NATIONAL CANCER INSTITUTE

A Snapshot of Kidney Cancer

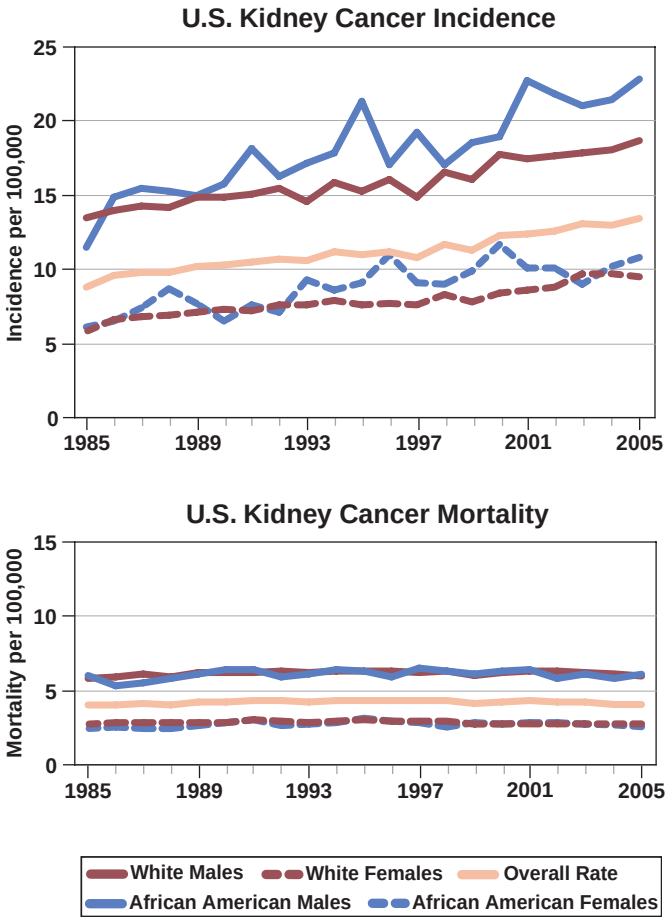
Incidence and Mortality Rate Trends

Kidney cancer incidence has been increasing steadily for the past 65 years; the reasons for this increase are unclear. The overall mortality rate from kidney cancer has increased slightly over the past two decades, but not as rapidly as the incidence rate. Kidney cancer incidence and mortality rates are more than twice as high in men as in women.

It is estimated that approximately $1.9 billion[1] is spent in the United States each year on treatment of kidney 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/.

[1]Cancer Trends Progress Report (http://progressreport.cancer.gov), in 2004 dollars, based on methods described in *Medical Care* 2002 Aug; 40 (8 Suppl): IV-104-17.

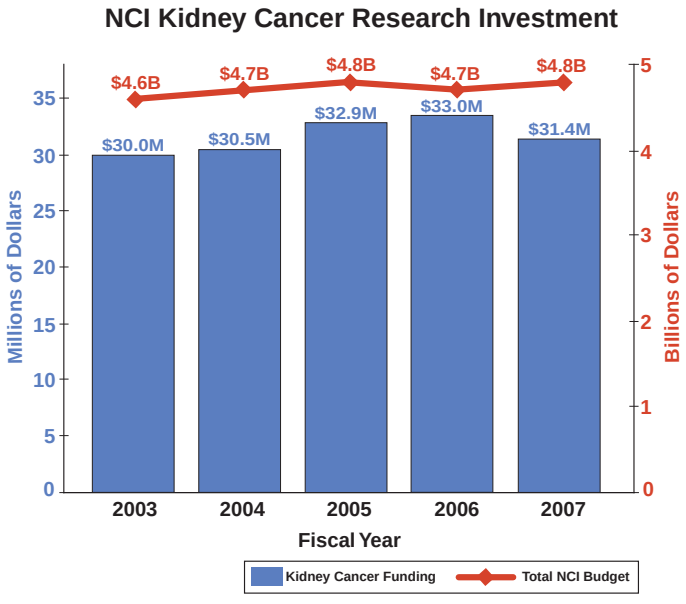


Trends in NCI Funding for Kidney Cancer Research

The National Cancer Institute's (NCI's) investment[2] in kidney cancer research increased from $30.0 million in fiscal year 2003 to $31.4 million in fiscal year 2007.

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, see http://www.nih.gov/about/.

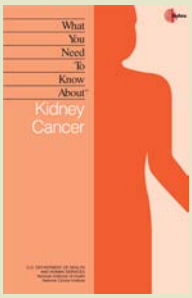


Developed by NCI's Office of Science Planning and Assessment (OSPA) with assistance from SAIC. Snapshots can be found online at: http://planning.cancer.gov/disease/snapshots.shtml.

Examples of NCI Activities Relevant to Kidney Cancer

- Two genitourinary cancer-specific **Specialized Programs of Research Excellence (SPOREs)** are identifying kidney cancer early detection markers, developing novel kidney cancer treatments, and studying the impact of surgical removal of the kidney on survival. http://spores.nci.nih.gov/current/genitourinary/genitourinary.html
- NCI's **Targeted Combinations for Metastatic Kidney Cancer** is comparing different combinations of bevacizumab, sorafenib tosylate, and temsirolimus in patients with metastatic kidney cancer. http://www.cancer.gov/clinicaltrials/ft-ECOG-E2804
- The **Kidney/Bladder Progress Review Group (PRG)**, a panel of prominent scientists and patient advocates, assessed the state of the science and identified future research priorities for kidney and bladder cancers. http://planning.cancer.gov/pdfprgreports/2002kidneyreport.pdf
- The **Cooperative Human Tissue Network (CHTN)** is a nationwide collaborative network that specializes in the procurement, preservation, and distribution of human tissues for biomedical research, including normal and cancerous kidney tissues. http://chtn.nci.nih.gov/
- The **Early Detection Research Network (EDRN)** is at the forefront of technology-driven research related to the early detection of cancer. Current studies include the use of methylation and proteomics-based approaches to detect kidney cancer. http://edrn.nci.nih.gov
- The **NCI Intramural Genitourinary Malignancies Faculty** brings together staff from National Institutes of Health branches and laboratories to develop better methods for prevention, diagnosis, and treatment of genitourinary malignancies. http://ccr.cancer.gov/faculties/faculty.asp?facid=131
- The **Kidney Cancer Home Page** provides up-to-date information on kidney cancer treatment, prevention, genetics, causes, and other topics. http://cancer.gov/kidney

What You Need to Know About™ Kidney Cancer



This booklet discusses possible causes, symptoms, diagnosis, treatment, and rehabilitation. It also has information to help patients cope with kidney cancer.

Risk factors for kidney cancer include: smoking, obesity, high blood pressure, long-term dialysis, Von Hippel-Lindau (VHL) syndrome, certain occupations (exposure to certain chemicals, such as asbestos or cadmium, in the workplace), and gender.

http://www.cancer.gov/cancertopics/wyntk/kidney

Information specialists can also answer questions about cancer at 1-800-4-CANCER.

Selected Advances in Kidney Cancer Research

- The combination of bevacizumab and interferon is more effective in treating advanced kidney cancer than interferon and placebo. Adding bevacizumab nearly doubled the time it took for the disease to progress without producing significant new side effects. http://www.cancer.gov/ncicancerbulletin/NCI_Cancer_Bulletin_061207/page5#c
- An experimental antiangiogenesis agent that stops the formation of blood vessels has shown promising results in patients with advanced kidney cancer for whom a similar drug did not work. http://www.cancer.gov/ncicancerbulletin/NCI_Cancer_Bulletin_100907/page4#c
- Researchers used urine metabolomics, the assessment of a cell's metabolic content, to distinguish between patients with and without kidney cancer. http://www.ncbi.nlm.nih.gov/pubmed/17316536
- Although partial nephrectomy, or removing only the part of the kidney containing a small tumor, produces similar outcomes to complete removal of the kidney, only about 20 percent of all patients with newly diagnosed kidney tumors undergo this procedure. http://www.cancer.gov/ncicancerbulletin/NCI_Cancer_Bulletin_021908/page3#c