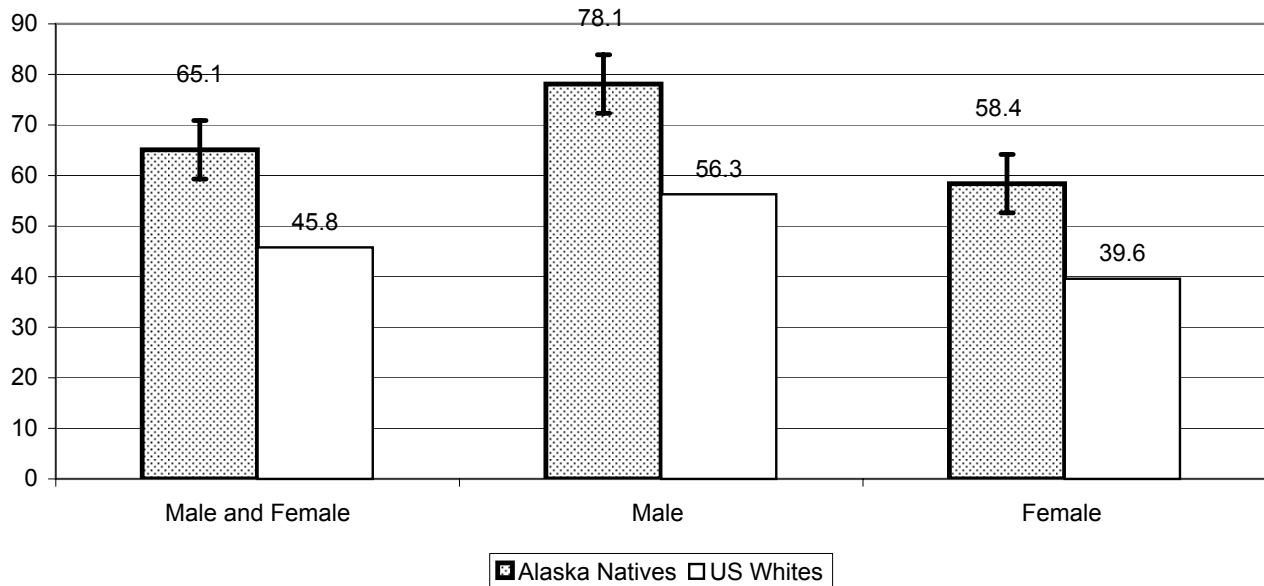
**TABLE 39. Annual Average Age-Adjusted Chronic Obstructive Pulmonary Disease Mortality
Alaska Natives vs U.S. Whites, 1999-2003**

	Alaska Natives		Rate [†] per 100,000	U.S. Whites		Rate [†] per 100,000	SMR	Lower 95%	Upper 95%
	#	%		#	%				
Male and Female	153	4.5%	65.1	573695	5.5%	45.8	1.42*	1.20	1.68
Male	73	3.8%	78.1	277174	5.5%	56.3	1.39*	1.07	1.79
Female	80	5.4%	58.4	296521	5.5%	39.6	1.47*	1.18	1.85

* 95% CI does not include 1.

† Age-adjusted to the US 2000 Standard population.

**FIGURE 78. Annual Average Age-Adjusted Chronic Obstructive Pulmonary Disease Mortality Ra
Alaska Natives vs U.S. Whites, 1999-2003**

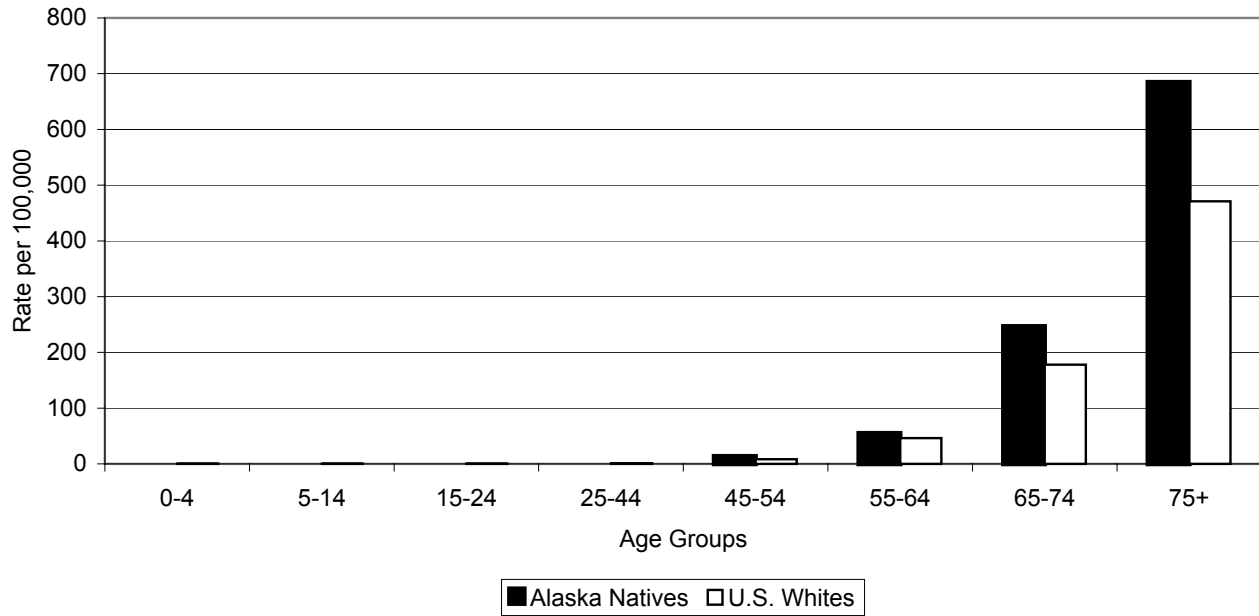


**TABLE 40a. Annual Average Age-Specific Chronic Obstructive Pulmonary Disease Mortality
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	13.4	54.7	246.7	684.6
U.S. Whites	0.3	0.2	0.3	1.2	8.2	46.2	177.9	471.1

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 79a. Annual Average Age-Specific Chronic Obstructive Pulmonary Disease Mortality
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

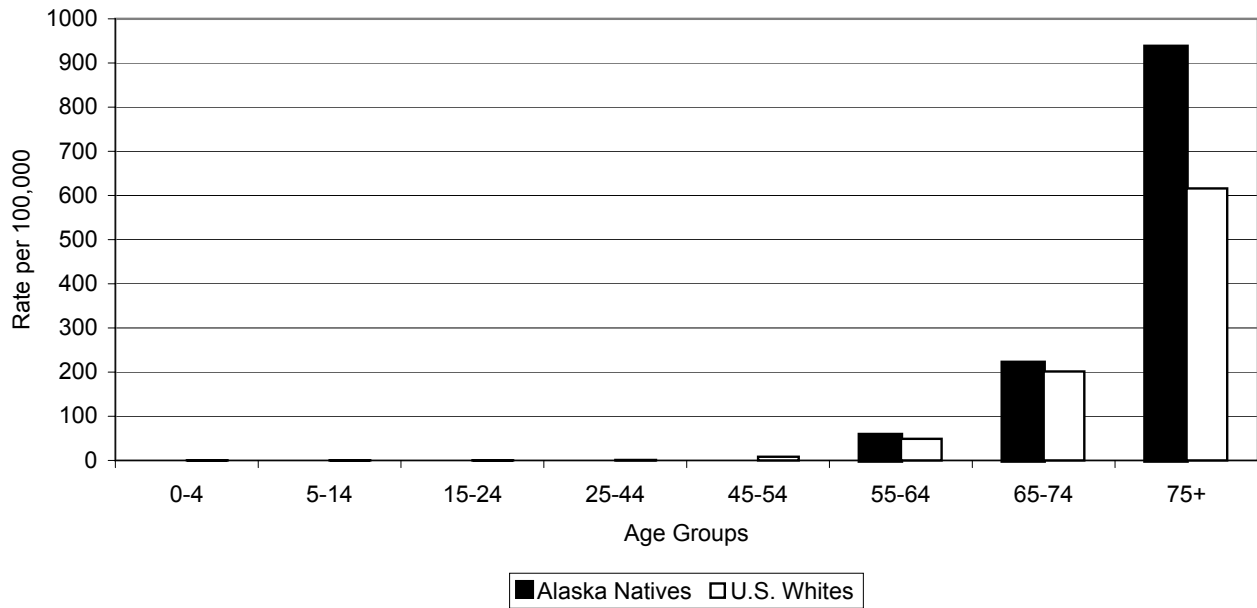


**TABLE 40b. Annual Average Age-Specific Chronic Obstructive Pulmonary Disease Mortality
Alaska Natives vs U.S. Whites, 1999-2003, Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	-	57.3	220.8	936.1
U.S. Whites	0.4	0.2	0.4	1.1	8.5	48.9	201.4	616.1

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 79b. Annual Average Age-Specific Chronic Obstructive Pulmonary Disease Mortality
Alaska Natives vs U.S. Whites, 1999-2003, Males**



**TABLE 40c. Annual Average Age-Specific Chronic Obstructive Pulmonary Disease Mortality
Alaska Natives vs U.S. Whites, 1999-2003, Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	19.7	52.9	269.9	539.1
US Whites	0.3	0.2	0.3	1.3	8.0	43.7	158.4	393.5

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 79c. Annual Average Age-Specific Chronic Obstructive Pulmonary Disease Mortality
Alaska Natives vs U.S. Whites, 1999-2003, Females**

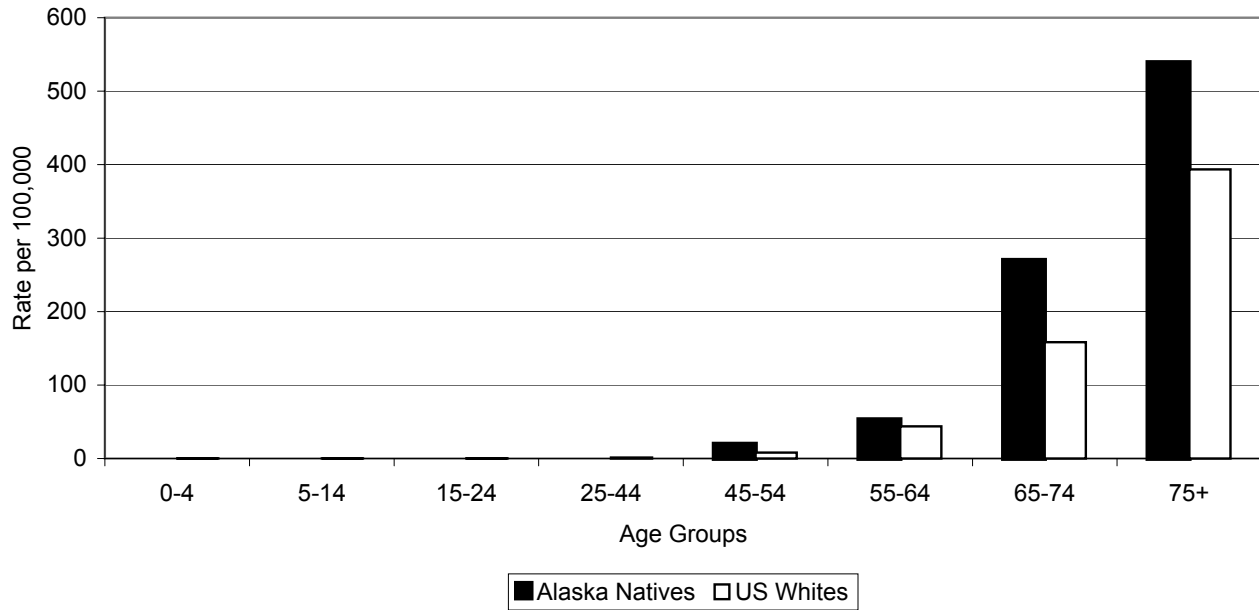


TABLE 41. Annual Average Age-Specific Chronic Obstructive Pulmonary Disease Mortality Alaska Natives, Males vs Females, 1999-2003

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	-	-	57.3	220.8	936.1
AN Females	-	-	-	-	19.7	52.9	269.9	539.1

(-) Rate not calculated for fewer than 5 deaths.

FIGURE 80. Annual Average Age-Specific Chronic Obstructive Pulmonary Disease Mortality Alaska Natives, Males vs Females, 1999-2003

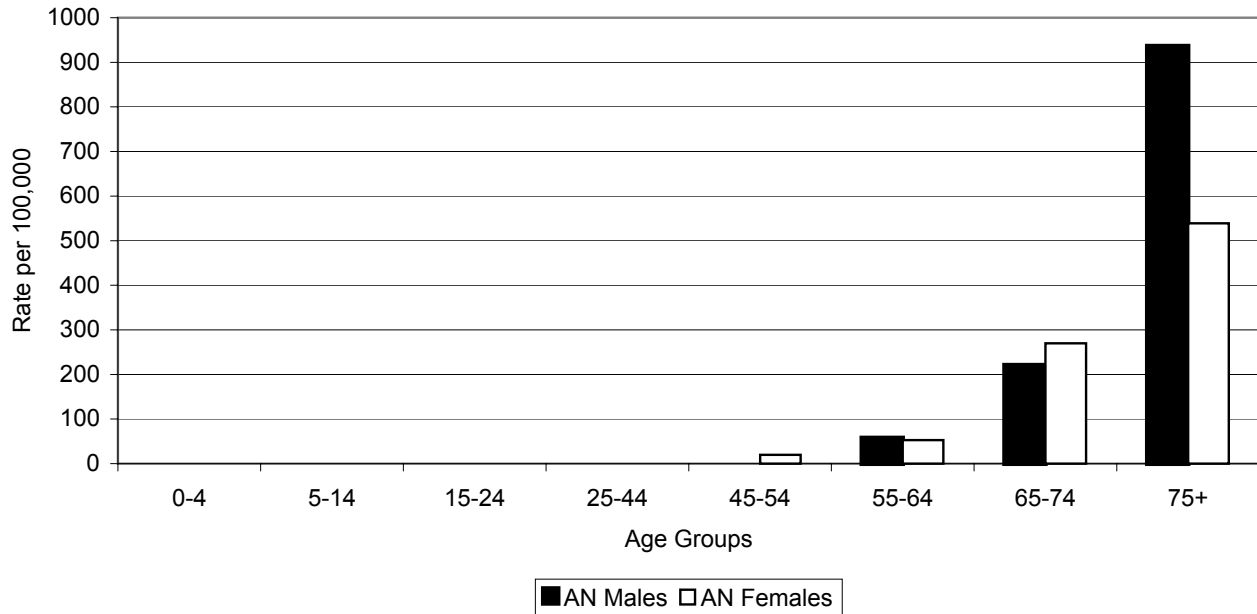


TABLE 42. Trends Over Time in Age-Adjusted Chronic Obstructive Pulmonary Disease Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined

Time Period	1979-1983	1984-1988	1989-1993	1994-1998	1999-2003	% Change
Alaska Natives	22.3	49.4	62.0	72.6	65.1	192%
U.S. Whites	29.8	35.8	39.2	42.2	45.8	54%

FIGURE 81. Trends Over Time in Age-Adjusted Chronic Obstructive Pulmonary Disease Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined

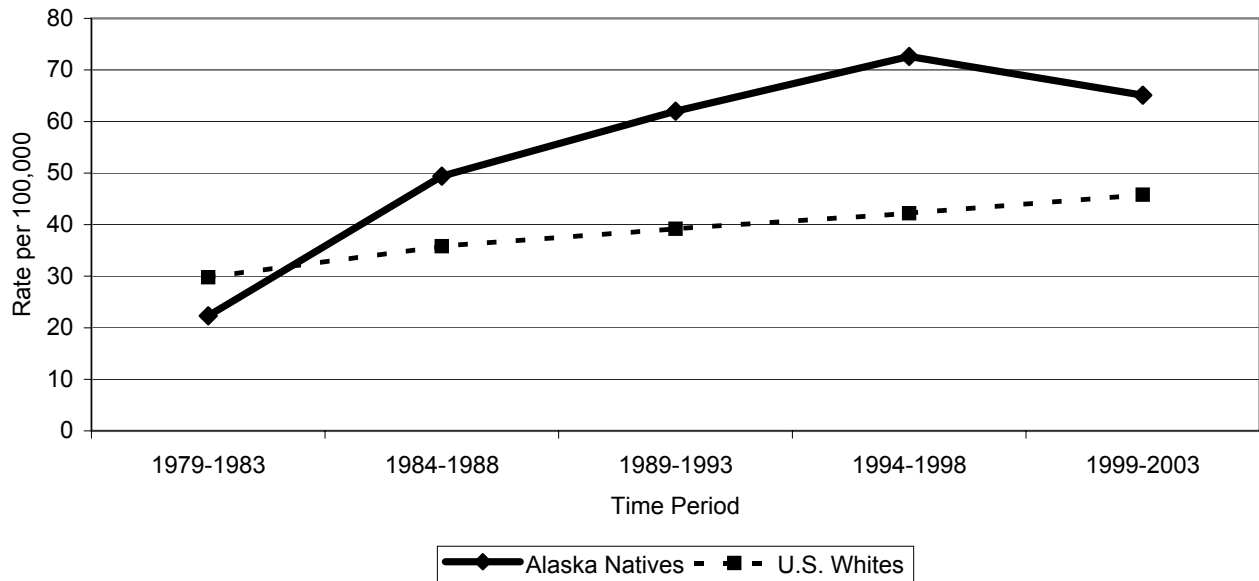
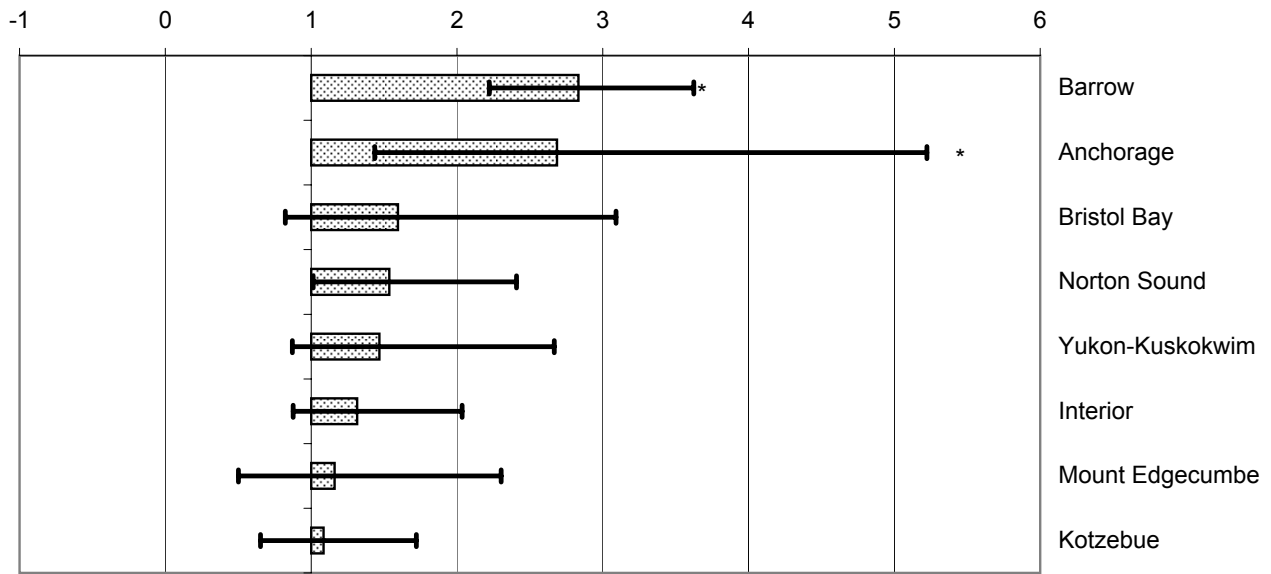


TABLE 43. Age-Adjusted Chronic Obstructive Pulmonary Disease Mortality Rates by Service Alaska Natives, Both Genders Combined

Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives	U.S. Whites
123.3	130.0	73.2	60.4	49.8	53.3	70.5	67.4	67.8	45.8

FIGURE 82. Ratio of Chronic Obstructive Pulmonary Disease For Alaska Natives vs U.S. Whites Service Region 1999-2003, Both Genders Combined



* p<0.05

#7 CAUSE OF DEATH

HOMICIDE AND LEGAL INTERVENTION

Homicide and legal intervention (HLI) was the seventh leading cause of death among AN, both genders combined. It ranked seventh among AN men and ninth among AN women. HLI accounted for 2.6% of all AN (n=90) deaths. HLI rates for AN, both genders combined, were 4.6 times higher than USW. AN men had rates 3.8 times higher than USW men. Rates for AN women were 6.1 times higher than those for USW women.

HLI accounted for 5.6% of all excess deaths among AN, both genders combined (n=68). Among AN men (n=39), HLI accounted for 5.2% of excess deaths. Among AN women (n=29), HLI accounted for 6.1% of all excess deaths.

Age-specific HLI rates were a significant 3.2 to 7.6 times higher among AN, both genders combined, compared to USW for all age groups for which there were enough cases to calculate rates. Patterns of age-specific HLI rates for AN men and AN women compared to USW men and USW women were similar to those for AN, both genders

combined. Comparing AN men to women, there were no significant differences in HLI rates for any age group.

Examining HLI rates by service region, showed that five service regions, Anchorage (RR=5.3), Interior (RR=6.3), Kotzebue (RR=4.6) Mt. Edgecumbe (RR=4.4), and Yukon-Kuskokwim (RR=4.8) had significantly higher rate ratios than USW. There were no significant differences in HLI rates for the other service regions compared to USW.

AN HLI rates declined 50% between 1979 and 2003. USW experienced a 35% decline.

The percentage of AN HLI involving firearms has increased significantly since 1989-1998 (53% vs. 34%). The increase appeared to be driven by a rise in firearm mortality among AN women (46% vs. 21%). There was no significant change in the percentage of HLI involving firearms among AN men (46% vs. 51%). Nineteen percent of HLI among AN women involved stabbing, as did 10% among AN men.

**#7 Cause of Death Among Alaska Natives, 1999-2003
Homicide and Legal Intervention**

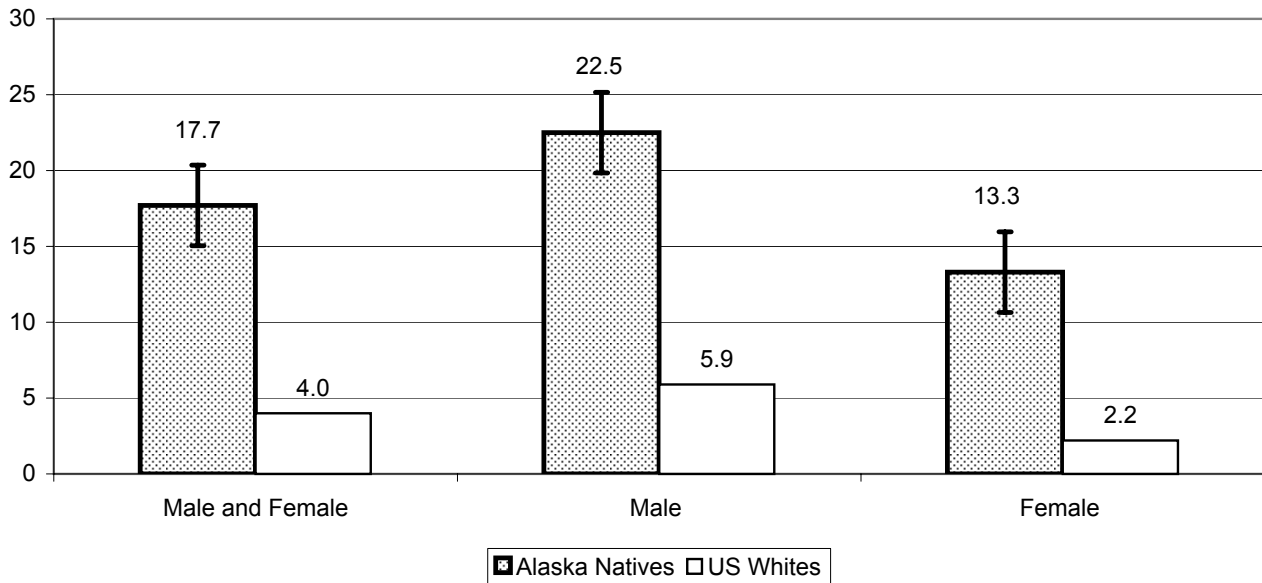
**TABLE 44. Annual Average Age-Adjusted Homicide and Legal Intervention Rates
Alaska Natives vs U.S. Whites, 1999-2003**

	Alaska Natives		Rate [†] per 100,000	U.S. Whites		Rate [†] per 100,000	SMR	Lower 95%	Upper 95%
	#	%		#	%				
Male and Female	90	2.6%	17.7	46859	0.4%	4.0	4.43*	3.52	5.45
Male	55	2.8%	22.5	34135	0.7%	5.9	3.81*	2.86	5.14
Female	35	2.4%	13.3	12724	0.2%	2.2	6.05*	4.35	8.54

* 95% CI does not include 1.

† Age-adjusted to the US 2000 Standard population.

**FIGURE 83. Annual Average Age-Adjusted Homicide and Legal Intervention Rates
Alaska Natives vs U.S. Whites, 1999-2003**

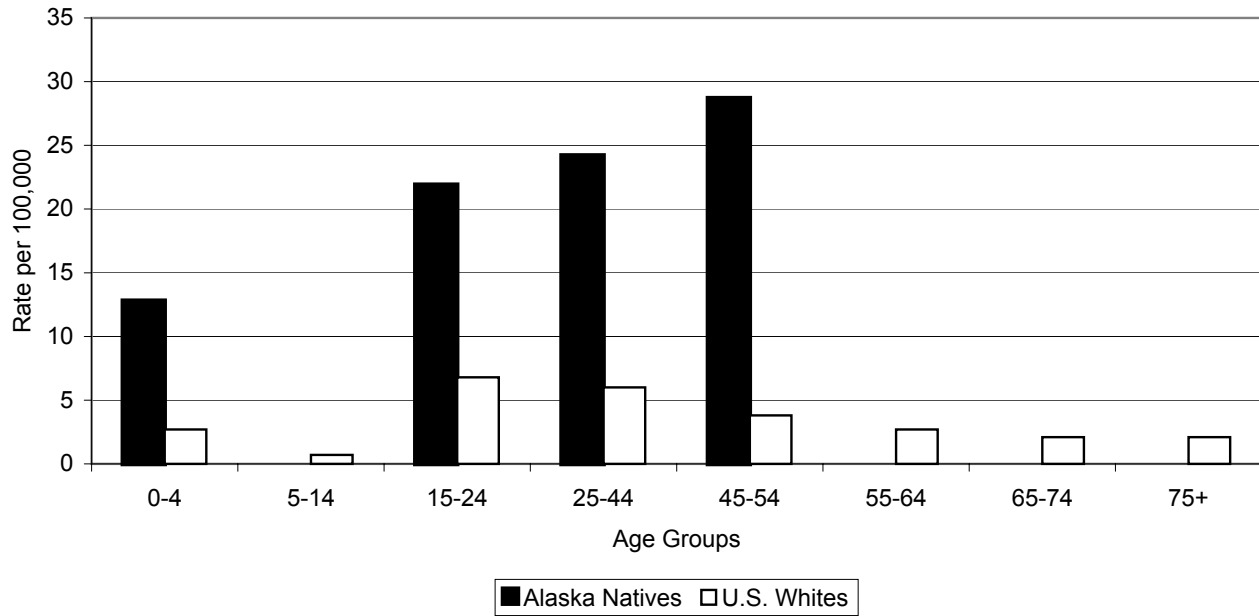


**TABLE 45a. Annual Average Age-Specific Homicide and Legal Intervention Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	12.8	-	21.9	24.2	28.7	-	-	-
U.S. Whites	2.7	0.7	6.8	6.0	3.8	2.7	2.1	2.1

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 84a. Annual Average Age-Specific Homicide and Legal Intervention Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

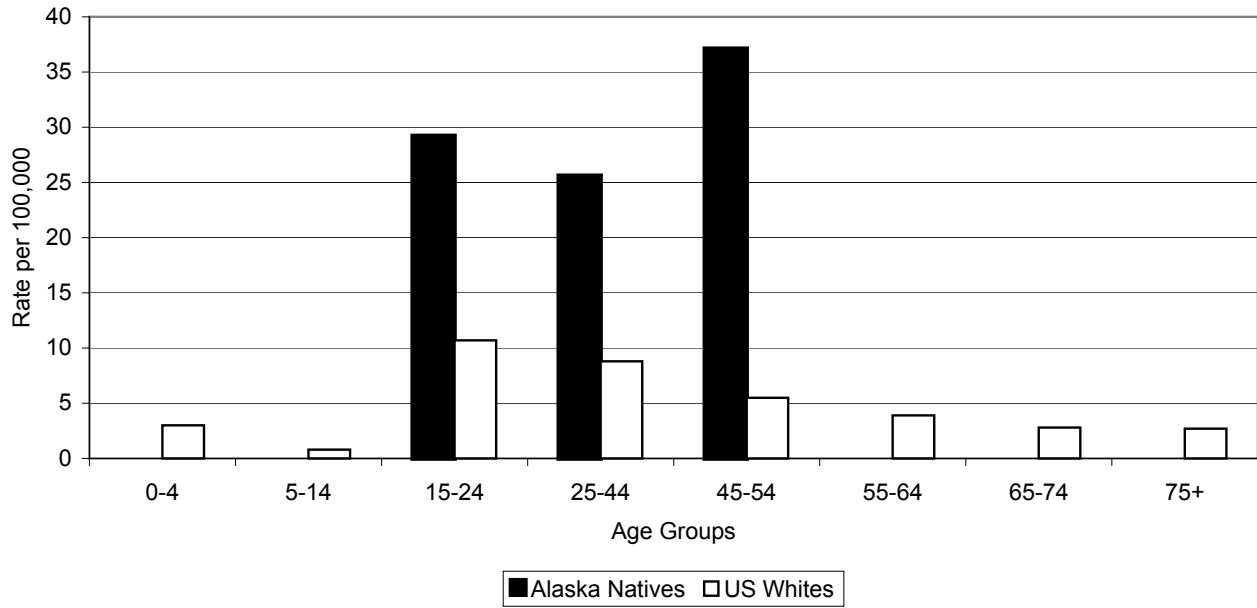


**TABLE 45b. Annual Average Age-Specific Homicide and Legal Intervention Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	29.2	25.6	37.1	-	-	-
US Whites	3.0	0.8	10.7	8.8	5.5	3.9	2.8	2.7

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 84b. Annual Average Age-Specific Homicide and Legal Intervention Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

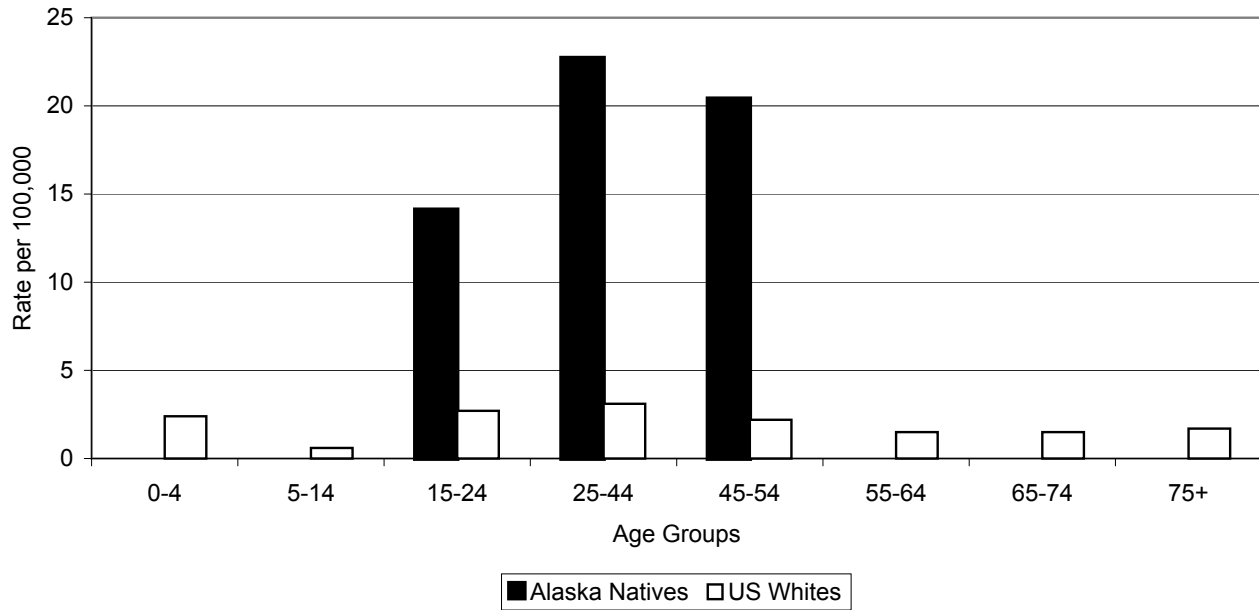


**TABLE 45c. Annual Average Age-Specific Homicide and Legal Intervention Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	14.1	22.7	20.4	-	-	-
US Whites	2.4	0.6	2.7	3.1	2.2	1.5	1.5	1.7

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 84c. Annual Average Age-Specific Homicide and Legal Intervention Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**



**TABLE 46. Annual Average Age-Specific Homicide and Legal Intervention Rates
Alaska Natives, Males versus Females, 1999-2003**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	29.2	25.6	37.1	-	-	-
AN Females	-	-	14.1	22.7	20.4	-	-	-

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 85. Annual Average Age-Specific Homicide and Legal Intervention Rates
Alaska Natives, Males versus Females, 1999-2003**

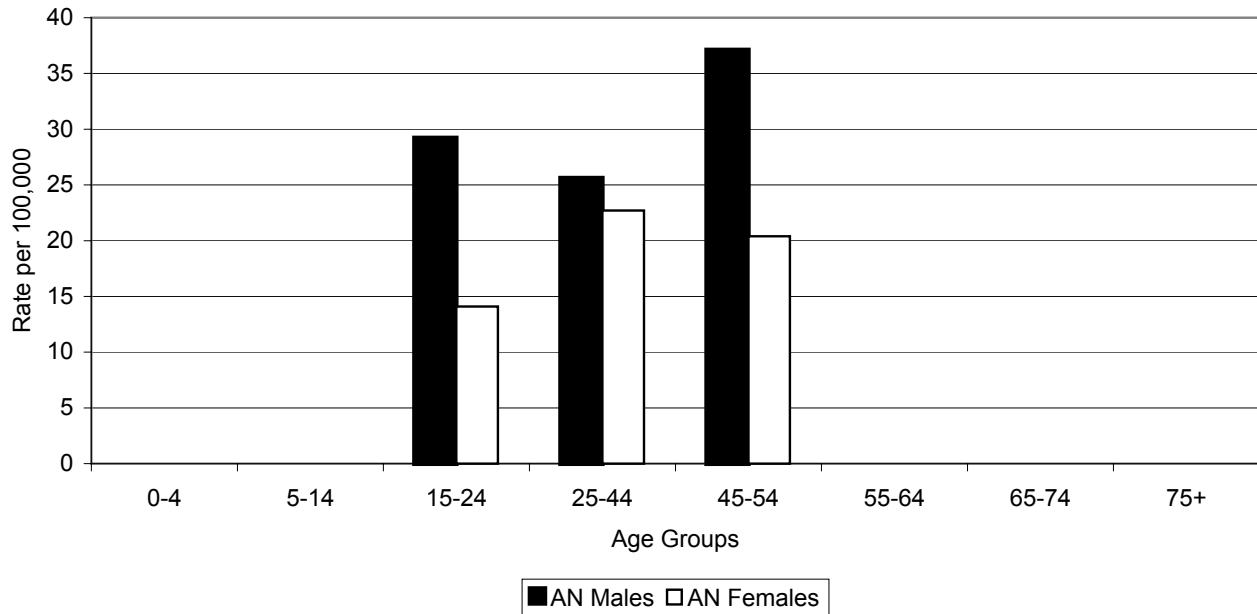
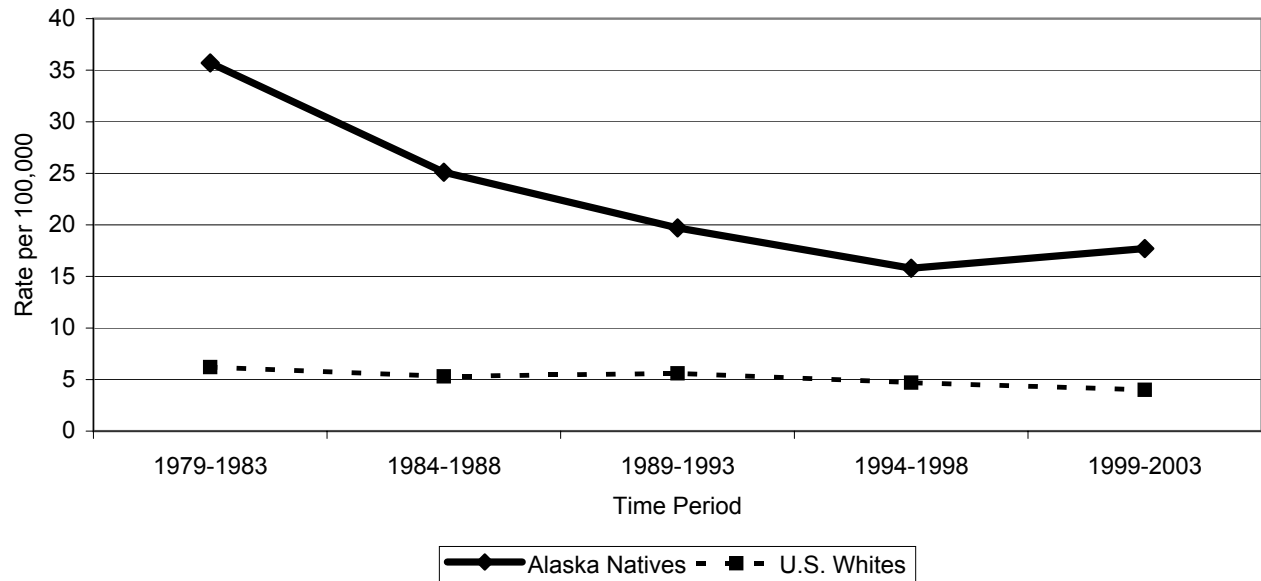


TABLE 47. Trends Over Time in Age-Adjusted Homicide and Legal Intervention Rates Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined

Time Period	1979-1983	1984-1988	1989-1993	1994-1998	1999-2003	% Change
Alaska Natives	35.7	25.1	19.7	15.8	17.7	-50%
U.S. Whites	6.2	5.3	5.6	4.7	4.0	-35%

FIGURE 86. Trends Over Time in Age-Adjusted Homicide and Legal Intervention Rates Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined

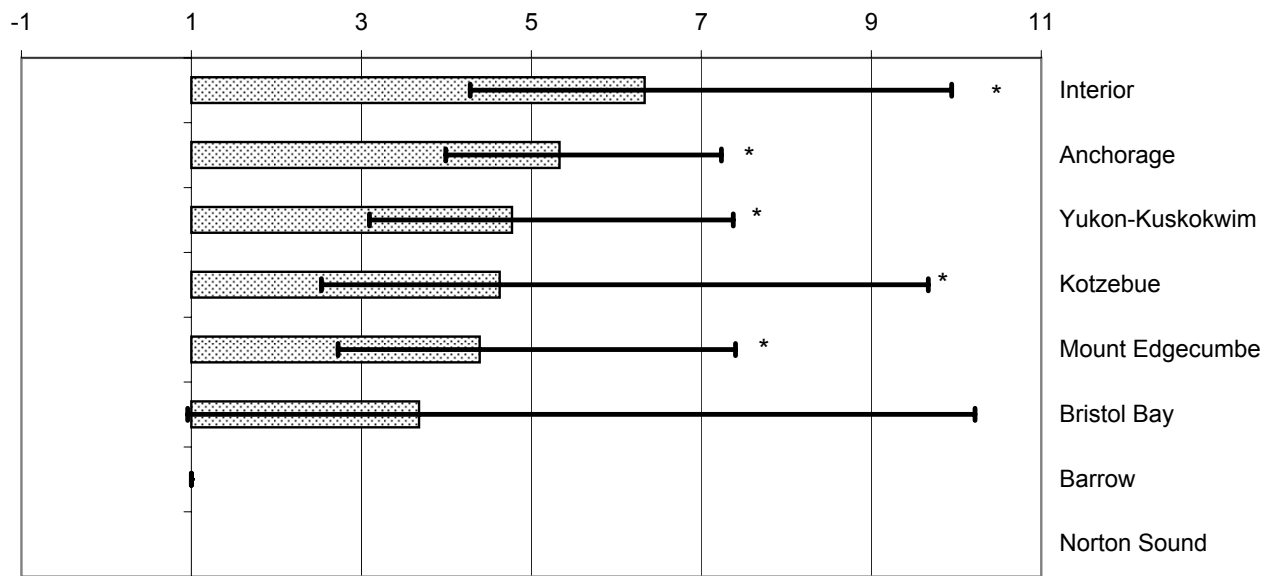


**TABLE 48. Age-Adjusted Homicide and Legal Intervention Rates by Service Region 1999-2003
Alaska Natives, Both Genders Combined**

Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives	U.S. Whites
21.9	-	15.1	26.0	19.0	18.0	-	19.6	19.0	4.0

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 87. Ratio of Homicide and Legal Intervention For Alaska Natives vs U.S. Whites by
Service Region 1999-2003, Both Genders Combined**



* p<0.05

#8 CAUSE OF DEATH

PNEUMONIA AND INFLUENZA

Pneumonia and influenza was the eighth leading cause of death among AN, both genders combined. It ranked eighth for both AN men and women separately. It accounted for 2.5% (n=85) of all deaths. Pneumonia and influenza mortality rates among AN, both genders combined, were 1.6 times higher than those among USW. This difference in rates was true for both AN men compared to USW men, and AN women compared to USW women.

Pneumonia and influenza accounted for 3.1% of all excess deaths among AN, both genders combined (n=38). Among AN men (n=19), pneumonia and influenza accounted for 2.6% of excess deaths. Among AN women (n=19), pneumonia and influenza accounted for 4.0% of excess deaths.

Examining pneumonia and influenza rates by age group showed that rates were significantly different between AN, both genders combined, and USW only among the 0-4 and 75 years and over age groups. Age-specific rate ratios for AN men compared to USW men were significantly higher only among the 0-4 age group. There were no significant differences in rate between AN women and USW women for any age groups. There were no significant differences between AN men and USW men for any age group, nor for AN women compared to USW women. Comparing AN

men to women, there were no significant differences in rates by age group.

Examining pneumonia and influenza mortality rates by service region, showed that three service regions, Bristol Bay (RR=2.2), Kotzebue (RR=3.4) and Yukon-Kuskokwim (RR=2.5) service regions had rate ratios significantly different from USW.

AN experienced a 27% decline in pneumonia and influenza mortality rates between 1979 and 2003. Most of this decline has occurred since the mid-1990s. Among USW, there was a significant 21% decline.

**#8 Cause of Death Among Alaska Natives, 1999-2003
Pneumonia and Influenza**

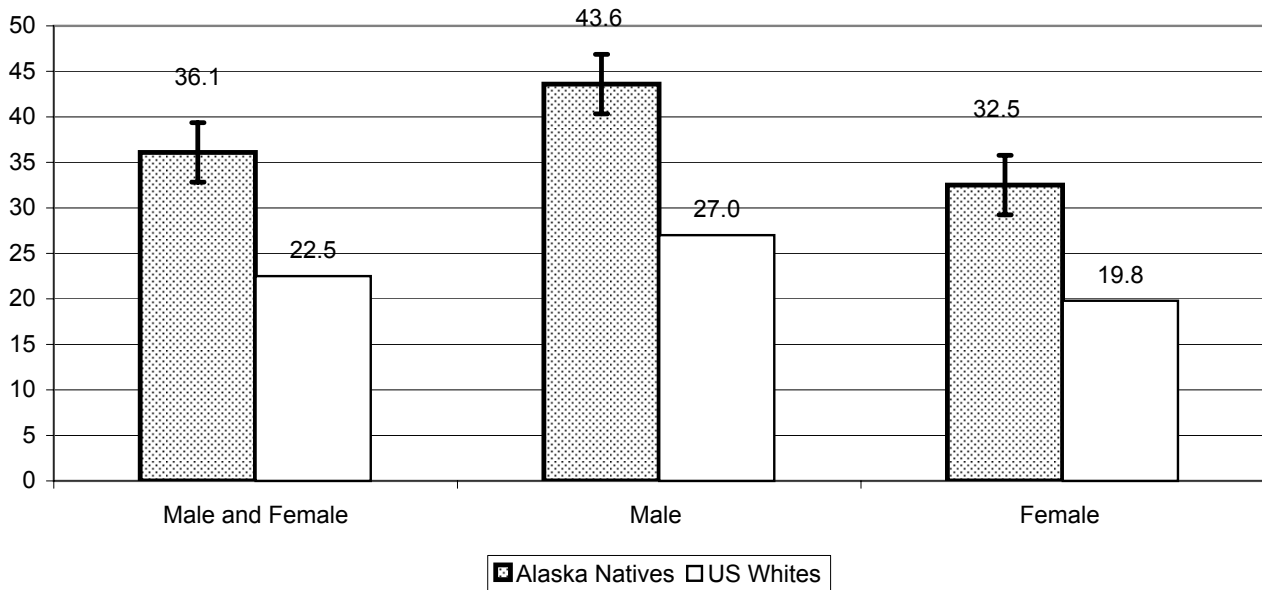
**TABLE 49. Annual Average Age-Adjusted Pneumonia and Influenza Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

	Alaska Natives		Rate [†] per	U.S. Whites		Rate [†] per	SMR	Lower 95%	Upper 95%
	#	%	100,000	#	%	100,000			
Male and Female	85	2.5%	36.1	285362	2.7%	22.5	1.60*	1.27	2.02
Male	41	2.1%	43.6	123409	2.4%	27.0	1.61*	1.12	2.33
Female	44	3.0%	32.5	161953	3.0%	19.8	1.64*	1.21	2.24

* 95% CI does not include 1.

† Age-adjusted to the US 2000 Standard population.

**FIGURE 88. Annual Average Age-Adjusted Pneumonia and Influenza Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

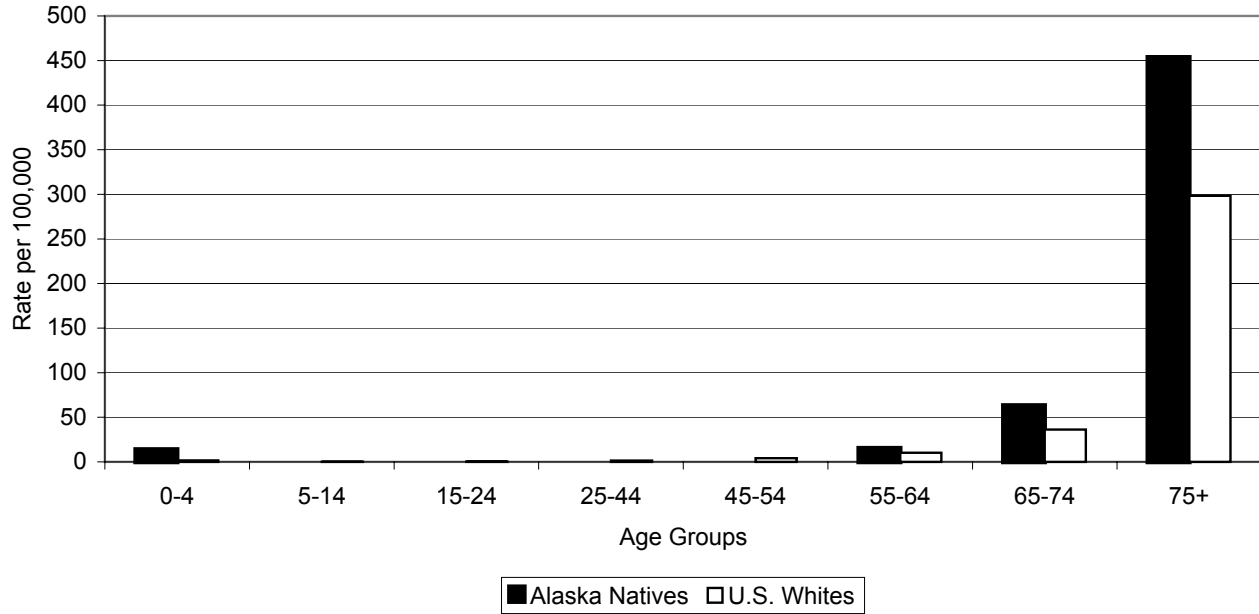


**TABLE 50a. Annual Average Age-Specific Pneumonia and Influenza Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	13.8	-	-	-	-	15.3	63.1	453.6
U.S. Whites	1.7	0.2	0.4	1.4	4.2	10.3	36.2	298.3

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 89a. Annual Average Age-Specific Pneumonia and Influenza Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

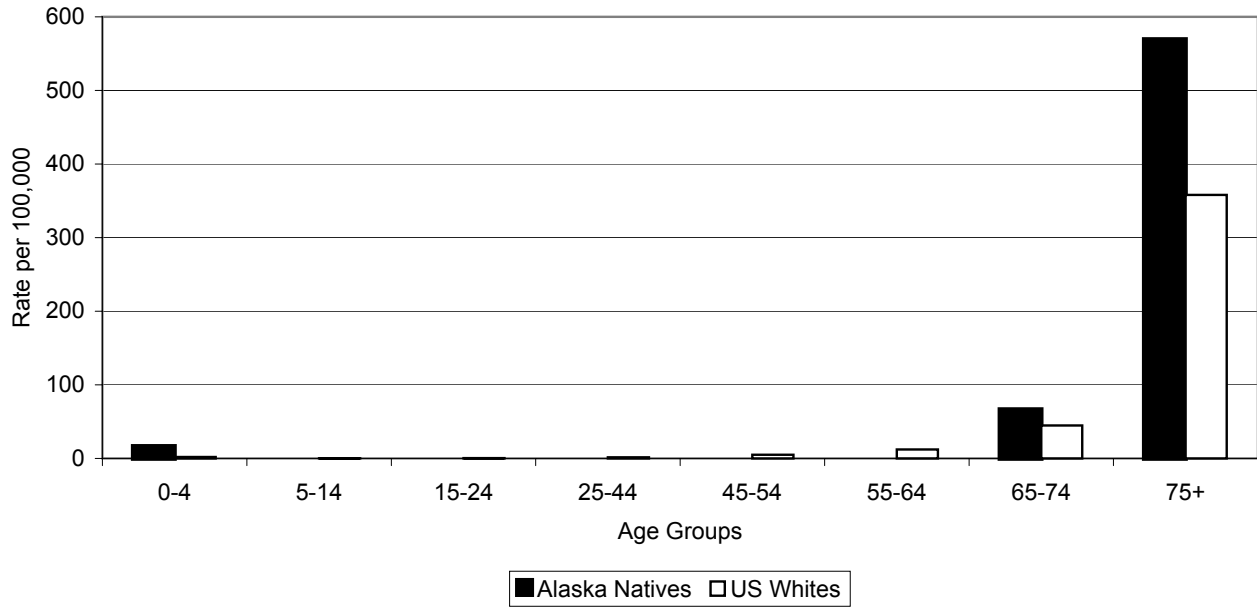


**TABLE 50b. Annual Average Age-Specific Pneumonia and Influenza Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	16.4	-	-	-	-	-	66.2	569.1
US Whites	1.9	0.2	0.5	1.6	5.1	12.1	44.7	358.1

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 89b. Annual Average Age-Specific Pneumonia and Influenza Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

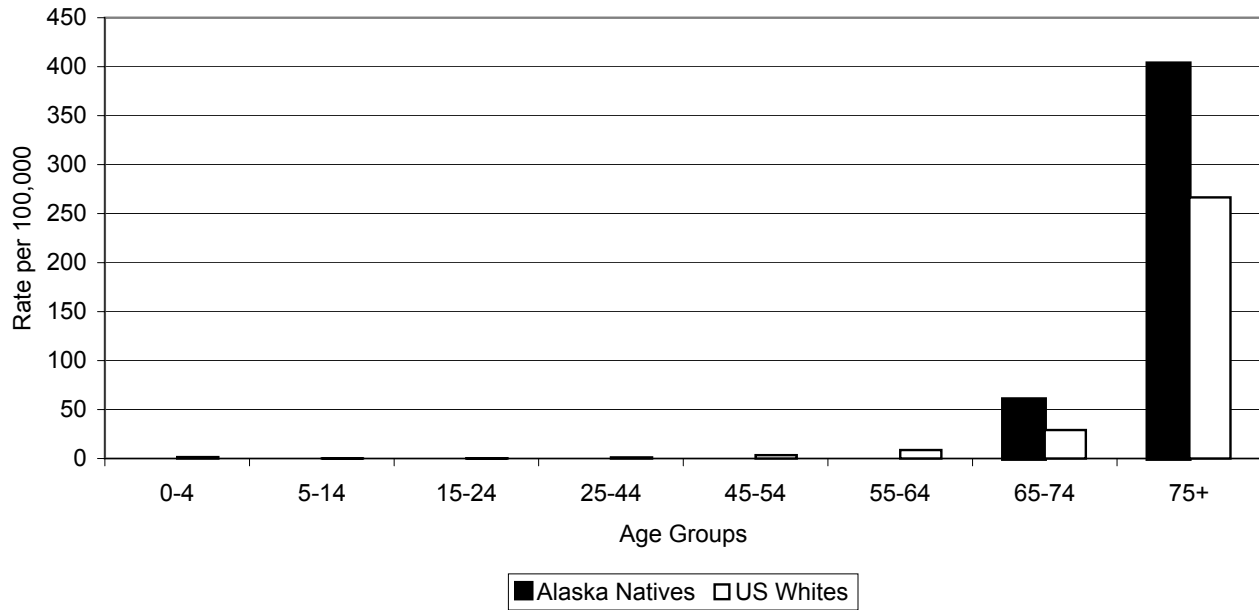


**TABLE 50c. Annual Average Age-Specific Pneumonia and Influenza Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	-	-	60.1	402.9
US Whites	1.5	0.2	0.4	1.2	3.4	8.7	29.1	266.5

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 89c. Annual Average Age-Specific Pneumonia and Influenza Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**



**TABLE 51. Annual Average Age-Specific Pneumonia and Influenza Mortality Rates
Alaska Natives, Males versus Females, 1999-2003**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	16.4	-	-	-	-	-	66.2	569.1
AN Females	-	-	-	-	-	-	60.1	402.9

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 90. Annual Average Age-Specific Pneumonia and Influenza Mortality Rates
Alaska Natives, Males versus Females, 1999-2003**

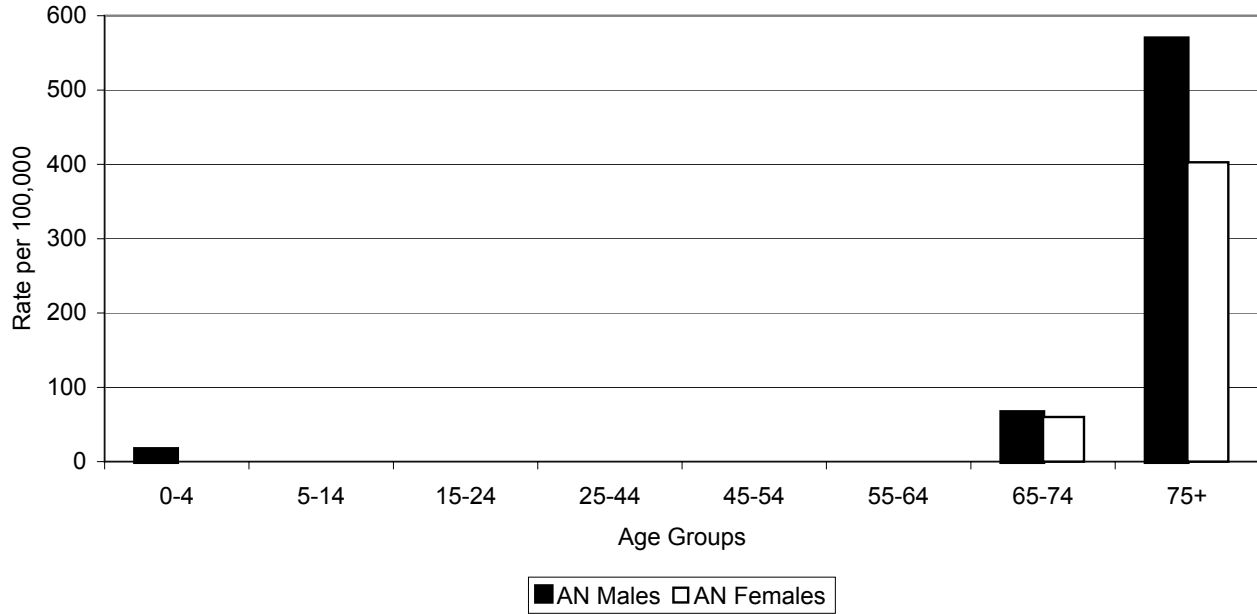


TABLE 52. Trends Over Time in Age-Adjusted Pneumonia and Influenza Mortality Rates Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined

Time Period	1979-1983	1984-1988	1989-1993	1994-1998	1999-2003	% Change
Alaska Natives	49.4	63.4	57.6	39.4	36.1	-27%
U.S. Whites	28.6	34.2	34.6	33.2	22.5	-21%

FIGURE 91. Trends Over Time in Age-Adjusted Pneumonia and Influenza Mortality Rates Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined

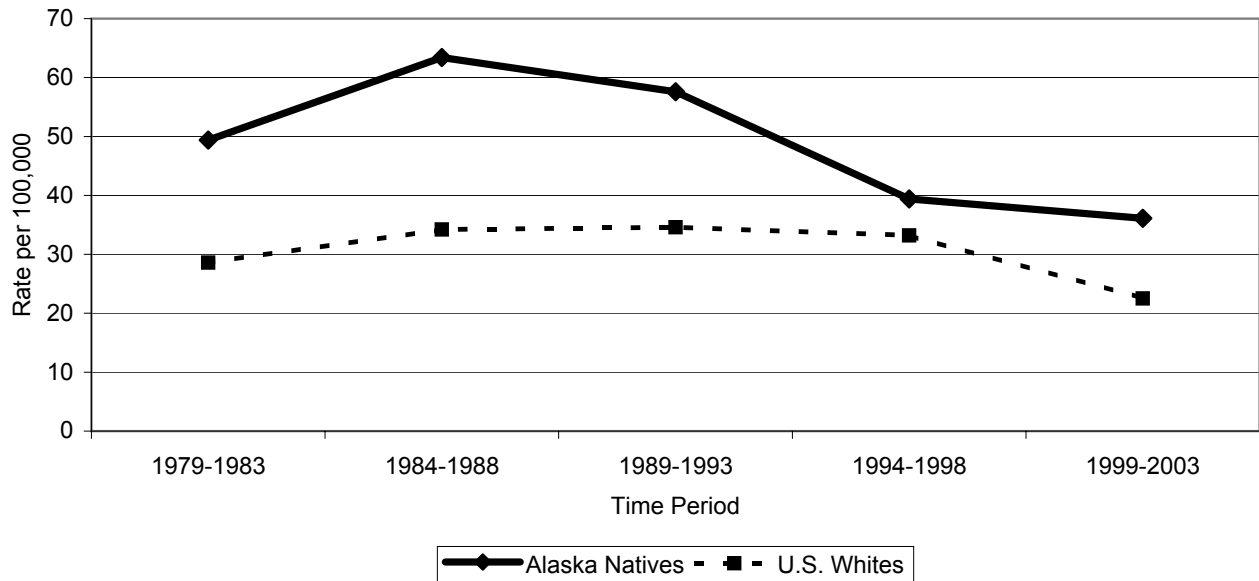
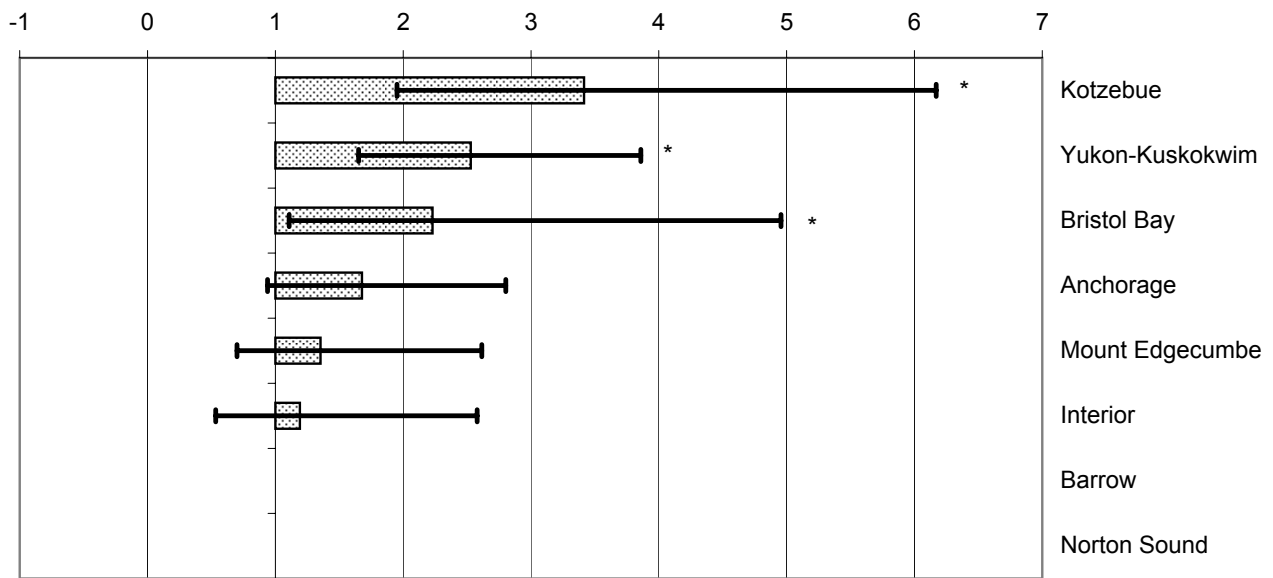


TABLE 53. Age-Adjusted Pneumonia and Influenza Mortality Rates by Service Region 1999- Alaska Natives, Both Genders Combined

Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives	U.S. Whites
38.1	-	50.6	27.0	77.5	30.7	-	57.4	33.7	22.5

(-) Rate not calculated for fewer than 5 deaths.

FIGURE 92. Ratio of Pneumonia and Influenza Mortality For Alaska Natives vs U.S. Whites by Service Region 1999-2003, Both Genders Combined



* p<0.05

#9 CAUSE OF DEATH

CHRONIC LIVER DISEASE AND CIRRHOSIS

Chronic liver disease and cirrhosis was the ninth leading cause of death among AN, both genders combined. It ranked tenth among AN men and sixth among AN women. Chronic liver disease (n=75) accounted for 2.2% of all deaths. Mortality rates for AN, both genders combined, were 2.0 times higher than among USW. Rates for AN men were not significantly different from those for USW men. Rates for AN women, however, were 4.1 times higher than those for USW women.

Chronic liver disease accounted for 3.4% of all excess deaths among AN both genders combined (n=41). Among AN men, chronic liver disease accounted for one more death than would have been expected if AN men had the same chronic liver disease mortality rate as USW men. Among AN women (n=40), chronic liver disease accounted for 8.4% of all excess deaths, the third leading cause of excess death.

Examining age-specific chronic liver disease mortality rates for AN, both genders combined, rates were 2.3 to 3.6 times higher for age groups 25 through 64 years as compared to USW. Rate ratios declined with age. Among AN men, there were no significant differences in chronic liver disease mortality rates for any age groups. Among AN women, chronic liver disease

mortality rates were 4.1 to 7.2 times higher than rates for USW women for age groups 25 to 64 years. Comparing AN men to women, there were no significant differences between chronic liver disease mortality rates for any age group.

Examining chronic liver disease and cirrhosis mortality rates by service region, showed that only the Anchorage (RR=4.4), Bristol Bay (RR=3.1), and Interior (RR=2.8) service regions had significantly higher rate ratios than USW. There were no significant differences in chronic liver disease mortality rates for any other service regions compared to USW.

There was a 31% decline in chronic liver disease mortality rates for AN, both genders combined, between 1979 and 2003. USW experienced a significant 26% decline.

More than three quarters (77%) of chronic liver disease deaths for AN during 1999-2003 were alcohol-related. This proportion is significantly lower than during the 1989 to 1998 time period (84% alcohol-related, $p < .05$).

**#9 Cause of Death Among Alaska Natives, 1999-2003
Chronic Liver Disease and Cirrhosis**

**TABLE 54. Annual Average Age-Adjusted Chronic Liver Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

	Alaska Natives		Rate [†] per 100,000	US Whites		Rate [†] per 100,000	SMR	Lower 95%	Upper 95%
	#	%		#	%				
Male and Female	75	2.2%	19.4	116808	1.1%	9.6	2.02*	1.59	2.56
Male	24	1.2%	13.2	75764	1.5%	13.4	0.99	0.65	1.51
Female	51	3.5%	25.2	41044	0.8%	6.2	4.06*	3.07	5.41

* 95% CI does not include 1.

† Age-adjusted to the US 2000 Standard population.

**FIGURE 93. Annual Average Age-Adjusted Chronic Liver Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

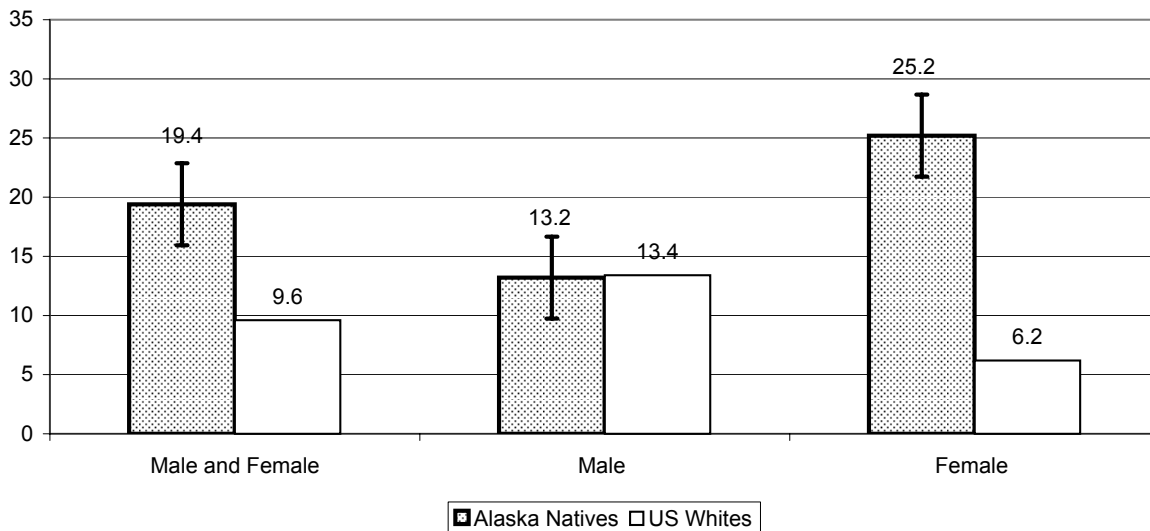
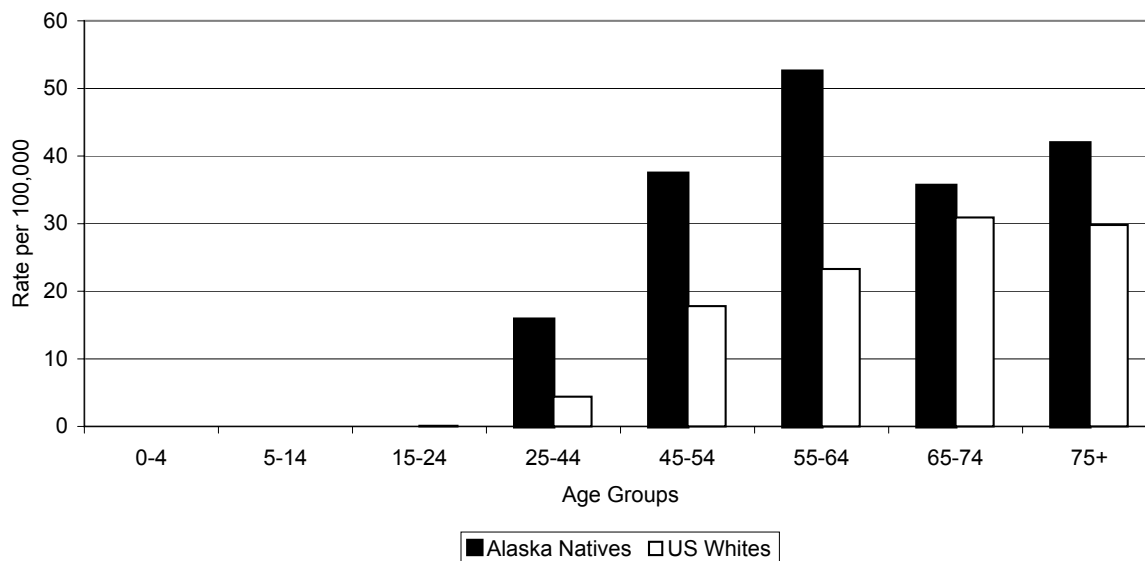


TABLE 55a. Annual Average Age-Specific Chronic Liver Disease Mortality Rates Compared to US Whites, 1999-2003, Both Genders Combined

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	15.8	37.4	52.5	35.6	41.9
US Whites	-	-	0.1	4.4	17.8	23.3	30.9	29.8

(-) Rate not calculated for fewer than 5 deaths.

FIGURE 94a. Annual Average Age-Specific Chronic Liver Disease Mortality Rates Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined

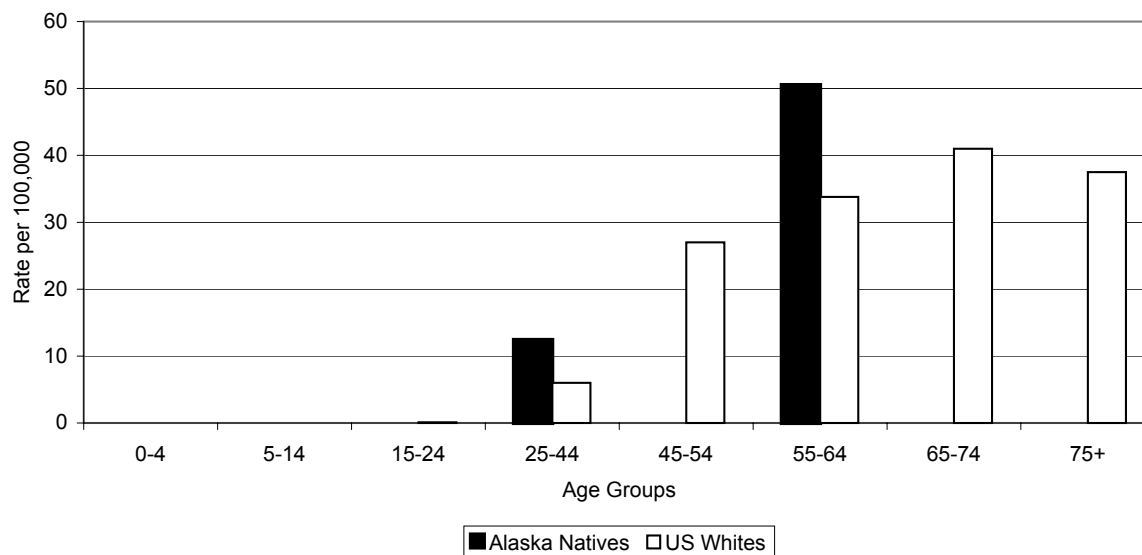


**TABLE 55b. Annual Average Age-Specific Chronic Liver Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	12.4	-	50.5	-	-
US Whites	-	-	0.1	6.0	27.0	33.8	41.0	37.5

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 94b. Annual Average Age-Specific Chronic Liver Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

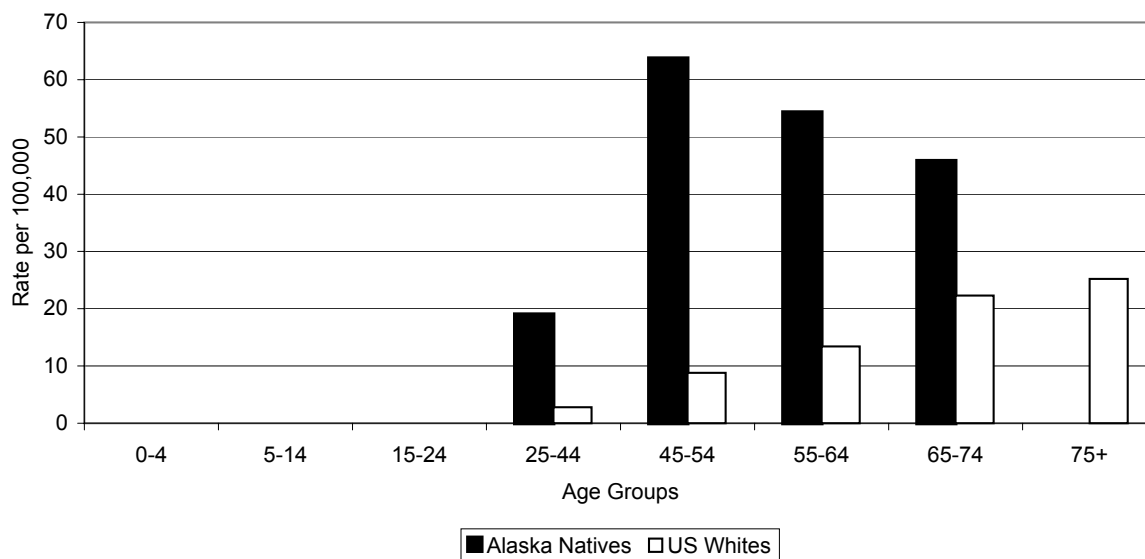


**TABLE 55c. Annual Average Age-Specific Chronic Liver Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	19.0	63.7	54.3	45.8	-
US Whites	-	-	-	2.8	8.8	13.4	22.3	25.2

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 94c. Annual Average Age-Specific Chronic Liver Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

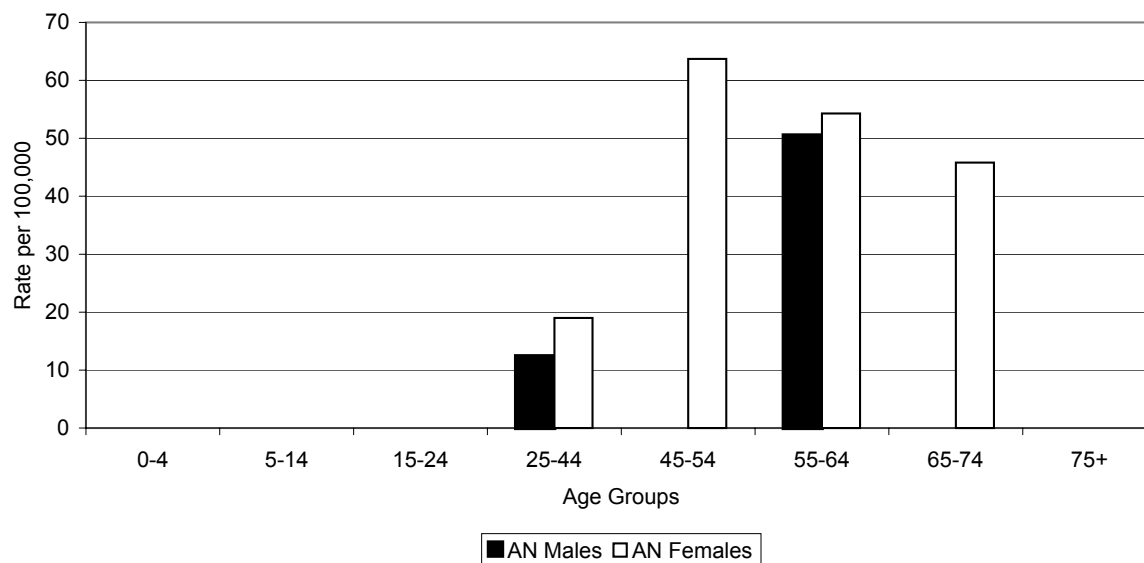


**TABLE 56. Annual Average Age-Specific Chronic Liver Disease Mortality Rates
Alaska Natives, Males vs Females, 1999-2003**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	12.4	-	50.5	-	-
AN Females	-	-	-	19.0	63.7	54.3	45.8	-

(-) Rate not calculated for fewer than 5 deaths.

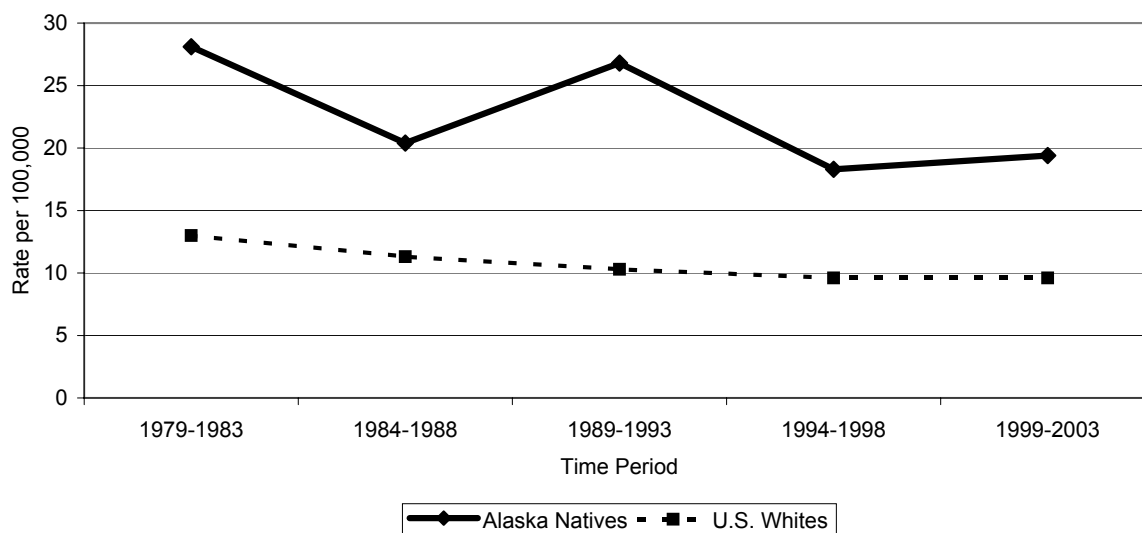
**FIGURE 95. Annual Average Age-Specific Chronic Liver Disease Mortality Rates
Alaska Natives, Males vs Females, 1999-2003**



**TABLE 57. Trends Over Time in Age-Adjusted Chronic Liver Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined**

Time Period	1979-1983	1984-1988	1989-1993	1994-1998	1999-2003	% Change
Alaska Natives	28.1	20.4	26.8	18.3	19.4	-31%
U.S. Whites	13.0	11.3	10.3	9.6	9.6	-26%

**FIGURE 96. Trends Over Time in Age-Adjusted Chronic Liver Disease Mortality Rates
Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined**

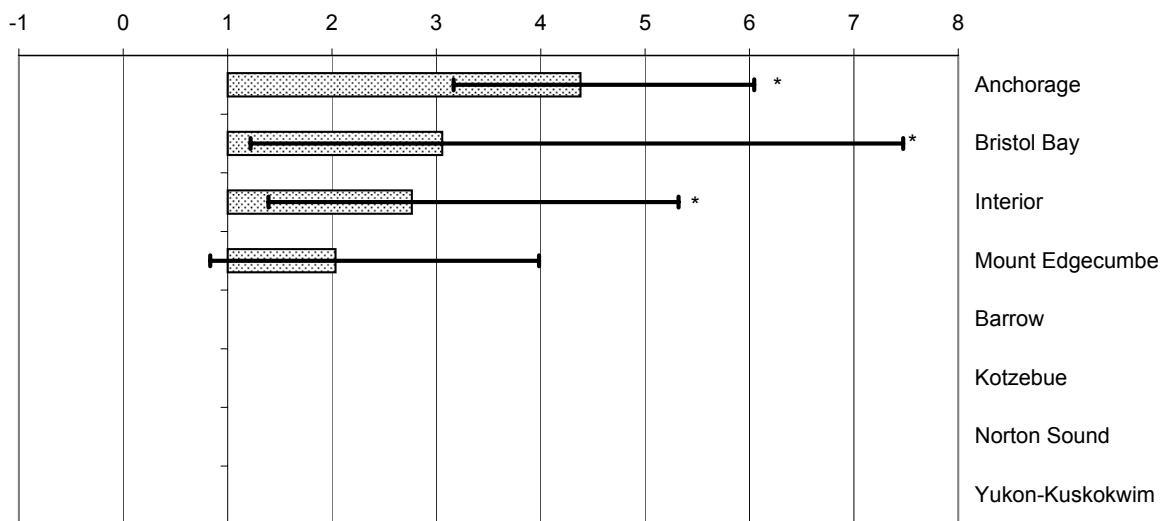


**TABLE 58. Age-Adjusted Chronic Liver Disease Mortality Rates by Service Region 1999-2003
Alaska Natives, Both Genders Combined**

Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives	U.S. Whites
42.1	-	29.3	26.5	-	19.5	-	-	18.4	9.6

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 97. Ratio of Chronic Liver Disease Mortality For Alaska Natives vs U.S. Whites by
Service Region 1999-2003, Both Genders Combined**



* p<0.05

#10 CAUSE OF DEATH

DIABETES MELLITUS

Diabetes mellitus is the tenth leading cause of death among AN, both genders combined. It ranked ninth for AN men, and tenth for AN women. Diabetes mellitus (n=51) accounted for 1.5% of all deaths among AN, both genders combined. The mortality rate for diabetes mellitus among AN, both genders combined, was not significantly lower than the USW rate. Among AN men rates were similar to those for USW men. Among AN women rates were similar to those for USW women.

There were eight fewer deaths from diabetes mellitus among AN, both genders combined, than would have been expected if AN had the same diabetes mellitus mortality rates as USW. There were no excess deaths among AN men or women from diabetes mellitus.

There were no significant differences in diabetes mellitus mortality rates between AN, both genders combined, and USW for any age group. This was also true for AN men and women as compared to USW men and women. There were no significant differences in age-specific mortality rates between AN men and women.

Examining diabetes mellitus mortality rates by service region, showed that only the Anchorage service region (RR=2.1) had a significantly different rate ratio than USW.

Diabetes mellitus mortality rates among AN, both genders combined, increased 194% between 1979 and 2003. USW had a significant 40% increase in mortality rates from diabetes mellitus between 1979 and 2003.

**#10 Cause of Death Among Alaska Natives, 1999-2003
Diabetes Mellitus**

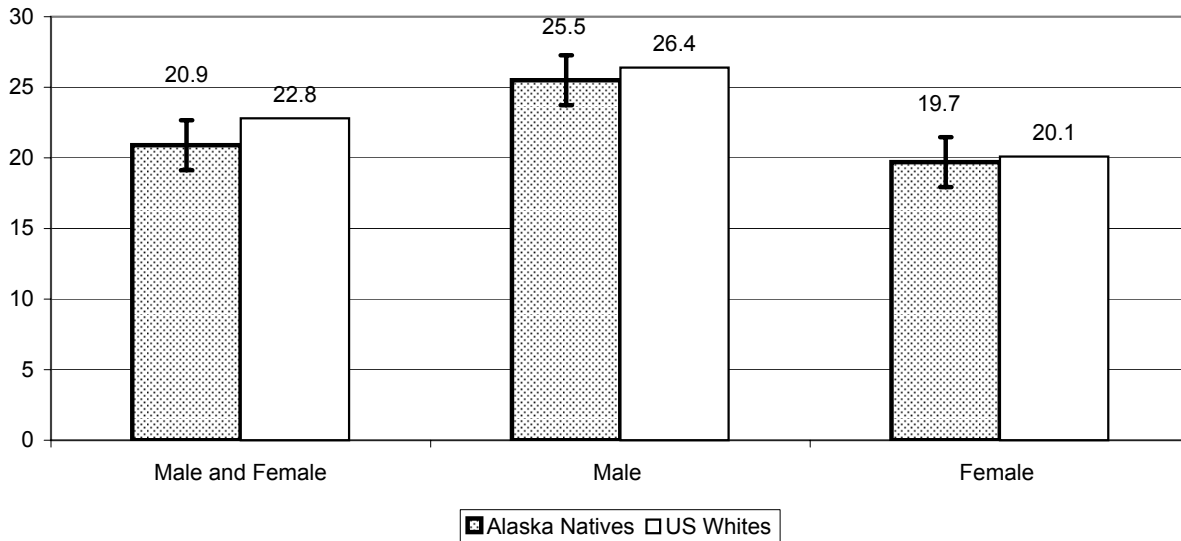
**TABLE 59. Annual Average Age-Adjusted Diabetes Mellitus Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

	Alaska Natives		Rate [†] per 100,000	US Whites		Rate [†] per 100,000	SMR	Lower 95%	Upper 95%
	#	%		#	%				
Male and Female	51	1.5%	20.9	284893	2.7%	22.8	0.92	0.68	1.23
Male	25	1.3%	25.5	135515	2.7%	26.4	0.97	0.61	1.54
Female	26	1.8%	19.7	149378	2.8%	20.1	0.98	0.66	1.45

* 95% CI does not include 1.

† Age-adjusted to the US 2000 Standard population.

**FIGURE 98. Annual Average Age-Adjusted Diabetes Mellitus Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003**

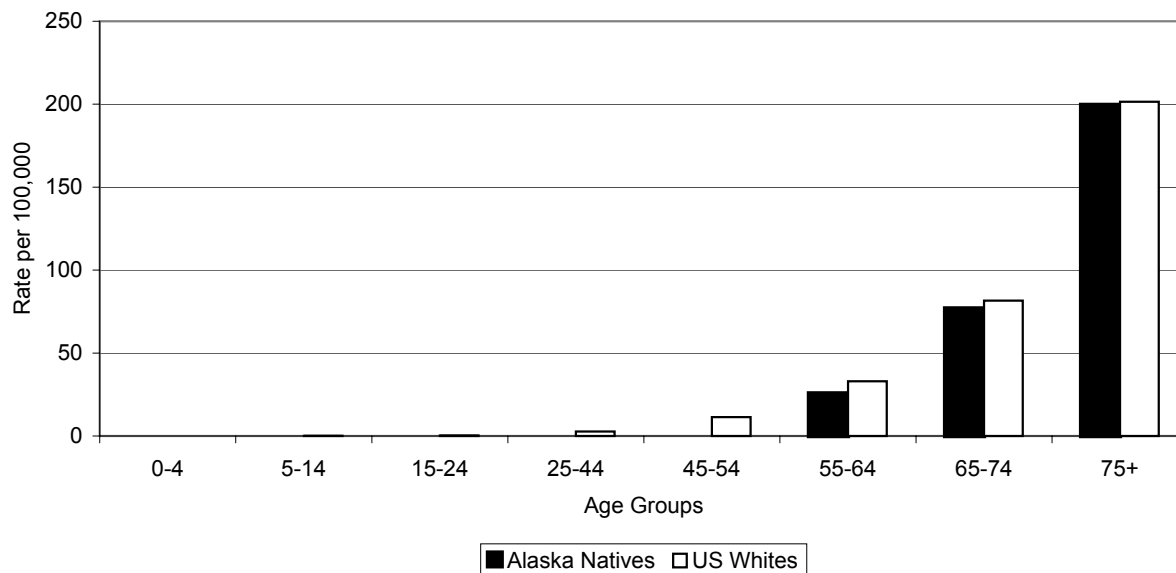


**TABLE 60a. Annual Average Age-Specific Diabetes Mellitus Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	-	25.7	76.9	199.6
US Whites	-	0.1	0.3	2.7	11.4	33.0	81.6	201.5

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 99a. Annual Average Age-Specific Diabetes Mellitus Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Both Genders Combined**

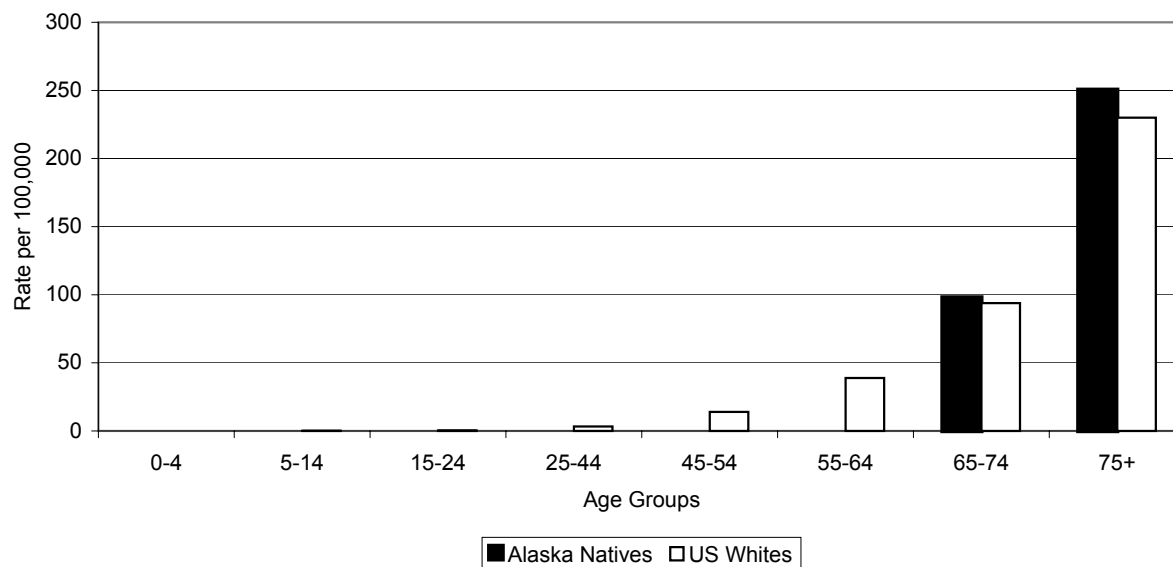


**TABLE 60b. Annual Average Age-Specific Diabetes Mellitus Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	-	-	98.0	250.4
US Whites	-	0.1	0.4	3.3	14.0	38.9	93.9	230.0

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 99b. Annual Average Age-Specific Diabetes Mellitus Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Males**

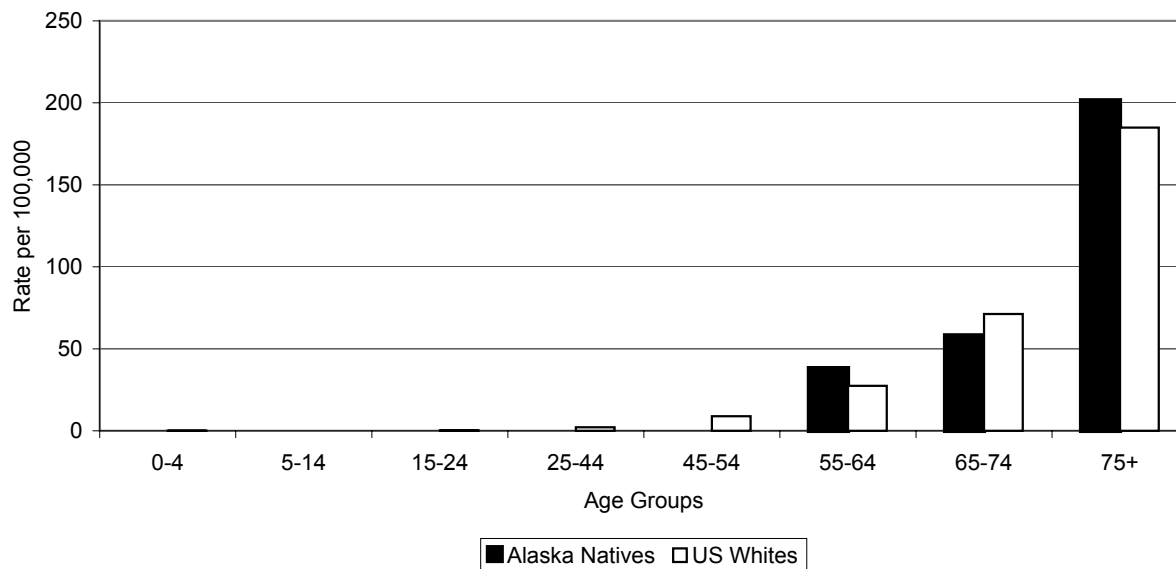


**TABLE 60c. Annual Average Age-Specific Diabetes Mellitus Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	-	38.2	58.2	201.5
US Whites	0.1	0.0	0.3	2.1	8.9	27.4	71.2	184.9

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 99c. Annual Average Age-Specific Diabetes Mellitus Mortality Rates
Alaska Natives vs U.S. Whites, 1999-2003, Females**

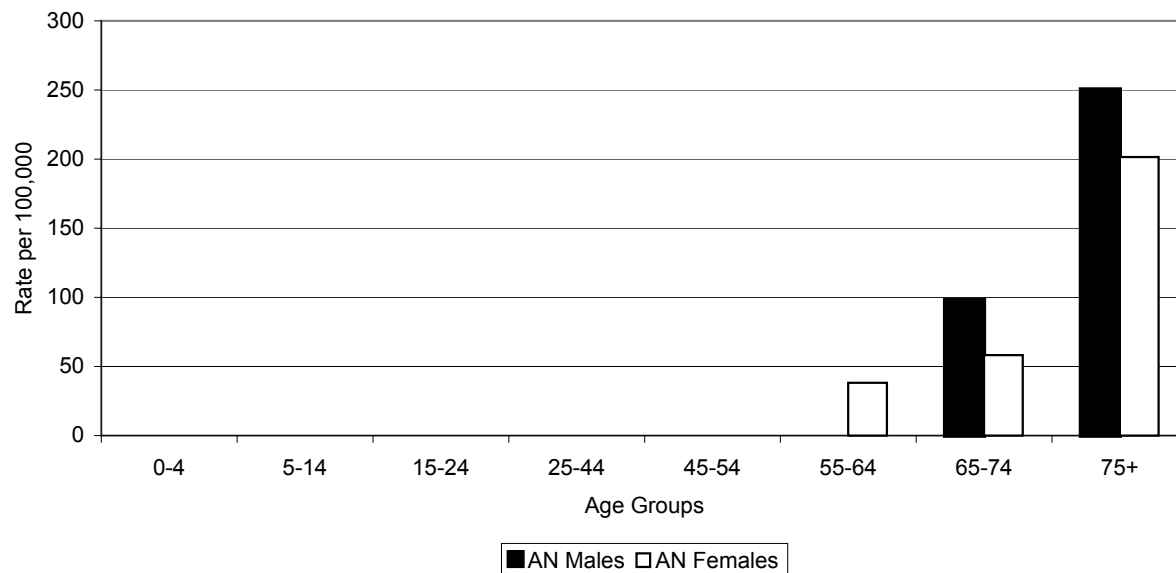


**TABLE 61. Annual Average Age-Specific Diabetes Mellitus Mortality Rates
Alaska Natives, Males versus Females, 1999-2003**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	-	-	-	98.0	250.4
AN Females	-	-	-	-	-	38.2	58.2	201.5

(-) Rate not calculated for fewer than 5 deaths.

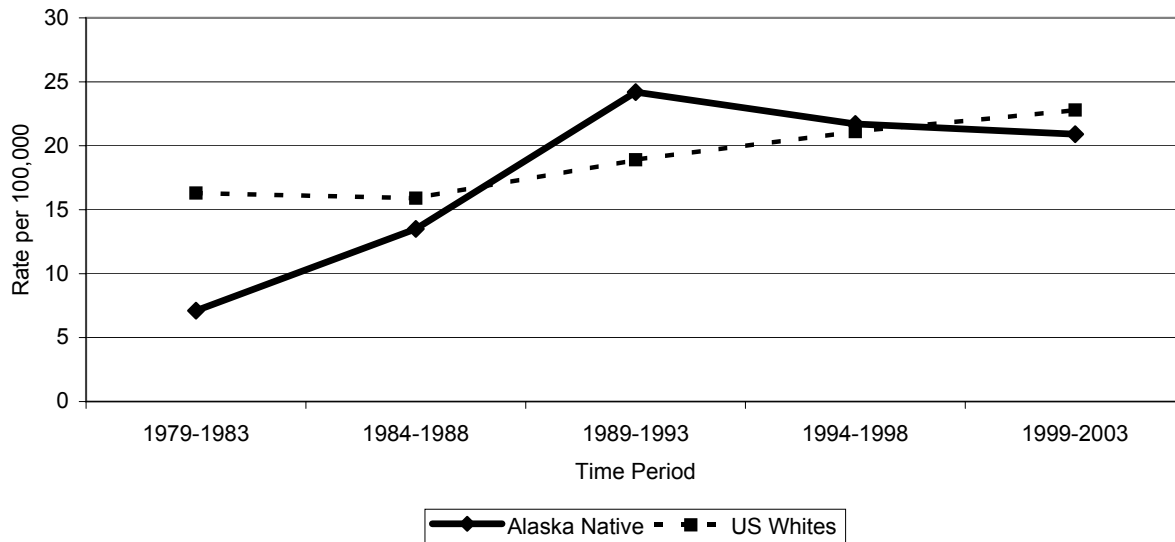
**FIGURE 100. Annual Average Age-Specific Diabetes Mellitus Mortality Rates
Alaska Natives, Males versus Females, 1999-2003**



**TABLE 62. Trends Over Time in Age-Adjusted Diabetes Mellitus Mortality Rates
Alaska Natives vs U.S. Whites, 1979-2003, Males and Females Combined**

Time Period	1979-1983	1984-1988	1989-1993	1994-1998	1999-2003	% Change
Alaska Native	7.1	13.5	24.2	21.7	20.9	194%
US Whites	16.3	15.9	18.9	21.1	22.8	40%

**FIGURE 101. Trends Over Time in Age-Adjusted Diabetes Mellitus Mortality Rates for Alaska
Alaska Natives vs U.S. Whites, 1979-2003, Both Genders Combined**

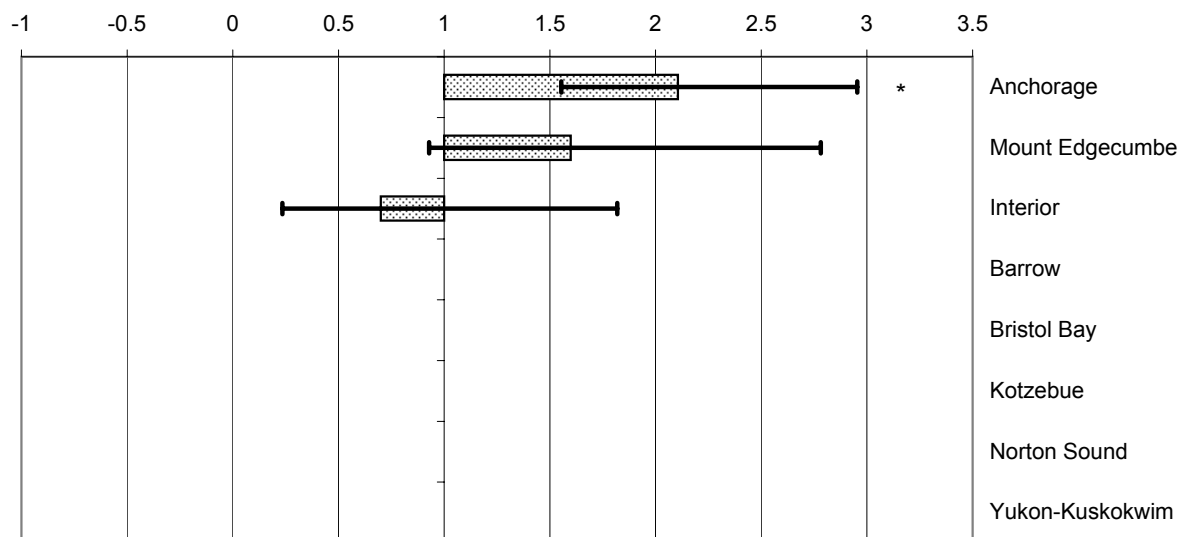


**TABLE 63. Age-Adjusted Diabetes Mellitus Mortality Rates by Service Region 1999-2003
Alaska Natives, Both Genders Combined**

Anchorage	Barrow	Bristol Bay	Interior	Kotzebue	Mount Edgecumbe	Norton Sound	Yukon-Kuskokwim	Alaska Natives	U.S. Whites
48.0	-	-	15.5	-	36.5	-	-	19.3	22.8

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 102. Ratio of Diabetes Mellitus Mortality For Alaska Natives vs U.S. Whites
By Service Region 1999-2003, Both Genders Combined**



* p<0.05

APPENDIX A
National Center for Health Statistics
113 Selected Causes of Death

	Cause of Death	ICD-9 Codes	ICD-10 Codes	AN Leading Causes
1	Salmonella infections	002-003	A01-A02	
2	Shigellosis and amebiasis	004, 006	A03, A06	
3	Certain other intestinal infections	007-009	A04, A07-A09	
4	Respiratory tuberculosis	010-012	A16	
5	Other tuberculosis	013-018	A17-A19	
6	Whooping cough	33	A37	
7	Scarlet fever and erysipelas	034.1-035	A38, A46	
8	Meningococcal infection	36	A39	
9	Septicemia	38	A40-A41	
10	Syphilis	090-097	A50-A53	
11	Acute poliomyelitis	45	A80	
12	Arthropod-borne viral encephalitis	062-064	A83-A84, A85.2	
13	Measles	55	B05	
14	Viral hepatitis	70	B15-B19	
15	Human immunodeficiency virus (HIV) disease	042-044	B20-B24	
16	Malaria	84	B50-B54	
17	Other and unspecified infectious and parasitic diseases and their sequelae	001, 005, 020-032, 037, 039-041, 046-054, 056-061, 065-066, 071-083, 085-088, 098-134, 136-139, 771.3	A00, A05, A20-A36, A42-A44, A48-A49, A54-A79, A81-A82, A85.0-A85.1, A85.8, A86-B04, B06-B09, B25-B49, B55-B99	
18	Malignant neoplasms of lip, oral cavity and pharynx	140-149	C00-C14	Cancer
19	Malignant neoplasm of esophagus	150	C15	
20	Malignant neoplasm of stomach	151	C16	
21	Malignant neoplasms of colon, rectum and anus	153-154	C18-C21	
22	Malignant neoplasms of liver and intrahepatic bile ducts	155	C22	
23	Malignant neoplasm of pancreas	157	C25	
24	Malignant neoplasm of larynx	161	C32	
25	Malignant neoplasms of trachea, bronchus and lung	162	C33-C34	
26	Malignant melanoma of skin	172	C43	
27	Malignant neoplasm of breast	174-175	C50	
28	Malignant neoplasm of cervix uteri	180	C53	
29	Malignant neoplasms of corpus uteri and uterus, part unspecified	179, 182	C54-C55	
30	Malignant neoplasm of ovary	183	C56	
31	Malignant neoplasm of prostate	185	C61	
32	Malignant neoplasms of kidney and renal pelvis	189.0, 189.1	C64-C65	
33	Malignant neoplasm of bladder	188	C67	
34	Malignant neoplasms of meninges, brain and other parts of central nervous system	191-192	C70-C72	
35	Hodgkin's disease	201	C81	
36	Non-Hodgkin's lymphoma	200, 202	C82-C85	
37	Leukemia	204-208	C91-C95	
38	Multiple myeloma and immunoproliferative neoplasms	203	C88, C90	
39	Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue	---	C96	
40	All other and unspecified malignant neoplasms	152, 156, 158-160, 163-171, 173, 181, 183.2-184, 186-187, 189.2-190, 193-199	C17, C23-C24, C26-C31, C37-C41, C44-C49, C51-C52, C57-C60, C62-C63, C66, C68-C69, C73-C80, C97	

41	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	210-239	D00-D48	
42	Anemias	280-285	D50-D64	
43	Diabetes mellitus	250	E10-E14	Diabetes mellitus
44	Malnutrition	260-263	E40-E46	
45	Other nutritional deficiencies	264-269	E50-E64	
46	Meningitis	320-322	G00, G03	
47	Parkinson's disease	332	G20-G21	
48	Alzheimer's disease	331	G30	
49	Acute rheumatic fever and chronic rheumatic heart diseases	390-398	I00-I09	Heart Disease
50	Hypertensive heart disease	402	I11	
51	Hypertensive heart and renal disease	404	I13	
52	Acute myocardial infarction	410	I21-I22	
53	Other acute ischemic heart diseases	411	I24	
54	Atherosclerotic cardiovascular disease, so described	429.2	I25.0	
55	All other forms of chronic ischemic heart disease	412-414	I20, I25.1-I25.9	
56	Acute and subacute endocarditis	421	I33	
57	Diseases of pericardium and acute myocarditis	420, 422-423	I30-I31, I40	
58	Heart failure	428	I50	
59	All other forms of heart disease	415-417, 424-427, 429.0-429.1, 429.3-429.9	I26-I28, I34-I38, I42-I49, I51	
60	Essential (primary) hypertension and hypertensive renal disease	401, 403	I10, I12	
61	Cerebrovascular diseases	430-434, 436-438	I60-I69	Cerebrovascular diseases
62	Atherosclerosis	440	I70	
63	Aortic aneurysm and dissection	441	I71	
64	Other diseases of arteries, arterioles and capillaries	442-448	I72-I78	
65	Other disorders of circulatory system	451-459	I80-I99	
66	Influenza	487	J10-J11	Pneumonia & Influenza
67	Pneumonia	480-486	J12-J18	
68	Acute bronchitis and bronchiolitis	466	J20-J21	
69	Unspecified acute lower respiratory infection	---	J22	
70	Bronchitis, chronic and unspecified	490-491	J40-J42	Chronic Obstructive Pulmonary Disease
71	Emphysema	492	J43	
72	Asthma	493	J45-J46	
73	Other chronic lower respiratory diseases	494, 496	J44, J47	
74	Pneumoconioses and chemical effects	500-506	J60-J66, J68	
75	Pneumonitis due to solids and liquids	507	J69	
76	Other diseases of respiratory system	034.0, 460-465, 470-478, 495, 508-519	J00-J06, J30-J39, J67, J70-J98	
77	Peptic ulcer	531-534	K25-K28	
78	Diseases of appendix	540-543	K35-K38	
79	Hernia	550-553	K40-K46	
80	Alcoholic liver disease	571.0-571.3	K70	Chronic Liver Disease and Cirrhosis
81	Other chronic liver disease and cirrhosis	571.4-571.9	K73-K74	

82	Cholelithiasis and other disorders of gallbladder	574-575	K80-K82	
83	Acute and rapidly progressive nephritic and nephrotic syndrome	580-581	N00-N01, N04	
84	Chronic glomerulonephritis, nephritis and nephritis not specified as acute or chronic, and renal sclerosis unspecified	582-583, 587	N02-N03, N05-N07, N26	
85	Renal failure	584-586	N17-N19	
86	Other disorders of kidney	588-589	N25, N27	
87	Infections of kidney	590	N10-N12, N13.6, N15.1	
88	Hyperplasia of prostate	600	N40	
89	Inflammatory diseases of female pelvic organs	614-616	N70-N76	
90	Pregnancy with abortive outcome	630-639	O00-O07	
91	Other complications of pregnancy, childbirth and the puerperium	640-676	O10-O99	
92	Certain conditions originating in the perinatal period	760-771.2, 771.4-779	P00-P96	
93	Congenital malformations, deformations and chromosomal abnormalities	740-759	Q00-Q99	
94	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	780-799	R00-R99	
95	All other diseases (Residual)	Residual	Residual	
96	Motor vehicle crash	E810-E825	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2	Unintentional Injury
97	Unintentional injury: Other land transport	E800-E807, E826-E829	V01, V05-V06, V09.1, V09.3-V09.9, V10-V11, V15-V18, V19.3, V19.8-V19.9, V80.0-V80.2, V80.6-V80.9, V81.2-V81.9, V82.2-V82.9, V87.9, V88.9, V89.1, V89.3, V89.9	
98	Unintentional injury: Water, air and space, and other transport	E830-E848, E929.0, E929.1	V90-V99, Y85	
99	Falls	E880-E888	W00-W19	
100	Accidental discharge of firearms	E922	W32-W34	
101	Accidental drowning and submersion	E910	W65-W74	
102	Accidental exposure to smoke, fire and flames	E890-E899	X00-X09	
103	Accidental poisoning and exposure to noxious substances	E850-E869, E924.1	X40-X49	
104	Other and unspecified nontransport accidents and their sequelae	E900-E909, E911-E921, E923-E924.0, E924.8-E928, E929.2-E929.9	W20-W31, W35-W64, W75-W99, X10-X39, X50-X59, Y86	
105	Intentional self-harm (suicide) by discharge of firearms	E955.0-E955.4	X72-X74	
106	Intentional self-harm (suicide) by other and unspecified means and their sequelae	E950-E954, E955.5-E959	X60-X71, X75-X84, Y87.0, *U03	

107	Assault (homicide) by discharge of firearms	E965.0-E965.4, E979.4	X93-X95, *U01.4	Homicide and Legal Intervention
108	Assault (homicide) by other and unspecified means and their sequelae	E960-E964, E965.5- E969, E979.0- E979.3, E979.5- E979.9, E999	X85-X92, X96-Y09, Y87.1, *U01.0- *U01.3, *U01.5- *U01.9, *U02	
109	Legal intervention	E970-E978	Y35, Y89.0	
110	Discharge of firearms, undetermined intent	E985.0-E985.4	Y22-Y24	
111	Other and unspecified events of undetermined intent and their sequelae	E980-E984, E985.5- E989	Y10-Y21, Y25-Y34, Y87.2, Y89.9	
112	Operations of war and their sequelae	E990-E998	Y36, Y89.1	
113	Complications of medical and surgical care	E870-E879, E930- E949	Y40-Y84, Y88	

**APPENDIX B Leading Causes of Death
Alaska Whites vs U.S. Whites, 1999-2003
Ranked by Percentage of Mortality for Alaska Natives
Both Genders Combined**

	Male and Female Combined	Alaska Whites		Rate [†] per 100,000	U.S. Whites [§]		Rate [†] per 100,000	SMR	Lower 95%	Upper 95%
		#	%		#	%				
1	Cancer	2620	24.9%	191.5	2,398,284	23.0%	193.5	0.99	0.97	1.05
2	Heart Disease	2280	21.7%	190.3	3,066,735	29.5%	243.8	0.78 *	0.75	0.82
3	Unintentional Injuries	1069	10.2%	51.8	433,560	4.2%	36.3	1.43 *	1.33	1.53
4	Suicide	374	3.6%	16.7	137,277	1.3%	11.6	1.44 *	1.28	1.61
5	Cerebrovascular Diseases	592	5.6%	60.0	703,698	6.8%	55.6	1.08	0.99	1.17
6	Chronic Obstructive Pulmonary Disease	538	5.1%	49.4	573,157	5.5%	45.8	1.08	0.99	1.18
7	Homicide and Legal Intervention	104	1.0%	4.3	46,755	0.4%	4.0	1.08	0.86	1.32
8	Pneumonia and Influenza	140	1.3%	14.4	285,222	2.7%	22.5	0.64 *	0.53	0.76
9	Chronic Liver Disease and Cirrhosis	180	1.7%	9.2	116,628	1.1%	9.6	0.96	0.84	1.14
10	Diabetes Mellitus	323	3.1%	24.9	284,570	2.7%	22.8	1.09	0.96	1.23
	All Others	2,301	21.9%	188.3	2,360,778	22.7%	189.1	1.00	0.96	1.01
	All Causes	10,521	100.0%	800.8	10,406,664	100.0%	834.6	0.96 *	0.94	0.98

†Age-adjusted to 2000 standard population.

* p<0.05

§ U.S. White data does not include Alaska White data

**Leading Causes of Death
Alaska Whites Compared to US Whites, 1999-2003
Ranked by Percentage of Mortality for Alaska Natives
Males**

Male	Alaska Natives		Rate [†] per 100,000	U.S. Whites [§]		Rate [†] per 100,000	SMR	Lower 95%	Upper 95%	
	#	%		#	%					
1	Unintentional Injuries	781	12.8%	74.4	278,940	5.5%	50.7	1.47 *	1.34	1.61
2	Cancer	1435	23.5%	229.6	1,240,404	24.5%	239.2	0.96	0.90	1.02
3	Heart Disease	1422	23.3%	244.8	1,491,601	29.4%	304.6	0.80 *	0.75	0.86
4	Suicide	298	4.9%	27.1	110,260	2.2%	19.4	1.40 *	1.21	1.62
5	Cerebrovascular Diseases	255	4.2%	59.8	267,579	5.3%	56.6	1.06	0.92	1.22
6	Chronic Pulmonary Diseases	282	4.6%	61.1	276,892	5.5%	56.3	1.09	0.95	1.24
7	Homicide and Legal Intervention	73	1.2%	5.7	34,062	0.7%	5.9	0.97	0.76	1.33
8	Pneumonia and Influenza	61	1.0%	15.8	123,348	2.4%	27.0	0.59 *	0.43	0.78
9	Diabetes Mellitus	180	2.9%	27.3	135,335	2.7%	26.4	1.03	0.87	1.24
10	Chronic Liver Disease and Cirrhosis	123	2.0%	13.1	75,641	1.5%	13.4	0.98	0.78	1.24
	All Others	1193	19.5%	195.0	1033268	20.4%	209.9	0.93 *	0.91	0.99
	All Causes	6103	100.0%	953.7	5,067,330	100.0%	1009.4	0.94 *	0.92	0.97

†Age-adjusted to 2000 standard population.

*p<0.05

§ U.S. White data does not include Alaska White data

Leading Causes of Death
Alaska Whites Compared to US Whites, 1999-2003
Ranked by Percentage of Mortality for Alaska Natives
Females

Female	Alaska Natives		Rate [†] per 100,000	U.S. Whites [§]		Rate [†] per 100,000	SMR	Lower 95%	Upper 95%	
	#	%		#	%					
1	Cancer	1185	21.1%	164.9	1,157,880	21.7%	163.4	1.01	0.95	1.07
2	Heart Disease	858	15.1%	143.0	1,575,134	29.5%	197.1	0.73 *	0.68	0.78
3	Unintentional Injuries	288	9.8%	29.6	154,620	2.9%	23.1	1.28 *	1.13	1.45
4	Cerebrovascular Diseases	337	6.0%	59.4	436,119	8.2%	54.1	1.10	0.98	1.23
5	Chronic Pulmonary Diseases	256	5.4%	42.2	296,265	5.5%	39.6	1.07	0.94	1.21
6	Chronic Liver Disease and Cirrhosis	57	3.5%	5.7	40,987	0.8%	6.2	0.92	0.68	1.23
7	Suicide	76	3.1%	6.6	27,017	0.5%	4.5	1.47 *	1.14	1.87
8	Pneumonia and Influenza	79	3.0%	13.7	161,874	3.0%	19.8	0.69 *	0.55	0.87
9	Homicide and Legal Intervention	31	2.4%	2.7	12,693	0.2%	2.2	1.23	0.85	1.87
10	Diabetes Mellitus	143	1.8%	22.3	149,235	2.8%	20.1	1.11	0.93	1.31
	All Others	1,108	28.9%	176.6	1,327,510	24.9%	171.7	1.03	0.94	1.08
	All Causes	4,418	100.0%	666.7	5,339,334	100.0%	701.8	0.95 *	0.92	0.98

†Age-adjusted to 2000 standard population.

*p<0.05

§ U.S. White data does not include Alaska White data

