

Incidence and Mortality Rate Trends

In the United States, pancreatic cancer is the fourth leading cause of cancer-related death in males and the fifth leading cause of cancer-related death in females. Because it is usually diagnosed at an advanced stage, the survival rate is poor compared to other types of cancer. Unfortunately, there has been little change in overall pancreatic cancer incidence or mortality rates throughout the past three decades.

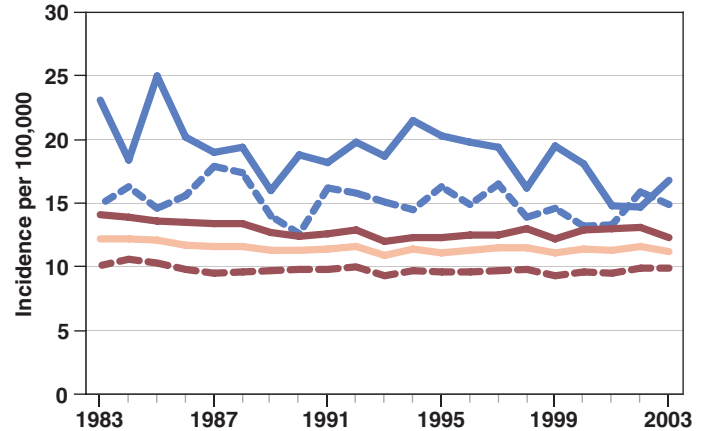
African Americans are more vulnerable to pancreatic cancer than Whites. In both of these populations, pancreatic cancer incidence and mortality are higher in men than in women.

It is estimated that approximately \$1.5 billion¹ is spent in the United States each year on treatment of pancreatic cancer.

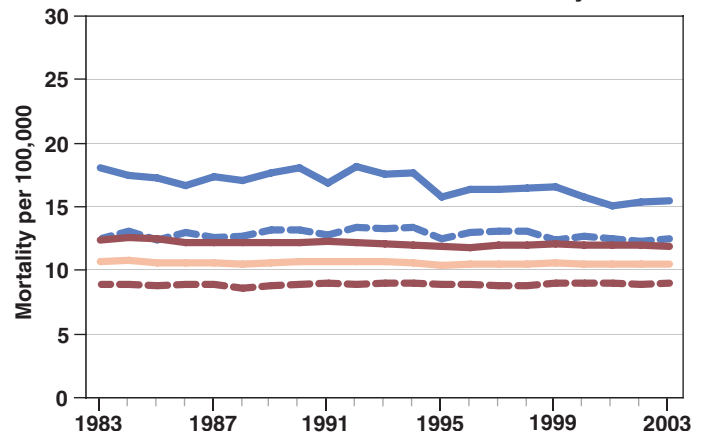
Source for incidence and mortality data: Surveillance, Epidemiology, and End Results (SEER) Program and the National Center for Health Statistics. Additional statistics and charts are available at <http://seer.cancer.gov/>.

¹In 2004 dollars, as reported in Brown ML, Riley GF, Schussler N, and Etzioni RD. Estimating health care costs related to cancer treatment from SEER-Medicare data. *Medical Care* 2002 Aug; 40 (8 Suppl): IV-104-17.

U.S. Pancreatic Cancer Incidence



U.S. Pancreatic Cancer Mortality



Legend: White Males (solid dark red), White Females (dashed dark red), Overall Rate (solid orange), African American Males (solid blue), African American Females (dashed blue)

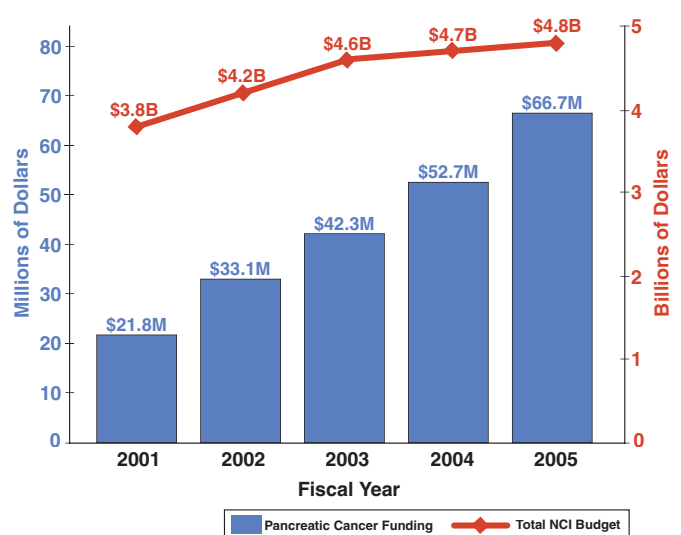
Trends in NCI Funding for Pancreatic Cancer Research

The National Cancer Institute's (NCI's) investment² in pancreatic cancer research has increased from \$21.8 million in fiscal year 2001 to \$66.7 million in fiscal year 2005.

Source: NCI Financial Management Branch <http://fmb.cancer.gov>.

²The estimated NCI investment is based on funding associated with a broad range of peer-reviewed scientific activities. For additional information on research priorities and funding, see <http://www.nih.gov/about/researchpriorities.htm#overview>.

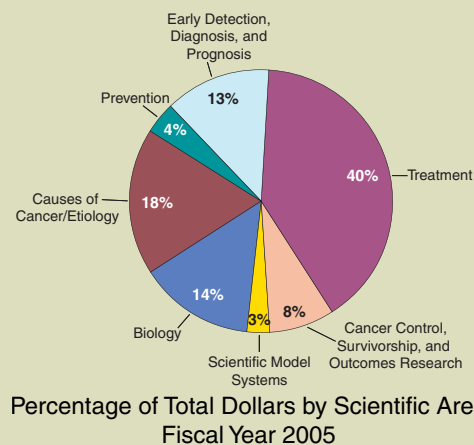
NCI Pancreatic Cancer Research Investment



Examples of NCI Research Initiatives Relevant to Pancreatic Cancer

- Three pancreatic cancer-specific **Specialized Programs of Research Excellence (SPOREs)** are moving results from the laboratory to the clinical setting. <http://spores.nci.nih.gov/current/pancreas/pancreas.html>
- The **Pilot Studies in Pancreatic Cancer** program promotes innovative research across multiple disciplines to better understand the etiology of pancreatic cancer and to promote its early detection, prevention, and treatment. <http://grants.nih.gov/grants/guide/pa-files/PA-06-303.html> and <http://grants.nih.gov/grants/guide/pa-files/PA-06-314.html>
- The **Pancreatic Cancer Research Map**, a public website, allows the pancreatic cancer research community to search a comprehensive list of investigators and research projects relevant to pancreatic cancer. <http://www.cancermap.org>
- **Cancer Nanotechnology Platform Partnerships** are developing technologies for new products in such areas as molecular imaging and early detection. One partnership is studying the use of nanoparticles in the diagnosis and therapy of pancreatic cancer. http://nano.cancer.gov/alliance_awards/fact/platforms.asp
- NCI's intramural **Gastrointestinal Malignancies Faculty** facilitates interactions among basic,

NCI Pancreatic Cancer Research Portfolio



Data on training grants are not included in this figure. A description of the relevant research projects can be found at the NCI Cancer Research Portfolio website at <http://researchportfolio.cancer.gov>.

epidemiological, translational, and clinical researchers. <http://ccr.cancer.gov/faculties/faculty.asp?facid=156>

- The **Early Detection Research Network (EDRN)** is dedicated to identifying and testing new biomarkers for detection and risk assessment. Studies related to pancreatic cancer are under way in the EDRN biomarkers development laboratories and clinical and epidemiologic centers. <http://edrn.nci.nih.gov>
- The **Pancreatic Cancer Home Page** provides up-to-date information on pancreatic cancer treatment, prevention, genetics, causes, screening, testing, and other topics. <http://www.cancer.gov/pancreas>

Selected Opportunities for Advancement of Pancreatic Cancer Research

- Improve our understanding of normal pancreas biology and pancreatic adenocarcinoma development and identify genetic/environmental factors and interactions that contribute to pancreatic cancer development.
- Develop nationwide tissue and data repositories, molecular profiling resources, and bioinformatics tools for pancreatic cancer research. Use these resources to develop prevention and early detection interventions.
- Establish models for studying environmental factors, gene–environment interactions, chemoprevention, chemotherapy, radiation therapy, vaccines, and imaging to improve understanding of pancreatic cancer risk, prevention, diagnosis, and treatment.
- Identify and develop surveillance and diagnosis methods for early detection of pancreatic cancer.
- Expand and sustain training and career development activities in pancreatic cancer research and medicine to build a comprehensive, multidisciplinary research community focused on this disease.