

TECHNICAL NOTES

Important: It is highly recommended that any user of the data presented in this report read the information provided in this Technical Notes section carefully and review as many of the cited references as possible.

Cancer incidence data was obtained from the Pennsylvania Cancer Registry (PCR) and the National Cancer Institute's (NCI) SEER program. Cancer mortality data was obtained from the Pennsylvania Certificate of Death and NCI's SEER data as compiled by the National Center for Health Statistics. African American as defined for this report includes those whose race was reported as "Black" on the PCR Report Form and the Pennsylvania Certificate of Death.

The projections of new cancer cases in this report were obtained by producing a regression line using the method of least squares. This approach utilized the actual number of cases reported to the PCR with a diagnosis year of 2001 through 2005. This method constructed the regression line that minimizes the sum of the squared residuals. A residual is the difference between each data point (actual or observed event) and the regression line (predicted event). Once a regression line has been computed, an estimate of the population standard error of the estimate is computed. This estimate measures the variability of the line. Also computed is the estimate of the population standard deviation of the dependent variable (year of diagnosis). This is a measure of the variability of projected cancer cases based on the arithmetic mean of cancer cases for the five years of 2001 through 2005. The estimate of the population standard error of the estimates was then compared to the estimate of the population standard deviation of the mean to identify which method had less variability. If the population standard deviation was lower, then the arithmetic mean for the five-year period was used as the projected number of cancer cases. This same method was applied to projecting the number of cancer deaths. However, since the cancer mortality file is more current, the five-year period of 2002 through 2006 was used to project the number of cancer deaths. The projected numbers of new cancer cases and new cancer deaths have been rounded to the nearest whole five. The projected figures should be used cautiously. Considerable variation may occur, particularly with estimates of small numbers. Of primary concern when using forecasted values is the high probability of chance variation due to unknown (or uncontrollable) factors.

Age-adjusted rates were calculated using the direct method. Specifically, age-specific rates for a selected population are applied to a standard population (in this report the 2000 U.S. standard million population) in order to calculate what rate would be expected if the selected population had the same age distribution as the standard. The total of these expected events divided by the total of the standard population and multiplied by 100,000 yields the age-adjusted rate per 100,000. It is important to use the same standard population in the computation of each age-adjusted rate to allow comparability. Age-adjusted rates should never be compared with any other type of rate or be used as absolute measurements of vital events. All state population figures used for calculating rates were either enumerated population figures produced by the U.S. Census Bureau (2000) or estimates produced jointly by the U.S. Census Bureau and the State Data Center of Penn State at Harrisburg (1995-1999, and 2001-2006).

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