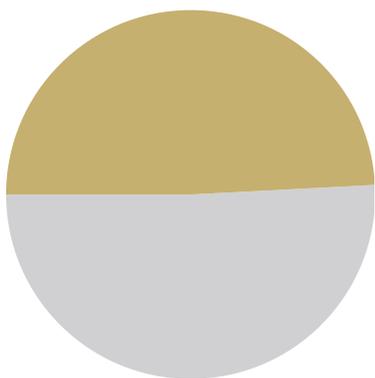


DEADLIEST CANCERS COALITION

Established in 2008, the Deadliest Cancers Coalition is a collaboration of national nonprofit organizations focused on addressing policy issues related to the nation's deadliest, or recalcitrant, cancers. The Recalcitrant Cancer Research Act of 2012 defines these cancers as those with a five-year relative survival rate below 50 percent. The overall five-year relative survival rate for all cancers was approximately 50 percent back in 1971, when the "War on Cancer" was declared, and it has now risen to 69 percent. While there are various types of cancers that fall under the "recalcitrant" definition, it is worth noting that half of the 595,690 cancer deaths expected in 2016 will be caused by eight of the deadliest site specific cancers: pancreas, lung, liver, esophagus, stomach, brain, ovary and myeloma.¹

2016 EST. CANCER DEATHS
595,690

**8 DEADLIEST SITE-SPECIFIC
CANCERS COMBINED**
296,390 (49.8%)



ALL OTHER CANCERS COMBINED
299,300 (50.2%)

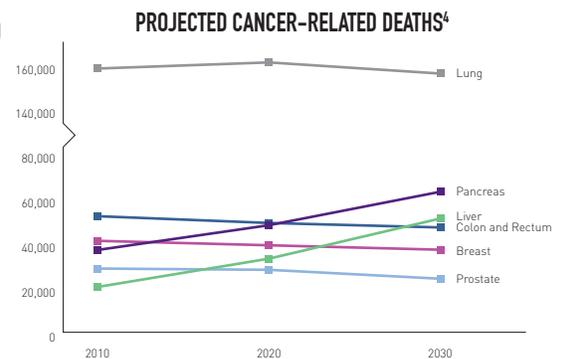
MOST COMMON CANCERS: 2016 CASES, DEATHS AND FIVE-YEAR RELATIVE SURVIVAL RATES¹

	2016 Est. Cases	2016 Est. Deaths	Five-Year Survival
Pancreas	53,070	41,780	8%
Lung	224,390	158,080	18%
Liver & intrahepatic bile duct	39,230	27,170	18%
Esophagus	16,910	15,690	20%
Stomach	26,370	10,730	30%
Brain & other nervous system	23,770	16,050	35%
Ovary	22,280	14,240	46%
Myeloma	30,330	12,650	49%
Leukemia	60,140	24,400	62%
Colon & rectum	134,490	49,190	66%
Non-Hodgkin lymphoma	72,580	20,150	72%
Kidney & renal pelvis	62,700	14,240	74%
Urinary bladder	76,960	16,390	79%
Uterine corpus	60,050	10,470	83%
Breast	249,260	40,890	91%
Melanoma of the skin	76,380	10,130	93%
Prostate	180,890	26,120	99%

The impact that these cancers are having on Americans is staggering and is intensified by the fact that there are significant gaps in our ability to help those diagnosed with these diseases. Lung cancer accounts for more deaths than any other cancer in both men and women. Ovarian cancer is the fifth leading cause of cancer-related death among women and is the deadliest of the gynecologic cancers.¹ Stomach cancer is the third leading cause of cancer-related death worldwide.² Brain and other nervous system cancer is the second most common pediatric site-specific cancer type in children diagnosed at ages 0-14 and is the leading cause of cancer-related death in men under 40 years of age and women under 20.³

While overall cancer incidence trends are declining, the incidence rates of pancreatic and liver cancer in men and women, and the rate of myeloma incidence in men, have increased between 2003 and 2012. And unfortunately, the long-term trends for death rates have also increased for both pancreatic and liver cancers.³

In 2016, pancreatic cancer surpassed breast cancer to become the third leading cause of cancer-related death in the U.S. In addition, deaths from liver cancer exceeded those caused by prostate cancer, moving liver cancer to the fifth leading cause of cancer-related death in the U.S.¹ It is projected that by 2030, the top five cancer killers in the U.S. will be lung, pancreatic, liver, colorectal and breast – a significant shift from the recent ranking of lung, colorectal, breast, pancreatic and prostate.⁴ The projected rise of pancreatic and liver cancers in the rankings of leading cancer killers underscores the need for greater federal investment in research on recalcitrant cancers to prevent these projections from coming true.



The Recalcitrant Cancer Research Act calls on the National Cancer Institute (NCI) to develop “scientific frameworks,” or strategic plans, to advance research on the deadliest cancers, first for pancreatic and lung cancers, with other recalcitrant cancers added at the NCI’s discretion. As required by the Act, the NCI has released a scientific framework outlining priority areas of research focus for pancreatic adenocarcinoma, as well as for small-cell lung cancer. These reports demonstrate the vast potential for progress in diseases that are currently some of the nation’s leading killers. The Deadliest Cancers Coalition strongly supports the use of this scientific framework model in developing reports for other deadly cancers.

The Deadliest Cancers Coalition applauds Congress for the historic funding increases provided to the National Institutes of Health (NIH) and NCI in FY2016. However, even with those increases, the NIH budget is still nearly 18 percent below its FY2003 level, when accounting for inflation. NCI funding has declined even more. The Deadliest Cancers Coalition calls on Congress to support the goals of President Obama’s Cancer Moonshot Initiative and calls on both Congress and the Administration to ensure that this new initiative is fully leveraged to provide new strategies that offer true hope for recalcitrant cancers – the cancers for which we’ve made the least amount of progress to date. Specifically, we ask that Congress support at least \$34.5 billion for the NIH, including \$5.9 billion for the NCI. We additionally request that members join the Congressional Caucus on the Deadliest Cancers and that the Senate include funding for the NIH in the HELP Committee’s Innovation for Healthier Americans Initiative legislation.

SOME NCI PROGRAMS THAT OFFER SIGNIFICANT PROMISE FOR OUR NATION’S RECALCITRANT CANCERS ARE:

- **NCI RAS Initiative** – Established in 2013, the RAS Initiative revitalizes efforts to directly target a previously “undruggable” protein, RAS. A RAS family member, KRAS, is known to be mutated to an active form in 95 percent of pancreatic cancer cases and 35 percent of lung cancer cases. Overall, more than 30 percent of human cancers are driven by RAS mutations.
- **BETRNet (Barrett’s Esophagus Translational Research Network Coordinating Center)** – Facilitates data collection, analysis and dissemination to reduce the incidence, morbidity and mortality of esophageal adenocarcinoma by answering key questions related to the progression of this disease, especially in the premalignant stage.
- **The Cancer Genome Atlas (TCGA)** – In 2014, researchers with TCGA identified four subtypes of stomach cancer that will allow exploration of targeted therapies if adequate research investments are made to build upon TCGA observations.
- **The Epidemiology and Genomics Research Program** – This initiative supports interdisciplinary and translational cancer research, including the Hepatocellular Carcinoma Epidemiology Consortium, which allows liver cancer investigators around the world to pool their resources in large collaborative research projects that enhance knowledge and increase public awareness of liver cancer.
- **Lung-MAP** – A multi-drug, multi-sub-study, biomarker-driven squamous cell lung cancer clinical trial that uses state-of-the-art genomic profiling to match patients to sub-studies testing investigational treatments that may target the genomic alterations, or mutations, found to be driving the growth of their cancer.
- **Precision Medicine Initiative** – The NCI will assemble and analyze additional genomic data sets to increase our understanding of cancer genomes and their relationship to gene variants that a patient may have inherited. Based on the genomic information uncovered, the NCI will test new therapies against several common adult cancers, including targeting EGFR and ALK mutations in lung cancer.

1. American Cancer Society. Cancer Facts & Figures 2016. Atlanta: American Cancer Society; 2016.

2. GLOBOCAN 2012 (IARC) Section of Cancer Surveillance (19/2/2016). Accessed February 2016.

3. Siegel, R. L., Miller, K. D. and Jemal, A. Cancer statistics, 2016. CA: A Cancer Journal for Clinicians, 66: 7–30. doi: 10.3322/caac.21332 (2016).

4. Rahib, L. et al. Projecting cancer incidence and deaths to 2030: the unexpected burden of thyroid, liver, and pancreas cancers in the United States. Cancer Research 74, 2913–2921. doi:10.1158/0008-5472.can-14-0155 (2014).