

## Incidence and Mortality Rate Trends

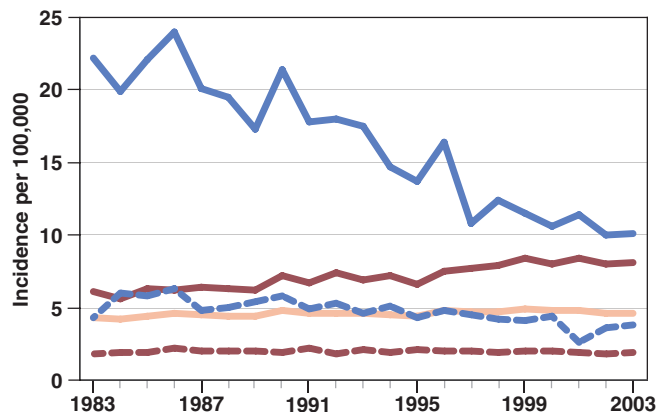
The incidence and mortality rates for esophageal cancer in the United States are very similar. Regardless of racial/ethnic group, men have higher incidence rates than women. The esophageal cancer incidence and mortality rates for African Americans have been higher than the rates for Whites. The incidence and death rates for African Americans have steadily declined; however, this downward trend is not observed for other racial/ethnic groups.

It is estimated that approximately \$779 million<sup>1</sup> is spent in the United States each year on treatment of esophageal cancer.

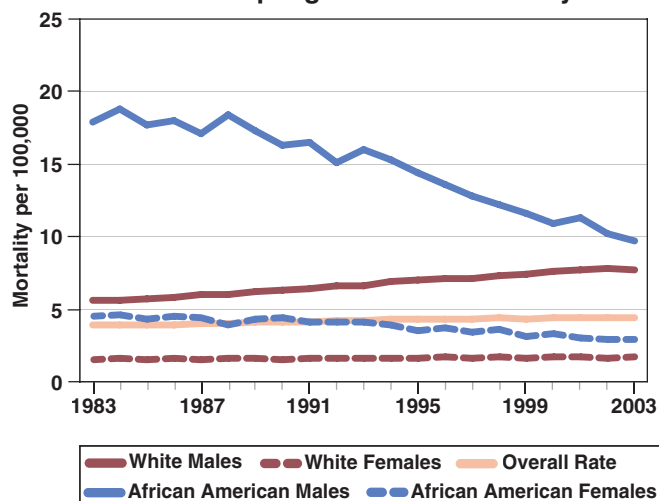
Source for incidence and mortality data: Surveillance, Epidemiology, and End Results (SEER) Program and the National Center for Health Statistics. Additional statistics and charts available at <http://seer.cancer.gov/>.

<sup>1</sup>In 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. Esophageal Cancer Incidence



U.S. Esophageal Cancer Mortality



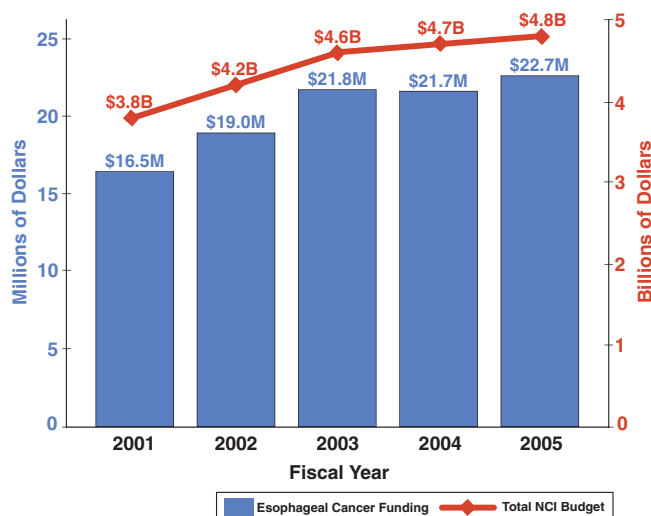
## Trends in NCI Funding for Esophageal Cancer Research

The National Cancer Institute's (NCI's) investment<sup>2</sup> in esophageal cancer research has increased from \$16.5 million in fiscal year 2001 to \$22.7 million in fiscal year 2005.

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

<sup>2</sup>The 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>.

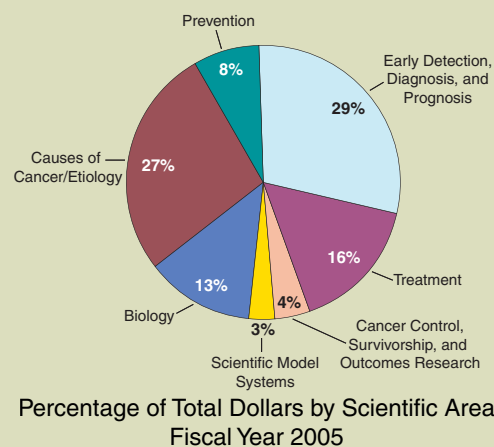
NCI Esophageal Cancer Research Investment



## Examples of NCI Research Initiatives Relevant to Esophageal Cancer

- Four gastrointestinal cancer-specific **Specialized Programs of Research Excellence (SPORes)** are moving results from the laboratory to the clinical setting. Current research is addressing whether treatment of Barrett's esophagus can prevent the subsequent development of esophageal cancer. <http://spores.nci.nih.gov/current/gi/gi.html>
- The interdisciplinary scientists of the **Network for Translational Research: Optical Imaging (NTROI)** are accelerating translational research in optical imaging and/or spectroscopy. Current efforts include the development of methods to improve treatment monitoring of Barrett's esophagus and the identification of molecular markers for detecting esophageal neoplasia. <http://imaging.cancer.gov/programsandresources/specializedinitiatives/ntroi/print>
- NCI's intramural **Gastrointestinal Malignancies Faculty** brings together basic, epidemiological, translational, and clinical research scientists from across NCI to address the prevention, diagnosis, and cure of gastrointestinal cancers. <http://ccr.cancer.gov/faculties/faculty.asp?facid=156>
- **Clinical Trials** are actively recruiting esophageal cancer patients to test new treatments and treatment combinations. Several active trials are testing new approaches for preventing and diagnosing esophageal cancer. [http://www.cancer.gov/search/clinical\\_trials](http://www.cancer.gov/search/clinical_trials)

## NCI Esophageal 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>.

- The **Stomach/Esophageal Cancers Progress Review Group (PRG)**, a panel of prominent scientists and patient advocates, assessed the state of the science and identified future research priorities for stomach and esophageal cancers. [http://planning.cancer.gov/stomach/stomach\\_esophageal.pdf](http://planning.cancer.gov/stomach/stomach_esophageal.pdf)
- The **Esophageal Cancer Home Page** provides up-to-date information on esophageal cancer treatment, prevention, genetics, causes, screening, testing, and other topics. <http://cancer.gov/cancerinfo/types/esophageal>

## Selected Opportunities for Advancement of Esophageal Cancer Research

- Establish collaborations for interdisciplinary, population-based, multi-institutional studies that use endoscopy to identify populations at greatest risk for esophageal cancer and to determine the prevalence and natural history of precancerous lesions.
- Develop strategies to prevent esophageal cancer that results, at least in part, from environmental exposure. Evaluate the effectiveness of these prevention strategies in at-risk populations.
- Characterize the molecular and cellular pathways in esophageal cancer cells and their microenvironment. Use this knowledge to develop and test novel therapeutics and optimize existing treatments for gastro-esophageal cancers and precancerous conditions.
- Create profiles of the molecular, cellular, and epidemiological features of gastro-esophageal tumors and precancerous lesions to identify diagnostic, prognostic, predictive, preventive, and therapeutic targets.