

## Incidence and Mortality Rate Trends

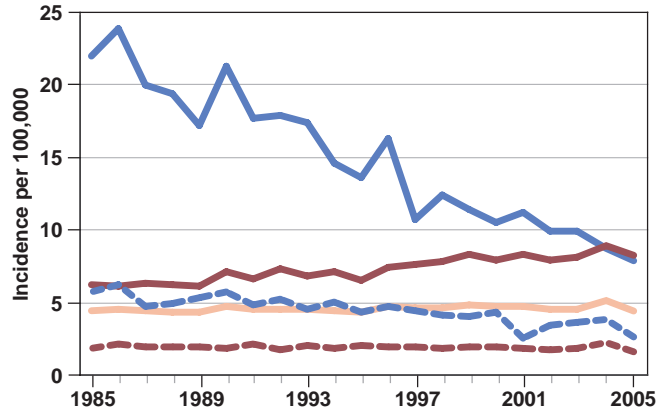
The incidence and mortality rates for esophageal cancer in the United States are very similar. Regardless of race or ethnicity, men have higher incidence and mortality rates than women. The esophageal cancer mortality rates for African Americans are higher than the rates for whites, but the incidence and death rates for African Americans have steadily declined over the past two decades. This downward trend is not observed for other racial or ethnic groups.

It is estimated that approximately \$800 million<sup>1</sup> is spent in the United States each year on treatment of esophageal cancer.

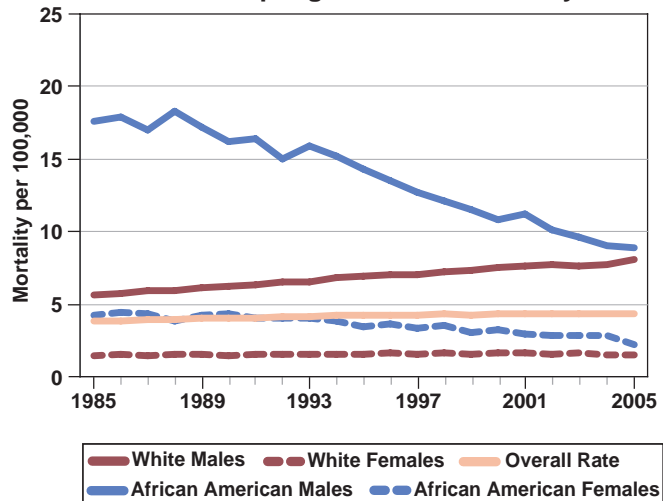
Source for incidence and mortality data: Surveillance, Epidemiology, and End Results (SEER) Program and the National Center for Health Statistics. Additional statistics and charts are available at <http://seer.cancer.gov/>.

<sup>1</sup>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.

U.S. Esophageal Cancer Incidence



U.S. Esophageal Cancer Mortality



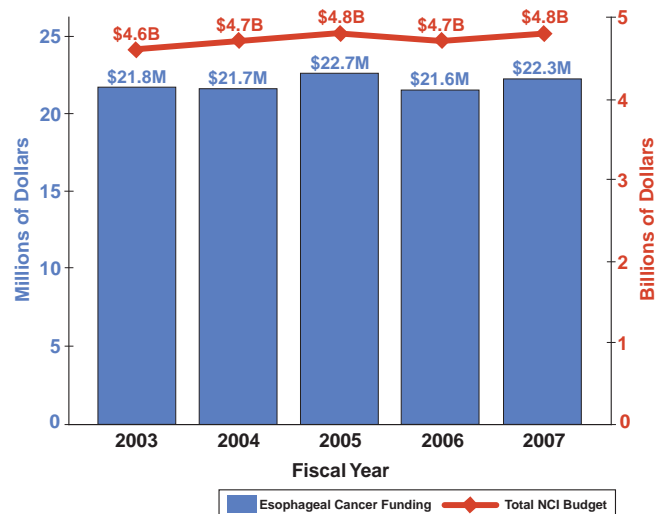
## Trends in NCI Funding for Esophageal Cancer Research

The National Cancer Institute's (NCI's) investment<sup>2</sup> in esophageal cancer research increased slightly from \$21.8 million in fiscal year 2003 to \$22.3 million in fiscal year 2007.

Source: NCI Office of Budget and Finance (<http://obf.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 planning and budgeting at the National Institutes of Health, see <http://www.nih.gov/about/>.

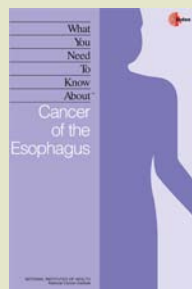
NCI Esophageal Cancer Research Investment



## Examples of NCI Activities Relevant to Esophageal Cancer

- The **Prevention Agents Program** provides scientific and administrative oversight for chemoprevention agent development from preclinical research to early Phase I studies. The program is currently supporting research on several agents for potential chemoprevention of esophageal cancer. <http://prevention.cancer.gov/programs-resources/groups/cad/programs/agents>
- 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 techniques to identify molecular markers for detecting esophageal neoplasia and understanding basic disease mechanisms. <http://imaging.cancer.gov/programsandresources/specializedinitiatives/ntroi/print>
- During the third annual meeting of the **Barrett Esophagus and Esophageal Adenocarcinoma Consortium (BEACON)**, researchers reviewed current research, developed new research ideas and strategies, and shared developments in clinical methods and laboratory analyses that could be used for consortium projects. <http://dceg.cancer.gov/newsletter/Linkage1107.html#EsophagealResearch>
- The **Cancer Prevention Research Small Grant Program** is supporting several research projects focused on esophageal cancer, including studies on esophageal cancer biomarkers, a mouse model

## What You Need to Know About™ Cancer of the Esophagus



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

Risk factors for esophageal cancer include: age, sex, tobacco use, alcohol use, Barrett esophagus, other types of irritation to the lining of the esophagus, and medical history.

<http://www.cancer.gov/cancertopics/wyntk/esophagus>

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

of esophageal adenocarcinoma, and the molecular mechanisms involved in the development of Barrett esophagus. <http://grants.nih.gov/grants/guide/pa-files/PAR-08-055.html>

- 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 Advances in Esophageal Cancer Research

- Researchers identified major risk factors for both esophageal squamous cell cancer (SCC) and esophageal adenocarcinoma. SCC risk factors include gastroesophageal reflux disease, alcohol, and smoking. Risk factors for esophageal adenocarcinoma (ACE) include increasing body mass index and gastroesophageal reflux disease. <http://www.ncbi.nlm.nih.gov/pubmed/17185192>
- *Helicobacter pylori* exposure does not appear to increase the risk of esophageal SCC. <http://dceg.cancer.gov/newsletter/Linkage1107.html#SciHigh>
- Tobacco smoking is associated with an increased risk of esophageal cancer, but drinking more than three alcoholic beverages per day does not appear to affect risk of ACE. <http://dceg.cancer.gov/newsletter/Linkage1107.html#SciHigh>
- Hypermethylation (chemical modification of the DNA) of a region in the tumor suppressor gene AKAP12 is a marker of progression from Barrett esophagus to esophageal cancer. <http://www.ncbi.nlm.nih.gov/pubmed/18199717>