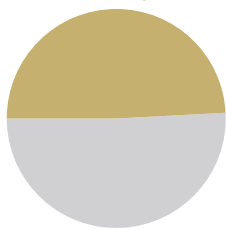


DEADLIEST CANCERS COALITION

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 nearly half of the 600,920 cancer deaths expected in 2017 will be caused by seven of the deadliest site specific cancers: pancreas, lung, liver, esophagus, stomach, brain and ovary.¹

2017 EST. CANCER DEATHS
600,920

7 DEADLIEST SITE-SPECIFIC
CANCERS COMBINED
285,310 (47.5%)



ALL OTHER CANCERS COMBINED
315,610 (52.5%)

MOST COMMON CANCERS: 2017 CASES, DEATHS AND FIVE-YEAR RELATIVE SURVIVAL RATES¹

	2017 Est. Cases	2017 Est. Deaths	Five-Year Survival
Pancreas	53,670	43,090	9%
Liver & intrahepatic bile duct	40,710	28,920	18%
Lung	222,500	155,870	19%
Esophagus	16,940	15,690	21%
Stomach	28,000	10,960	31%
Brain & other nervous system	23,800	16,700	35%
Ovary	22,440	14,080	46%
Myeloma	30,280	12,590	50%
Leukemia	62,130	24,500	63%
Colon & rectum	135,430	50,260	66%
Non-Hodgkin lymphoma	72,240	20,140	73%
Kidney & renal pelvis	63,990	14,400	75%
Urinary bladder	76,030	16,870	79%
Uterine corpus	61,380	10,920	83%
Breast	255,180	41,070	91%
Melanoma of the skin	87,110	9,730	93%
Prostate	161,360	26,730	99%

Deadliest cancers have a significant impact on public health. 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

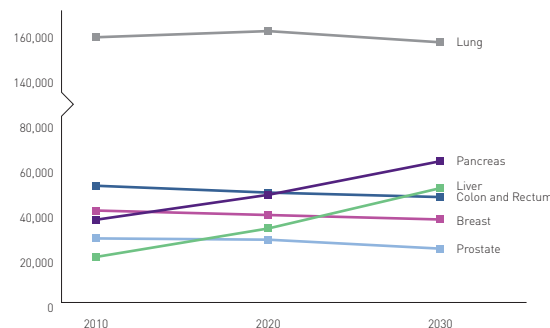
While overall cancer incidence trends are declining, the incidence rates of pancreatic and liver cancer in men and women have increased between 2004 and 2013. In addition, the long-term trends for death rates have also increased slightly for pancreatic cancer and significantly for liver cancer.³

In 2016, pancreatic and liver cancer became the third and fifth leading causes of cancer-related deaths.¹ By 2030, the top three cancer killers in the U.S. are projected to be lung, pancreatic and liver cancer - all recalcitrant cancers.⁴ These predictions could be stopped if we target and increase federal research on recalcitrant cancers.

There is good news. The 2017 five-year relative survival rate for myeloma increased to 50 percent, meaning that this disease has "graduated" out of the deadliest cancers. Pancreatic cancer survival has also increased, albeit only slightly, each year for the last three. Further, thanks in large part to the National Cancer Institute's National Lung Screening Trial, there is now an early detection tool for Americans at high-risk of being diagnosed with lung cancer, which could save at least 12,000 Americans each year. While these advances are worth celebrating, there is still much more work that needs to be done to improve outcomes for myeloma patients and others who are diagnosed with any of the deadliest cancers.

The Recalcitrant Cancer Research Act is a step in the right direction. In addition to creating a statutory definition for recalcitrant cancers, it has led to the funding of important research into pancreatic and small-cell lung cancer. It also has provided a model for prioritizing research and creating accountability for deadliest cancers research.

PROJECTED CANCER-RELATED DEATHS⁴



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. TCGA has also published discrete subsets and genomic analyses of diffuse gliomas (brain cancer) in 2015 and 2016. Finally, the integrated genomic characterization of esophageal cancer was published in early 2017.
- **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.
- **Cancer Moonshot Funding Opportunities** – In December 2016, the 21st Century Cures Act was signed into law, authorizing \$1.8 billion over seven years to fund the Cancer Moonshot to make a decade’s worth of progress in cancer prevention, diagnosis and treatment in just five years. This funding, which is meant to supplement “regular” NIH and NCI funding, will be spent on specific research projects that align with the 10 recommendations made by the 2016 Blue Ribbon Panel. As an initial step, the NCI released a list of funding opportunity announcements (FOAs) that can be leveraged with existing funds while they are also planning for longer term implementation. Several of the initial FOAs focus on immunotherapy, which could be an important area of focus for several of the deadliest cancers. Also in support of the Cancer Moonshot, the NCI launched the NCI Formulary to enable investigators at NCI-designated Cancer Centers to have quicker access to approved and investigational agents for use in preclinical studies and cancer clinical trials. This unique partnership between NCI and pharmaceutical and biotechnology companies could ultimately translate into speeding the availability of more effective treatment options to patients facing our deadliest cancers.
- While the Moonshot funding is an important resource for accelerating progress in a few select areas, it is still critical that Congress continue to prioritize increasing NCI’s “regular” funding as this will likely remain the primary source of funding for the overwhelming majority of research on the deadliest cancers.

The Deadliest Cancers Coalition calls on the 115th Congress to support our nation’s deadliest/recalcitrant cancers – defined by the Recalcitrant Cancer Research Act of 2012 as cancers with five-year survival rates below 50 percent – by:

- **Supporting \$36.2 billion for the National Institutes of Health (NIH) in FY2018, including \$6 billion for the National Cancer Institute (NCI) and the funding provided from the 21st Century Cures Act.**
- **Joining the Congressional Caucus on the Deadliest Cancers and by ensuring that there are no lapses or reductions in health coverage for this critical population.**

1. American Cancer Society. Cancer Facts & Figures 2017. Atlanta: American Cancer Society; 2017.

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).