

Study Finds Cancer Mortality Has Declined Since Initiation of ‘War on Cancer’

A new American Cancer Society study finds progress in reducing cancer death rates is evident whether measured against baseline rates in 1970 or in 1990. The study appears in the open access journal PLoS ONE, and finds a downturn in cancer death rates since 1990 results mostly from reductions in tobacco use, increased screening allowing early detection of several cancers, and modest to large improvements in treatment for specific cancers.

Temporal trends in death rates are the most reliable measure of progress against cancer, reflecting improvements in prevention, early detection, and treatment. Although age-standardized cancer death rates in the U.S. have been decreasing since the early 1990s, some reports have cited limited improvement in death rates as evidence that the “war on cancer”, which was initiated in 1971, has failed. Many of these analyses fail to account for the dominant and dramatic increase in cancer death rates due to tobacco-related cancers in the latter part of the 20th century.

To investigate further, researchers led by American Cancer Society epidemiologist Ahmedin Jemal, Ph.D., used nationwide cancer mortality data for the years 1970 through 2006 from the SEER*Stat database, which defines major cancer sites consistently over time in order to facilitate reporting of long term mortality trends. They found for all cancers combined, death rates (per 100,000) in men increased from 249.3 in 1970 to 279.8 in 1990, and then decreased to 221.1 in 2006, yielding a relative decline of 21% from 1990 (peak year) and a drop of 11% since 1970 (baseline year). Similarly, the death rate from all-cancers combined in women increased from 163.0 in 1970 to 175.3 in 1991, and then decreased to 153.7 in 2006, a relative decline of 12% and 6% from the 1991 (peak year) and 1970 rates, respectively.

The researchers also calculated years of potential life lost (YPLL) due to cancer before age 75 for 2006 as additional measure for the impact of declining cancer death rates on population health. They compared this to the YPLL that would have been expected had the 1970 age-specific cancer death rates continued to apply in 2006. For persons under age 75, the decrease in cancer death rates during the 36 years time interval (1970-2006) resulted in about 2.0 million years of potential life gained.

“Contrary to the pessimistic news from the popular media, overall cancer death rates have decreased substantially in both men and women whether measured against baseline rates in 1970/71 when the National Cancer Act was signed by President Nixon or when measured against the peak rates in 1990/91,” write the authors. Despite those gains, the authors caution against complacency. “Continued and increased investment in cancer prevention and control, access to high quality health care, and research could accelerate this progress,” they conclude.

Article: Jemal A, Ward E, Thun M, 2010 Declining Death Rates Reflect Progress against Cancer. PLoS ONE 5(3): e9584. doi:10.1371/journal.pone.0009584

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