Preventing and Controlling Cancer: 
Addressing the Nation’s 
Second Leading Cause of Death

2002

Rates of Death Due to Cancer,* United States, 1999

*Deaths per 100,000 people, age adjusted to 2000 total U.S. population. Data are grouped in quartiles and ranked from lowest to highest.

Source: National Center for Health Statistics, CDC.

“The future of cancer prevention and control will depend on how quickly and efficiently the advances of science are applied to those in great need in our smallest communities, which are often distant from our best universities. That is what CDC and public health are about.”

James S. Marks, MD, MPH
Director, National Center for Chronic Disease Prevention and Health Promotion
The Burden of Cancer

Cancer, the second leading cause of death among Americans, is responsible for one of every four deaths in the United States. In 2002, more than 550,000 Americans—or more than 1,500 people a day—will die of cancer.

About 16 million new cancer cases have been diagnosed since 1990, and more than 1.2 million new cases will be diagnosed in 2002 alone. This estimate does not include in situ (preinvasive) cancer or the approximately 1 million cases of nonmelanoma skin cancer expected to be diagnosed this year.

Cancer does not affect all races equally. Black Americans are more likely to die from cancer than people of any other racial or ethnic group. From 1992 to 1998, the average annual death rate per 100,000 people for all cancers combined was 218.2 for blacks, 164.5 for whites, 105.4 for American Indians/Alaska Natives, 102.6 for Hispanics, and 101.2 for Asians/Pacific Islanders.

The financial costs of cancer are staggering. According to the National Institutes of Health, the direct and indirect costs of cancer in the United States total $180 billion annually.

Effective prevention measures exist to substantially reduce the number of new cases of cancer and prevent many cancer deaths. Creating healthier lifestyles can eliminate many of the behavioral and environmental factors that increase a person’s risk for cancer. These factors include tobacco use, lack of physical activity, poor nutrition, and sun exposure. Making cancer screening and information services available and accessible to all Americans is also essential for reducing the high rates of cancer and cancer deaths. Screening tests for breast, cervical, and colorectal cancer reduce the number of deaths from these diseases by finding them early, when they are most treatable. Screening tests for cervical and colorectal cancer can actually prevent these cancers from developing by detecting treatable precancerous conditions.

CDC’s Leadership in Detecting, Preventing, and Controlling Cancer

With fiscal year 2002 funding of approximately $269 million, CDC provides national leadership for preventing cancer and promoting its early detection. CDC works with its partners—including state and territorial health agencies, other federal agencies, voluntary and professional organizations, academia, and private sector businesses—to develop, implement, and promote effective cancer prevention and control practices nationwide through the following activities.

Monitoring

CDC provides funding and technical assistance to support systems that monitor cancer incidence and deaths, cancer-related risk factors, and use of cancer screening tests. Data from these systems play a critical role in identifying and tracking cancer trends; in developing, guiding, and evaluating cancer prevention and control activities; and in prioritizing the use of resources.

Conducting Research and Evaluation

CDC conducts and supports studies to improve understanding of the factors that increase a person’s risk for cancer and to identify prevention opportunities related to these factors. CDC also evaluates the feasibility and effectiveness of cancer prevention and control strategies. Results from these studies are used to plan or improve cancer prevention and control activities.

Building Capacity and Partnerships

CDC works with a variety of partners to translate basic research into public health programs, practices, and services. To ensure that these innovations reach the people who most need them, CDC helps states, territories, and American Indian health agencies build the scientific and programmatic capacity required to support these cancer prevention and control efforts.

Education and Training

CDC develops cancer prevention communication campaigns and educational materials and recommends priorities for health promotion, health education, and cancer risk-reduction activities for both health professionals and the public. CDC also provides support and technical assistance to help partners improve education and training programs addressing cancers that respond to prevention and treatment measures.
CDC’s cancer prevention and control resources are focused on the following priority areas: the National Comprehensive Cancer Control Program, the National Breast and Cervical Cancer Early Detection Program, the National Program of Cancer Registries, and initiatives addressing colorectal, prostate, skin, and ovarian cancers. Additionally, CDC provides national leadership for a comprehensive, broad-based approach to reducing tobacco use.

The National Comprehensive Cancer Control Program is an integrated, coordinated approach to reducing cancer's impact that includes monitoring, policy, research, education, programs, services, and evaluation. With 2002 funding, CDC provides support and technical assistance to plan and implement comprehensive cancer control activities and programs in 19 states and 1 tribal organization. Health agencies use this funding to establish broad-based cancer coalitions, provide epidemiological support, and develop and implement a comprehensive cancer control plan. Additionally, CDC and its partners have developed a framework for establishing priorities, addressing cancer issues, and prioritizing the use of limited resources for comprehensive cancer control.

A State Program in Action

In North Carolina, a recent pilot project to evaluate the feasibility of conducting colorectal cancer screening in local health departments also examined the potential value of addressing cancer concerns from a comprehensive and family-health perspective. The evaluation found that this approach successfully raised public awareness about the importance of early detection and encouraged participation in screening programs. More importantly, 10 precancerous polyps and 4 cancers were diagnosed in the 706 participants who returned the home test kits. North Carolina’s Comprehensive Cancer Unit plans to expand the colorectal cancer screening program as resources become available.
The National Breast and Cervical Cancer Early Detection Program (NBCCEDP) has provided more than 3 million free breast and cervical cancer screening and diagnostic tests to low-income women over the past decade. The program also supports education and outreach activities, case management services, and research to increase screening rates. With 2002 funding, CDC supports early detection programs in all 50 states, 6 U.S. territories, the District of Columbia, and 14 American Indian/Alaska Native organizations. The Breast and Cervical Cancer Prevention and Treatment Act of 2000 recently gave states the option to provide full Medicaid benefits to uninsured women younger than age 65 who are screened under the NBCCEDP and need treatment.

The National Program of Cancer Registries (NPCR) is a centralized system for collecting data on the occurrence of cancer; the type, extent, and location of the cancer; and the type and results of treatment. As of 2002, CDC supports cancer registries in 45 states, the District of Columbia, and 3 territories. Through the NPCR, CDC provides funding, technical assistance, standards for data collection and use, and training for establishing high-quality computerized reporting and data-processing systems. Since 1997, the number of state registries certified as high quality has increased from 14 states to 36 states and the District of Columbia.

Through colorectal cancer prevention and control initiatives, CDC and its partners are promoting colorectal cancer screening nationwide by educating health care providers and the public about screening procedures, guidelines, and benefits. The initiatives also support research, including studies to determine barriers to colorectal cancer screening. CDC’s educational campaign Screen for Life, developed with partners, addresses common myths and educates Americans that screening saves lives by finding precancerous polyps and by detecting colorectal cancer early.

Through prostate cancer control initiatives, CDC is working to provide the public, physicians, and policymakers with the information they need to make informed decisions about the potential risks and benefits of prostate cancer screening and follow-up. CDC is also conducting a large population-based study in four health plan groups to assess whether prostate-specific antigen screening tests and digital rectal examinations reduce deaths from prostate cancer.

Through skin cancer primary prevention and education initiatives, CDC supports skin cancer monitoring, research, education, and interventions. CDC is completing Guidelines for School Programs to Prevent Skin Cancer, a report that summarizes promising strategies for reducing risk among students aged 5–18 years. CDC is working with its partners to help states apply these evidence-based guidelines.

CDC’s ovarian cancer control initiative is expanding the limited knowledge about ovarian cancer by initiating projects with academic and medical institutions and advocacy groups to identify factors related to the early detection and treatment of ovarian cancer. In addition, CDC’s NPCR is funding three central state registry programs to evaluate patterns of care and outcomes for patients with ovarian cancer diagnosed in 1995–1999.

Through its Tobacco Control Program, CDC provides national leadership for a comprehensive, broad-based approach to reducing tobacco use, the cause of more than 80% of lung cancer cases. Essential elements of this approach include state- and community-based interventions, countermarketing, policy development, surveillance, and evaluation. Through the National Tobacco Control Program, CDC supports tobacco prevention and control efforts in all 50 states, 7 U.S. territories, 7 tribal-serving organizations, 9 national networks, and the District of Columbia.

Future Directions

CDC will continue to expand its support for comprehensive cancer control as the most effective means of reducing the nation’s cancer burden. Future activities will include conducting research to determine how best to implement comprehensive programs, providing ongoing technical assistance and training, evaluating comprehensive cancer control programs, and expanding the number of states, territories, and tribes funded for these programs.