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## VI. Special Populations

### ***A. Cancer and Race/Ethnicity in Oregon***

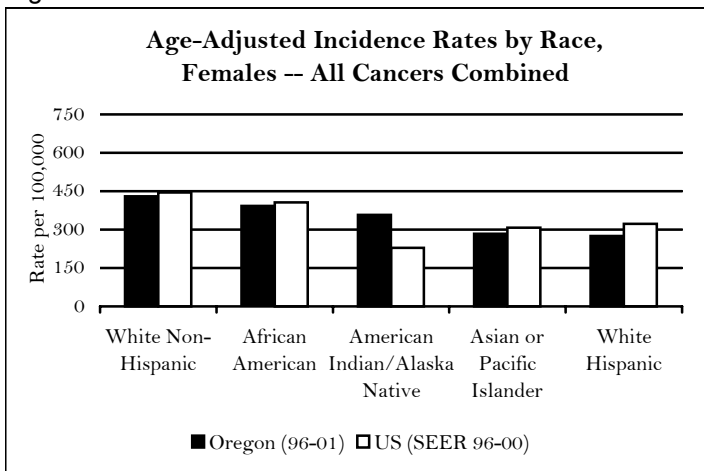
Age-adjusted cancer rates by race/ethnicity are shown in Figures 11 - 14. These differences among race/ethnicity are important because they may reflect differences in screening rates, treatment, and modifiable risk behaviors. However, due to issues with the completeness and accuracy of race/ethnicity reporting, these data must be interpreted with caution. Please refer to the *Technical Section* regarding ongoing efforts to improve the race and ethnic origin data in the Registry.

Additionally, the rates included in this section are not comparable with rates published in other sections of this report. The denominator data used for calculating rates by race/ethnicity is based on data bridged from multiple race/ethnic categories in the 2000 US Census into the five presented. See the *Technical Section* for more details. Additionally, cases for which race was unknown are excluded from these calculations.

Historically, Oregon's American Indian/Alaskan Native (AI/AN) population had the lowest rate of cancer of all racial/ethnic groups. The low incidence rate among AI/AN was a phenomenon reported by other population-based cancer registries. OSCaR and other registries have found that AI/AN cases are often misclassified as another race or Hispanic. When AI/AN individuals are properly classified, AI/AN rates are substantially higher. OSCaR links annually with local and national tribal registries to correct racial coding for AI/AN persons. Because of this, Oregon may have higher AI/AN rates than those seen nationally. As similar linkage projects are conducted in more states, it is hoped that racial misclassification will have a progressively smaller effect in artificially suppressing AI/AN cancer rates.

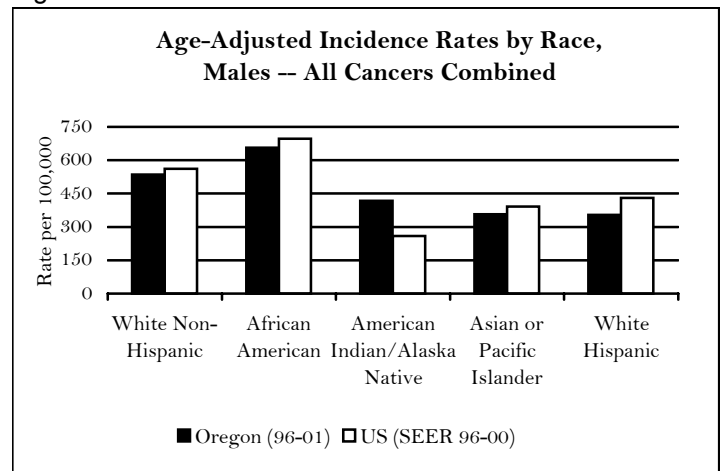
As seen nationally, African American (AA) men in Oregon have the highest rate of cancer incidence and mortality followed by whites. (See figures 11 - 14). Among women in Oregon and nationally, whites have the highest cancer rates. Oregon AI/AN have higher cancer rates than are seen nationally. Nationwide, AI/AN cancer incidence and mortality are the lowest among the different race and ethnicity groups.

Figure 11



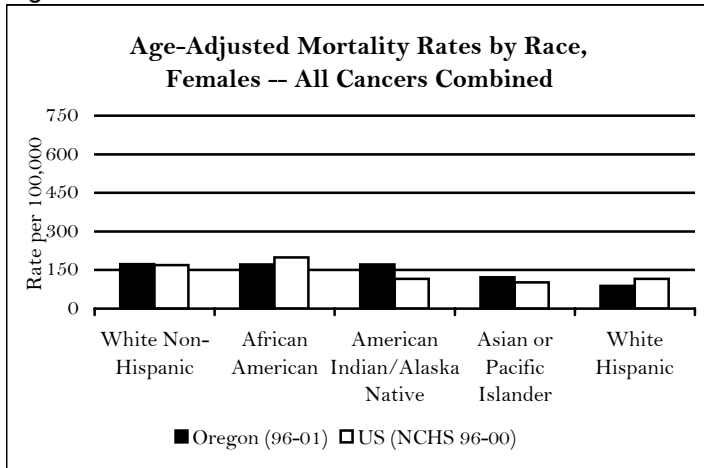
Note: These figures contain mutually exclusive race/ethnicity categories for White, Non-Hispanic, and White, Hispanic

Figure 12



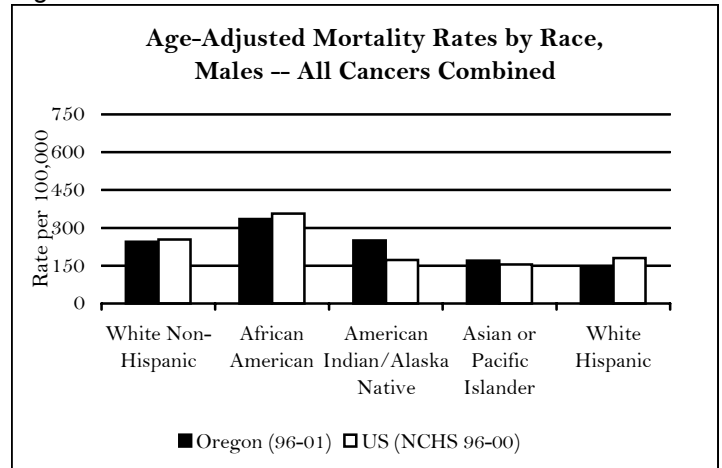
Note: These figures contain mutually exclusive race/ethnicity categories for White, Non-Hispanic, and White, Hispanic

Figure 13



Note: These figures contain mutually exclusive race/ethnicity categories for White, Non-Hispanic, and White, Hispanic

Figure 14



Note: These figures contain mutually exclusive race/ethnicity categories for White, Non-Hispanic, and White, Hispanic

There are also differences in distribution of cancer by anatomic site among the race/ethnic groups. (See Figures 15-16.)

For men, prostate was the most common cancer site for all race/ethnicity groups nationwide, but for Oregon AI/AN men, lung cancers were slightly more common than prostate cancers. Lung cancer also represents a much greater burden among AI/AN female Oregonians than their national counterparts. In Oregon, AI/AN have the highest rate of smoking among the race/ethnicity groups. Breast was the most common cancer site for all women both in Oregon and in the United States. Cervical cancer, a cancer that potentially could be eliminated with appropriate, population-based screening, is among the top five sites for White, Hispanics for both Oregon and the nation.

Figure 15

<b>Top 5 Most Frequently Diagnosed Cancers, by Race</b>							
<b>Oregon (96-01) vs US (SEER 96-00)</b>							
<b>Ranked by Percent of Total Invasive Cancers</b>							
<b>US</b>	<b>MEN</b>		<b>OREGON</b>	<b>US</b>	<b>WOMEN</b>		<b>OREGON</b>
<b>White, Non-Hispanic Men</b>				<b>White, Non-Hispanic Women</b>			
Prostate	29%	29%	Prostate	Breast	32%	33%	Breast
Lung/Bronchus	14%	16%	Lung/Bronchus	Lung/Bronchus	13%	14%	Lung/Bronchus
Colon/Rectum	11%	11%	Colon/Rectum	Colon/Rectum	11%	10%	Colon/Rectum
Urinary Bladder	7%	8%	Urinary Bladder	Uterus	6%	6%	Uterus
Lymphoma	5%	5%	Melanoma	Lymphoma	4%	4%	Lymphoma
<b>African American Men</b>				<b>African American Women</b>			
Prostate	38%	30%	Prostate	Breast	31%	31%	Breast
Lung/Bronchus	17%	19%	Lung/Bronchus	Colon/Rectum	13%	14%	Colon/Rectum
Colon/Rectum	10%	10%	Colon/Rectum	Lung/Bronchus	13%	11%	Lung/Bronchus
Lymphoma	4%	5%	Lymphoma	Uterus	4%	6%	Lymphoma
Oral Cavity	3%	5%	Kidney Renal	Lymphoma	4%	4%	Pancreas
<b>American Indian/Alaska Native Men</b>				<b>American Indian/Alaska Native Women</b>			
Prostate	22%	19%	Lung/Bronchus	Breast	27%	24%	Breast
Lung/Bronchus	13%	18%	Prostate	Colon/Rectum	9%	20%	Lung/Bronchus
Colon/Rectum	10%	12%	Colon/Rectum	Lung/Bronchus	7%	12%	Colon/Rectum
Kidney Renal	6%	6%	Lymphoma	Ovary	6%	5%	Lymphoma
Stomach	5%	5%	Urinary Bladder	Uterus	6%	4%	Uterus
<b>Asian/Pacific Islander Men</b>				<b>Asian/Pacific Islander Women</b>			
Prostate	24%	20%	Prostate	Breast	33%	32%	Breast
Lung/Bronchus	15%	15%	Colon/Rectum	Colon/Rectum	12%	12%	Colon/Rectum
Colon/Rectum	14%	14%	Lung/Bronchus	Lung/Bronchus	9%	9%	Lung/Bronchus
Stomach	6%	7%	Liver	Uterus	6%	5%	Lymphoma
Liver	5%	6%	Stomach	Ovary	4%	5%	Uterus
<b>White, Hispanic Men</b>				<b>White, Hispanic Women</b>			
Prostate	28%	21%	Prostate	Breast	29%	28%	Breast
Colon/Rectum	11%	13%	Lung/Bronchus	Colon/Rectum	9%	8%	Cervix
Lung/Bronchus	9%	9%	Lymphoma	Cervix	7%	8%	Lung/Bronchus
Lymphoma	7%	8%	Colon/Rectum	Lung/Bronchus	7%	7%	Colon/Rectum
Leukemia	4%	6%	Leukemia	Uterus	5%	5%	Uterus

Note: These figures contain mutually exclusive race/ethnicity categories for White, non-Hispanic, and White, Hispanic.

For men, lung cancer was the most common cause of cancer death for all race/ethnicity groups in Oregon. For women, lung cancer was also the leading cause of cancer death except among Asian/Pacific Islander (A/PI) and White, Hispanics. For women in these two groups, breast cancer was the leading cause of cancer death. As seen nationally, AA males in Oregon have a higher rate of myeloma cancer deaths. Oregon A/PI have a high number of liver cancer deaths compared to other races. This may be because hepatitis B is more prevalent among this group. Note: Due to incompatibility of race/ethnicity coding, national mortality data are not presented for comparison in Table 16.

Figure 16

Most Frequent Causes of Cancer Mortality by Race, Oregon (96-01), Ranked by Percent of Total Malignant Cancer Deaths

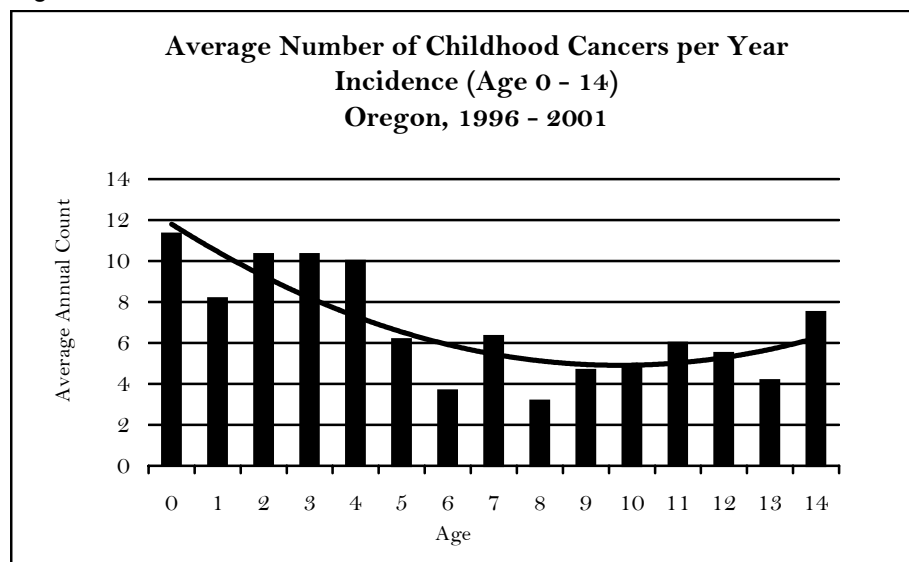
Men		Women	
White, Non-Hispanic			
Lung/Bronchus	31%	27%	Lung/Bronchus
Prostate	13%	15%	Breast
Colon/Rectum	9%	10%	Colon/Rectum
Pancreas	5%	6%	Pancreas
Lymphomas	5%	6%	Ovary
African American			
Lung/Bronchus	35%	18%	Lung/Bronchus
Prostate	16%	18%	Breast
Colon/Rectum	8%	12%	Colon/Rectum
Pancreas	5%	11%	Pancreas
Myeloma	4%	5%	Uterus
American Indian/Alaska Native			
Lung/Bronchus	35%	33%	Lung/Bronchus
Colon/Rectum	11%	12%	Breast
Prostate	7%	9%	Colon/Rectum
Esophagus	6%	6%	Lymphomas
Brain/CNS	5%	5%	Leukemias
Asian/Pacific Islander			
Lung/Bronchus	24%	19%	Breast
Liver	14%	16%	Lung/Bronchus
Colon/Rectum	11%	11%	Colon/Rectum
Stomach	9%	8%	Stomach
Prostate	7%	7%	Liver
White, Hispanic			
Lung/Bronchus	22%	16%	Breast
Prostate	10%	12%	Lung/Bronchus
Leukemias	9%	10%	Colon/Rectum
Pancreas	9%	7%	Leukemias
Lymphomas	8%	5%	Stomach
		5%	Pancreas

Note: These figures contain mutually exclusive race/ethnicity categories for White, Non-Hispanic, and White, Hispanic.

## B. Childhood Cancer

The incidence of cancer among children in Oregon (0-14 years of age) is low compared to adults. In 2001, there were 114 invasive cancers diagnosed in Oregon children, and 20 children died from cancer. The 1996-2001 incidence rate for cancer in Oregon children was 14.9 per 100,000; similar to the national five-year 1996-2000 aggregate rate of 14.6. This represents a small (<1%) annual decline for the period 1996 through 2001. Oregon's 2001 childhood cancer mortality rate of 2.8 was also similar to the 2000 national rate of 2.5.

Figure 17



During 1996-2001, about half of all childhood cancers in children under 14 years of age occurred in children less than 5 years of age. (See Figure 17.) Incidence counts were higher at very young ages (<4), lower between ages 5 and 13, and then increased again after age 13. These patterns were similar to national data.

Nationally, childhood cancer survival rates have shown a dramatic increase over the past few decades. Since the 1960's, the five-year relative survival rate has increased from 30% to approximately 70%. Since this is only the sixth year of Oregon cancer incidence data, Oregon-specific survival data are not yet available.

Figure 18 provides brief descriptions of the cancers diagnosed among Oregon children from 1996-2001.

Figure 18

**Childhood Cancers in Oregon, (0-14 Years of Age)**  
**Incidence, Average Number of Cases per Year**

Invasive Cancers (Primary Site)	Total*	Male	Female	Synopsis
Leukemia <i>Acute Lymphocytic Leukemia (ALL)</i>	33 28	18 15	15 13	Nationally, acute leukemias are the most frequent childhood cancers with a higher incidence among boys than girls. Children with genetic disorders, particularly Down Syndrome, are at a higher risk for ALL.
Brain and Central Nervous System (CNS)	22	12	10	Nationally, brain and CNS cancers are the 2 <sup>nd</sup> most common cancers among children and are more common among boys than girls. Nationally, nearly 17% of malignancies develop in children under 20 years of age.
Lymphoma <i>Non-Hodgkin (NHL)</i> <i>Hodgkin Lymphoma (HL)</i>	10 4 3	7 3 3	3 2 0	Nationally, lymphoma is the 3 <sup>rd</sup> most common cancer among children. NHL rates are generally higher among males than females. HL is fairly rare in early childhood with a peak frequency at age 25-29 and again late in life.
Sympathetic Nervous System	7	4	3	Nationally, neuroblastomas account for approximately 8% of all childhood cancers and normally arise during fetal life.
Soft Tissue Sarcomas	6	3	3	Nationally, 7% of childhood cancers are soft tissue sarcomas with rhabdomyosarcomas being the most common.
Renal Tumors (Wilms Tumor)	6	2	3	Nationally, kidney/renal tumors account for 6% of childhood cancers. Wilms tumors are the most common form of renal cancer in children with a peak incidence occurring under 5 years of age.
Carcinomas/Other Malignant Epithelial Neoplasms	5	2	2	Nationally, thyroid cancer and malignant melanomas are the most common carcinomas of children. Generally, carcinomas are more common among girls than boys.
Germ Cell, Trophoblastic/Other Gonadal Neoplasms (GCTOG)	4	2	1	Nationally, 4% of childhood cancers are GCTOG tumors. GCTOG tumors are more common in the adolescent years (15-19 year age group) constitute about 16% of cancer cases in that age group.
Malignant Bone Cancers <i>Ewing sarcomas</i> <i>Osteosarcoma</i>	4 2 2	3 2 1	1 1 1	Nationally, bone tumors constitute about 6% of all childhood cancers with osteosarcomas and Ewing's sarcoma predominating.
Retinoblastomas	1	1	1	Nationally, 11% of retinoblastoma cancers occur in the first year of life.
Hepatic Tumors	1	0	1	Liver tumors are rare in children. Nationally, only 1% of childhood cancers are liver tumors; hepatoblastoma is the most common in children younger than 4 years of age.

\*Due to rounding, counts for total may not equal male and female combined; calculations are rounded to the nearest whole case.