

## **Cancer in Minnesota by Race and Ethnicity, 1998-2002: Preliminary Report**

### **Suggested citation**

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## **Cancer in Minnesota by Race and Ethnicity, 1998-2002: Preliminary Report**

This brief report provides preliminary information on cancer rates among Minnesota populations defined by race, ethnicity and gender. To provide more stable rates and therefore to more meaningfully evaluate race/ethnic differences in cancer occurrence, data are aggregated over the five-year period 1998-2002.

Table 1 presents the total number of new cancers diagnosed among Minnesota residents during the five-year period 1988-2002 by race, ethnicity, and gender and the corresponding average annual age-adjusted incidence rate, reported to the Minnesota Cancer Surveillance System (MCSS) as of March 2005. Table 2 presents the total number of Minnesotans who died of cancer during the same period by race, ethnicity, and gender and the corresponding average annual age-adjusted mortality rate. Final rates will be published in the MCSS 2005 biennial legislative report.

Data are presented for all cancer sites combined, and for the ten cancers most commonly diagnosed and cervical cancer in Minnesota during 2002. Rates based on fewer than ten cases over the five-year period are not presented.

The last time that cancer occurrence in Minnesota was presented by race and ethnicity was in the report "*Minnesota Cancer Facts and Figures, 2003*," published in February 2004. At that time, race-specific data were aggregated over the five-year period 1996-2000.

Because of improvements undertaken by MCSS since that report in the classification of the race and ethnicity of cancer cases, rates published in previous reports are not comparable to those presented here, and should not be compared to assess trends in cancer occurrence by race and ethnicity. Improvements include:

1. For this first time, cancer incidence rates for Hispanic Minnesotans are presented. The identification of Hispanic ethnicity, which is not always recorded on the medical record, has been improved by using surnames and county of residence to reclassify some individuals as Hispanic. After careful evaluation, we believe that MCSS data now adequately reflect the occurrence of cancer in this growing population of Minnesotans. Both incidence and mortality data are presented for Hispanics of all races combined.
2. Because Hispanics are now better identified, rates can be presented for non-Hispanic white Minnesotans rather than for whites including Hispanics. This increases the ability to meaningfully compare cancer rates across geographic areas with varying proportions of Hispanics.
3. The determination of which cancer cases are American Indian has also been improved through collaboration with the Indian Health Service. Because this collaboration enabled persons who had been reported to MCSS as another race to be correctly reclassified as American Indian, cancer incidence among American Indians in Minnesota is about 30 percent higher than previously reported, and cancer rates among other race groups (primarily whites) are marginally lower. This does not represent an increase in the risk of developing cancer for American Indians between the time periods covered in this and

previous reports, but reflects the fact that cancer rates previously reported were inaccurate because American Indians were not adequately identified using the medical record alone. The same method has not yet been applied to cancer mortality data, and it is not clear if race on the death certificate has the extent of misclassification as the medical record. Because that issue has not yet been resolved, cancer mortality rates for American Indians are not presented in this preliminary report. Comparable mortality data for American Indians will be presented in the MCSS 2005 biennial legislative report.

In spite of the improvements MCSS has made in determining the race and ethnicity of cancer cases (the numerator for incidence rates), it is likely that an unknown degree of misclassification still exists. In addition, because people may not identify themselves as the same race/ethnicity to medical care providers as they do on census forms, numerators may not be consistent with population estimates (the denominator of rates). For small populations, these misclassifications and inconsistencies may result in substantial error in calculated rates.

For more information, please visit the MCSS web site, telephone the MCSS office at (612) 676-5216, or write to MCSS, P.O. Box 9441, Minneapolis, MN 55440-9441.

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**Table 1: Cancer Incidence for All Cancers Combined and Selected Common Cancers by Race/Ethnicity and Gender, Minnesota, 1998-2002**

	Number of New Cases 1998-2002			Average Annual Age-Adjusted Incidence Rate		
	Male	Female	Total	Male	Female	Total
<b>All Sites Combined</b>						
American Indian	402	359	761	692.3	434.3	538.1
Asian/Pacific Islander	421	495	916	280.0	252.1	263.1
Black	1,084	812	1,896	674.5	402.8	520.2
Hispanic (all races)	351	370	721	376.1	315.1	336.0
Non-Hispanic White	55,553	51,550	107,103	553.1	413.3	470.1
Total	58,942	54,382	113,324	561.1	415.9	475.0
<b>Breast</b>						
American Indian	0	85	85	~	97.3	53.2
Asian/Pacific Islander	0	135	135	~	64.9	35.5
Black	4	240	244	~	108.5	57.4
Hispanic (all races)	2	108	110	~	84.9	43.7
Non-Hispanic White	125	17,076	17,201	1.3	139.2	75.0
Total	133	17,902	18,035	1.3	138.9	74.9
<b>Cervix</b>						
American Indian	~	14	14	~	12.1	~
Asian/Pacific Islander	~	29	29	~	13.6	~
Black	~	30	30	~	10.4	~
Hispanic (all races)	~	25	25	~	10.9	~
Non-Hispanic White	~	717	717	~	6.2	~
Total	~	843	843	~	6.7	~
<b>Colon and Rectum</b>						
American Indian	56	46	102	105.5	63.0	81.7
Asian/Pacific Islander	44	38	82	28.1	23.8	26.2
Black	96	93	189	67.4	54.2	60.1
Hispanic (all races)	33	26	59	46.4	31.0	38.0
Non-Hispanic White	5,976	6,036	12,012	60.3	45.2	51.9
Total	6,280	6,315	12,595	60.9	45.7	52.4
<b>Corpus Uteri</b>						
American Indian	~	10	10	~	10.9	~
Asian/Pacific Islander	~	29	29	~	15.0	~
Black	~	34	34	~	17.6	~
Hispanic (all races)	~	24	24	~	20.7	~
Non-Hispanic White	~	3,245	3,245	~	26.6	~
Total	~	3,410	3,410	~	26.7	~
<b>Kidney and Renal Pelvis</b>						
American Indian	16	14	30	29.2	14.5	19.9
Asian/Pacific Islander	11	9	20	8.0	~	7.3
Black	50	19	69	25.3	9.8	17.1
Hispanic (all races)	13	10	23	9.7	9.0	9.4
Non-Hispanic White	1,754	1,090	2,844	17.0	8.8	12.6
Total	1,885	1,156	3,041	17.4	8.9	12.8
<b>Leukemia</b>						
American Indian	14	15	29	13.3	14.7	14.4
Asian/Pacific Islander	25	16	41	11.6	5.6	8.2
Black	30	14	44	8.9	4.1	6.6
Hispanic (all races)	16	11	27	9.6	5.8	7.5
Non-Hispanic White	1,811	1,323	3,134	18.2	10.3	13.7
Total	1,941	1,402	3,343	18.4	10.4	13.9

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**Table 1: Cancer Incidence for All Cancers Combined and Selected Common Cancers by Race/Ethnicity and Gender, Minnesota, 1998-2002 (continued)**

	Number of New Cases 1998-2002			Average Annual Age-Adjusted Incidence Rate		
	Male	Female	Total	Male	Female	Total
<b>Lung and Bronchus</b>						
American Indian	82	76	158	157.6	101.3	122.8
Asian/Pacific Islander	45	33	78	37.3	21.7	28.4
Black	181	112	293	123.6	63.7	89.7
Hispanic (all races)	38	32	70	61.9	42.2	49.9
Non-Hispanic White	7,157	5,688	12,845	71.6	46.0	56.9
Total	7,535	5,967	13,502	72.5	46.4	57.5
<b>Melanoma of the Skin</b>						
American Indian	2	4	6	~	~	~
Asian/Pacific Islander	1	2	3	~	~	~
Black	2	1	3	~	~	~
Hispanic (all races)	4	8	12	~	~	3.6
Non-Hispanic White	2,087	1,896	3,983	20.0	16.0	17.5
Total	2,182	1,986	4,168	19.7	15.6	17.1
<b>Non-Hodgkin Lymphoma</b>						
American Indian	12	17	29	14.7	21.4	18.3
Asian/Pacific Islander	31	20	51	19.8	10.0	14.3
Black	48	23	71	25.0	8.2	15.8
Hispanic (all races)	4	8	12	~	~	22.2
Non-Hispanic White	2,544	2,289	4,833	25.1	18.0	21.1
Total	2,704	2,400	5,104	25.4	18.1	21.3
<b>Prostate</b>						
American Indian	89	~	89	182.4	~	~
Asian/Pacific Islander	65	~	65	59.0	~	~
Black	316	~	316	233.2	~	~
Hispanic (all races)	80	~	80	113.3	~	~
Non-Hispanic White	18,388	~	18,388	184.1	~	~
Total	19,482	~	19,482	188.0	~	~
<b>Urinary Bladder</b>						
American Indian	15	6	21	33.0	~	19.1
Asian/Pacific Islander	8	7	15	~	~	5.9
Black	34	14	48	24.5	10.4	16.7
Hispanic (all races)	6	5	11	~	~	6.7
Non-Hispanic White	3,771	1,304	5,075	38.5	9.9	22.1
Total	3,890	1,353	5,243	38.3	9.9	22.0

Rates are age-adjusted to the US 2000 standard population and are per 100,000 persons.

~ Sex-specific site or fewer than 10 cases.

Source: Minnesota Cancer Surveillance System, March 2005. All cases were microscopically confirmed or identified solely through death certificates. *In situ* cancers except those of the urinary bladder were excluded.

Population estimates for 1988-2001 were from <http://seer.cancer.gov>, and for 2002 were from <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm>. Persons of unknown or other race are excluded from race-specific data, but are included in the total. Race/ethnicity categories are not mutually exclusive and do not sum to the total.

**Table 2: Cancer Mortality for All Cancers Combined and Selected Common Cancers by Race/Ethnicity and Gender, Minnesota, 1998-2002**

	Number of Deaths 1998-2002			Average Annual Age-Adjusted Mortality Rate		
	Male	Female	Total	Male	Female	Total
<b>All Sites Combined</b>						
American Indian	*	*	*	*	*	*
Asian/Pacific Islander	205	190	395	161.0	126.3	141.8
Black	455	330	785	325.3	189.5	246.7
Hispanic (all races)	140	108	248	185.1	117.8	147.0
Non-Hispanic White	22,129	21,091	43,220	229.5	156.9	185.1
Total	23,104	21,868	44,972	230.8	157.2	185.9
<b>Breast</b>						
American Indian	*	*	*	*	*	*
Asian/Pacific Islander	0	17	17	~	8.9	4.9
Black	0	65	65	~	30.0	16.1
Hispanic (all races)	0	26	26	~	20.8	10.7
Non-Hispanic White	29	3,324	3,353	0.3	25.3	14.3
Total	29	3,444	3,473	0.3	25.2	14.2
<b>Cervix</b>						
American Indian	*	*	*	*	*	*
Asian/Pacific Islander	~	11	11	~	6.0	~
Black	~	9	9	~	~	~
Hispanic (all races)	~	3	3	~	~	~
Non-Hispanic White	~	170	170	~	1.4	~
Total	~	197	197	~	1.5	~
<b>Colon and Rectum</b>						
American Indian	*	*	*	*	*	*
Asian/Pacific Islander	10	20	30	5.9	14.7	11.2
Black	32	34	66	23.9	20.7	21.8
Hispanic (all races)	7	10	17	~	11.6	11.8
Non-Hispanic White	2,112	2,327	4,439	22.0	16.3	18.7
Total	2,178	2,408	4,586	21.9	16.4	18.7
<b>Corpus Uteri</b>						
American Indian	*	*	*	*	*	*
Asian/Pacific Islander	~	4	4	~	~	~
Black	~	8	8	~	~	~
Hispanic (all races)	~	3	3	~	~	~
Non-Hispanic White	~	543	543	~	4.0	~
Total	~	558	558	~	4.0	~
<b>Kidney and Renal Pelvis</b>						
American Indian	*	*	*	*	*	*
Asian/Pacific Islander	5	3	8	~	~	~
Black	9	1	10	~	~	2.8
Hispanic (all races)	4	1	5	~	~	~
Non-Hispanic White	601	406	1,007	6.1	3.0	4.3
Total	629	416	1,045	6.1	2.9	4.3
<b>Leukemia</b>						
American Indian	*	*	*	*	*	*
Asian/Pacific Islander	12	10	22	8.8	4.8	6.4
Black	14	5	19	8.0	~	3.9
Hispanic (all races)	7	3	10	~	~	2.7
Non-Hispanic White	1,080	869	1,949	11.3	6.3	8.3
Total	1,121	892	2,013	11.3	6.2	8.2

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**Table 2: Cancer Mortality for All Cancers Combined and Selected Common Cancers by Race/Ethnicity and Gender, Minnesota, 1998-2002 (continued)**

	Number of Deaths 1998-2002			Average Annual Age-Adjusted Mortality Rate		
	Male	Female	Total	Male	Female	Total
<b>Lung and Bronchus</b>						
American Indian	*	*	*	*	*	*
Asian/Pacific Islander	40	25	65	37.6	17.9	26.2
Black	135	83	218	98.1	49.7	70.4
Hispanic (all races)	32	16	48	47.0	21.3	32.9
Non-Hispanic White	6,019	4,686	10,705	61.3	36.5	46.9
Total	6,283	4,868	11,151	61.7	36.6	47.1
<b>Melanoma of the Skin</b>						
American Indian	*	*	*	*	*	*
Asian/Pacific Islander	0	0	0	~	~	~
Black	0	1	1	~	~	~
Hispanic (all races)	0	1	1	~	~	~
Non-Hispanic White	364	233	597	3.6	1.8	2.6
Total	364	235	599	3.4	1.7	2.5
<b>Non-Hodgkin Lymphoma</b>						
American Indian	*	*	*	*	*	*
Asian/Pacific Islander	9	11	20	~	7.4	7.3
Black	15	13	28	7.8	7.3	7.9
Hispanic (all races)	11	4	15	11.5	~	8.6
Non-Hispanic White	1,124	1,019	2,143	11.6	7.3	9.1
Total	1,163	1,051	2,214	11.6	7.3	9.1
<b>Prostate</b>						
American Indian	*	*	*	*	*	*
Asian/Pacific Islander	8	~	8	~	~	~
Black	52	~	52	57.9	~	~
Hispanic (all races)	12	~	12	22.3	~	~
Non-Hispanic White	2,870	~	2,870	31.9	~	~
Total	2,960	~	2,960	32.1	~	~
<b>Urinary Bladder</b>						
American Indian	*	*	*	*	*	*
Asian/Pacific Islander	4	2	6	~	~	~
Black	6	6	12	~	~	5.1
Hispanic (all races)	2	1	3	~	~	~
Non-Hispanic White	705	314	1,019	7.6	2.1	4.2
Total	718	324	1,042	7.5	2.1	4.2

Rates are age-adjusted to the US 2000 standard population and are per 100,000 persons.

~ Sex-specific site or fewer than 10 deaths.

\* Mortality data comparable to incidence data for American Indians not currently available.

Source: Death certificates from the Minnesota Center for Health Statistics with cancer as the underlying cause of death during the time period, regardless of year of diagnosis. Analyses by the Minnesota Cancer Surveillance System, March 2005. Population estimates for 1988-2002 were from <http://seer.cancer.gov>. Persons of unknown or other race are excluded from race-specific data, but are included in the total. Race/ethnicity categories are not mutually exclusive and do not sum to the total.