III. What's New in 2003?

Diagnosis year 2003 marks the eighth year of complete cancer reporting for Oregon. Five years of complete data are included in this annual report, 1999-2003. Limited data for prior years are included. For historical data, please review prior reports on our website at www.healthoregon.org/oscar.

Cancer and Race and Ethnicity in Oregon

Due to issues with the completeness and accuracy of race and ethnicity reporting, these data must be interpreted with caution. Please refer to the *Technical Section* for additional information and an overview of ongoing efforts to improve the race and ethnic origin data in the Registry.

Since 2002, race and ethnic categories included in this report conform to national reporting standards. There are four race categories—African American (AA), American Indian/Alaskan Native (AI/AN), Asian/Pacific Islander (A/PI), and White. There are two ethnic categories—Hispanic and Non-Hispanic.

Racial and ethnic categories are not mutually exclusive. The race data are reported regardless of ethnicity, and the ethnicity data are reported regardless of race. This change allows for comparability with national data and facilitates comparisons for tracking progress in achieving Healthy People 2010 objectives.

Denominator Change

Denominator data used to calculate incidence and mortality rates for prior years were population estimates from the Center for Population Research and Urban Studies, Portland State University (PSU), a resource center for population data designated by the US Bureau of the Census. However, the PSU data does not include race or ethnicity population counts with the level of detail needed to age-adjust rates. This year's report uses bridged, intercensal estimates directly from the 2000 US Census. Although the differences in rates are negligible at the state level, some county level rates show modest variation due to the change in calculation. However, this allows direct comparability among the race and ethnicity rates and rates for the general population.

Change in Calculating Age-Adjusted Rates

Through 2001, all age-adjusted rates were calculated per 100,000 population using the Year 2000 standard population with 18 age groups. To allow greater comparability with national mortality data, the age-adjusted rates are now calculated using 19 age groups: infants less than one year of age are put in an age group stratum separate from one- to four-year-olds. Because cancer is more common among the elderly, this analysis change results in minimal data variance.

Trend Data

Two types of trends are presented in this year's report: current trends and historical trends. Current trends include the most recent five years of data, 1999-2003. Historical trends include all available years of data, 1996-2003.

All trend data should be interpreted with caution. Over the years, changes in coding and collection standards have occurred, which affect the interpretability of the data. Specifically, in 1999, a national switch from ICD-9 classification to ICD-10 changed how cause of death is recorded and how cancer mortality data correlate with cancer incidence data. In 2001, major changes affecting coding for staging and cancer reportability came into effect for cases collected by cancer registries nationwide. Please review the *Technical Section* for specific information on data collection and analysis changes.

Current trends for 1999-2003 have been calculated for incidence and mortality for each site. The trend is the average annual percent change (APC) per year based on the past five years. These data are presented in *Fast Facts* for selected sites and in the incidence and mortality tables for all cancer sites.

Historical trends have been calculated and presented only for selected sites and include all available years of data. These trends track any changes in cancer incidence or mortality since the onset of registry data collection in 1996. In future reports, these historical trends will continue to be presented with additional years of data, which will increase their applicability.

Trends are affected by a number of factors including the following:

- ✓ general reporting improvements from early years,
- ✓ site-specific reporting deficiencies in recent years as more cancers are being treated in outpatient settings (outside of the rigorous hospital reporting system),
- ✓ changes in reporting requirements and/or coding standards,
- ✓ changes in characteristics of underlying populations, natural fluctuations, and
- ✓ true changes in population risk and/or burden.

All trends are based on rates per 100,000 population, that are age-adjusted to the Year 2000 Standard Population. Please see the *Technical Section* for more detailed discussion.

Cancer Maps

The 2003 report includes maps showing regional differences in cancer incidence and mortality. These maps are not intended to represent individual county rates; county rates are presented in Tables 3 and 4. These maps depict statistically smoothed county rates to identify regional differences that would not necessarily be apparent when reviewing single county rates. The mapped rates for 2003 show the county rates as above, below, or at the national rates. For additional information about methodology, please see the *Technical Section.*

Regional variations in cancer rates may lead to concern about exposures to carcinogens or unequal risk in some areas of the state. However, translating regional cancer rate differences into differences in cancer risk is problematic. It is important to recognize that multiple factors influence geographic variation in cancer rates. Despite the multitude of factors influencing cancer variations by region, these maps illustrate regional differences in cancer incidence and mortality and may suggest areas to target screening and prevention programs or to expand treatment facilities.

In addition to true differences in burden or random rate fluctuations, the following are also responsible for regional variation of cancer rates:

Variation in Population Demographics - Some cancers have different rates among different racial or ethnic groups. For example, breast cancer rates are generally higher in white women and prostate cancer rates are generally higher in African American men. Therefore, racial makeup of an area should be considered when evaluating regional differences.

Variation in Medical Care/Screening - In areas with higher cancer screening rates, such as PSA testing for prostate cancer, more cancers will be diagnosed. However, for several cancers, notably cervical, breast, and colorectal, a higher percentage of early stage diagnoses associated with higher screening rates can result in more favorable prognosis for these cancers. Comparing both incidence and mortality rates is important to gain a more complete picture of regional cancer differences.

Variation in Reporting - Although OSCaR has a total case completeness rate of over 95%, cancer reporting may differ by region in terms of completeness and type of report source (hospital vs. physician office). Ongoing efforts by registry staff will help alleviate artifactual differences.