

Prostate Cancer

Incidence and Mortality Rate Trends

Prostate cancer is the most common cancer, other than non-melanoma skin cancer, and the second leading cause of cancer-related death in men in the United States. African-American men have a higher incidence and at least double the mortality rate compared with men of other racial and ethnic groups.

Prostate cancer incidence rates rose dramatically in the late 1980s, when screening with the prostate-specific antigen (PSA) test, which received initial U.S. Food and Drug Administration approval in 1986, came into wide use. Since the early 1990s, prostate cancer incidence has been declining. Mortality rates for prostate cancer have also declined since the early 1990s.

It is estimated that approximately \$9.9 billion¹ is spent each year in the United States on prostate cancer treatment.

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/>.

¹ Cancer Trends Progress Report (<http://progressreport.cancer.gov/>), in 2006 dollars.

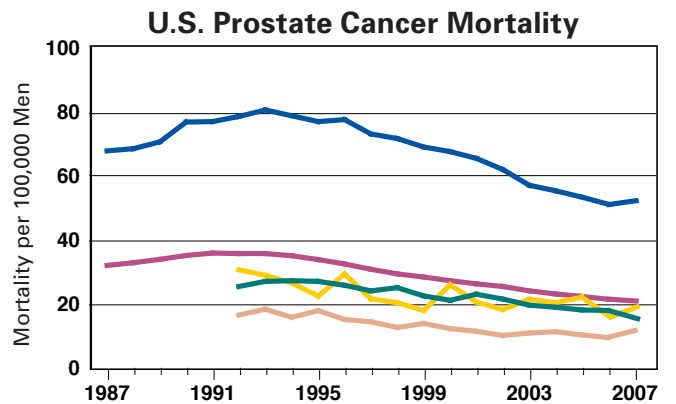
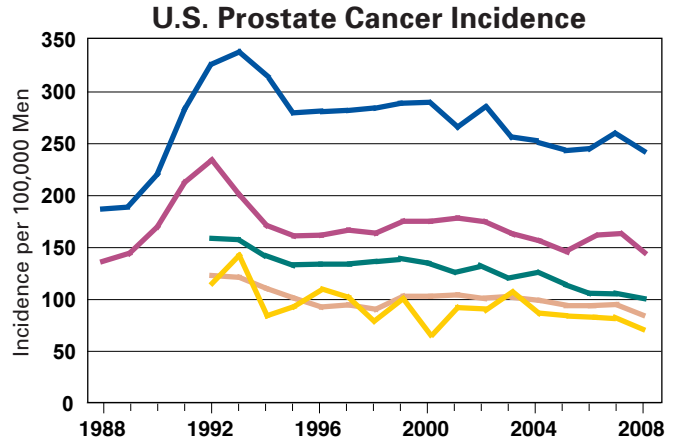
Trends in NCI Funding for Prostate Cancer Research

The National Cancer Institute's (NCI) investment² in prostate cancer research increased from \$293.2 million in fiscal year (FY) 2006 to \$300.5 million in FY 2010. In addition, NCI supported \$68.4 million in prostate cancer research in FY 2009 and 2010 using funding from the American Recovery and Reinvestment Act (ARRA).³

Source: NCI Office of Budget and Finance (<http://obf.cancer.gov/>).

² The estimated NCI investment is based on funding associated with a broad range of peer-reviewed scientific activities. For additional information on research planning and budgeting at the National Institutes of Health (NIH), see <http://www.nih.gov/about/>.

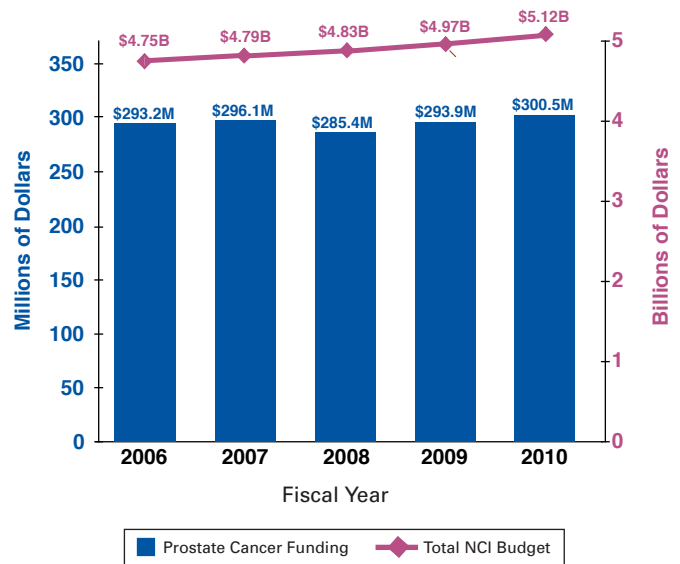
³ For more information regarding ARRA funding at NCI, see <http://www.cancer.gov/aboutnci/recovery/recoveryfunding>.



Whites, Hispanics*, African Americans, Asians/Pacific Islanders*, American Indians/Alaska Natives*

* Incidence and mortality data not available before 1992.

NCI Prostate Cancer Research Investment

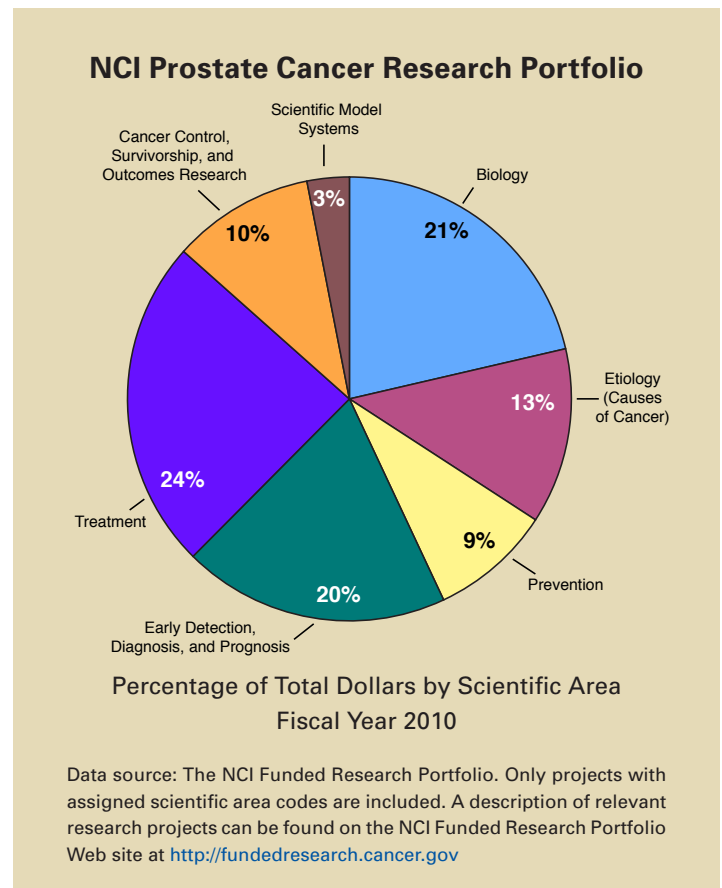


Examples of NCI Activities Relevant to Prostate Cancer

- The **Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial (PLCO)**, a large-scale clinical trial, is determining whether specific cancer screening tests reduce deaths from these cancers. For prostate cancer, the screening method involves digital rectal examination plus the PSA test. <http://dcp.cancer.gov/plco>
- The **Prostate Cancer Modeling** project, conducted by the **Cancer Intervention and Surveillance Modeling Network (CISNET)**, explores the natural history of prostate cancer, screening efficacy, screening policy, overdiagnosis, novel biomarkers, outcomes of care, and health disparities in screening and treatment. <http://cisnet.cancer.gov/prostate/>
- The **Prostate Cancer Program**, which includes staff from NCI's Medical Oncology, Radiation Oncology, and Urologic Oncology Branches, carries out clinical training, research, and care to improve management of patients with prostate cancer. http://bethesdatrials.cancer.gov/clinical-programs/prostate_cancer_program/default.aspx
- The **Tumor Microenvironment Network (TMEN)** is exploring the role of the microenvironment—the cells, molecules, and blood vessels that surround and feed a tumor—in tumor initiation and progression. Network investigators are studying the interactions between prostate tumors and the prostate microenvironment. <http://tmen.nci.nih.gov/>
- NCI's Epidemiology and Genetics Research Program supports four **Prostate Cancer Epidemiology Consortia** that share data and conduct research on genetic and environmental factors contributing to prostate cancer risk and outcomes. <http://epi.grants.cancer.gov/Consortia/tables/prostate.html>
- Nine prostate-cancer-specific **Specialized Programs of Research Excellence (SPOREs)** conduct inter-SPORE scientific studies for the clinical evaluation of biomarkers, early-phase clinical trials of anti-prostate-cancer agents, and development of inter-institutional systems to accelerate prostate cancer research. <http://trp.cancer.gov/spores/prostate.htm>

Selected Advances in Prostate Cancer Research

- Using data from the SEER registry, researchers have confirmed previous study results suggesting that screening using the **PSA test leads to overtreatment of many prostate cancers**, including aggressive treatment in older men considered to be at low risk for disease progression. <http://www.cancer.gov/ncicancerbulletin/072710/page3>
- In a case-control study, researchers demonstrated that **use of certain pesticides modifies the association between specific genetic variants and prostate cancer risk**. http://dceg.cancer.gov/newsletter/mar2011/0311_scientifichighlights.shtml and <http://www.ncbi.nlm.nih.gov/pubmed/20978189>
- In a phase II clinical trial, the **targeted therapy cabozantinib shrank bone metastases** in patients with metastatic castration-resistant prostate cancer. <http://www.cancer.gov/ncicancerbulletin/053111/page3> and http://www.asco.org/ASCOv2/Meetings/Abstracts?&vmview=abst_detail_view&conftID=102&abstractID=82339
- Researchers have determined that **active surveillance with curative intent may be a reasonable option** for older men with very-low-risk prostate cancer. <http://www.ncbi.nlm.nih.gov/pubmed/21464416>



- The **What You Need to Know About™ Prostate Cancer** booklet provides information about prostate cancer diagnosis and staging, treatment options, follow-up tests, and participation in research studies. Information specialists can also answer questions about cancer at 1-800-4-CANCER. <http://www.cancer.gov/cancertopics/wyntk/prostate/>
- The **NCI Prostate Cancer Home Page** provides up-to-date information on prostate cancer treatment, prevention, genetics, causes, screening, testing, and other related topics. <http://www.cancer.gov/cancertopics/types/prostate>