



Cancer Research: The Promise of Hope

The American Cancer Society Cancer Action Network (ACS CAN) recognizes that cancer research is the engine behind our ongoing progress in the fight against cancer. Research offers hope to the millions of people who face cancer – for better treatments, for more opportunities to prevent and detect the disease early on, and for improved quality of life for those already diagnosed. The National Cancer Institute (NCI) – one of the 27 institutes and centers that comprise the National Institutes of Health (NIH) – is the foundation of the nation’s cancer research efforts. As a federal agency, NCI-funded research has played a role in every major advance in the fight against cancer over the last 70 years. That’s why it is so important that the NCI continues to receive the government investment that it needs to support life-saving research projects. Billions of dollars exist in the federal budget for medical research, and ACS CAN is leading the effort to lobby our government for the crucial funds necessary for clinical trials that could one day bring an end to this terrible disease.

The Results Are In

Today, researchers are making remarkable progress in every area of cancer prevention, detection, treatment, and care – moving discoveries from the laboratories to the bedside. Each year, NCI supports over 1,400 clinical trials, assisting more than 34,000 cancer patients. The results are clear:

- Cancer death rates have been steadily declining for men and women overall, and for most racial and ethnic populations in the United States. From 1991 to 2010, the greatest drop in cancer death rates, 55 percent, was seen among African American men aged 40 years to 49 years. Notably, African American men experienced the largest drop within every 10-year age group.
- We now have nearly 14 million cancer survivors in the U.S. – living proof of the gains we’ve made. Today, two-thirds of patients survive five years or longer after their cancer diagnosis, compared to only half of patients forty years ago.

The combined cancer death rate has declined twenty percent over the past two decades, translating to the avoidance of approximately 1,340,400 cancer deaths during this time period.

“The progress we are seeing is good, even remarkable, but we can and must do even better.”

*- Dr. John R. Seffrin, CEO,
American Cancer Society
Cancer Action Network
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In the past year alone, science has seen stunning breakthroughs in targeted therapies for hard-to-treat cancers and new tools in the fast-growing field of personalized medicine. More than 80% of NCI’s budget supports research activities at more than 700 universities, hospitals, and other sites throughout the United States and abroad. Many of these institutions comprise our nation’s unparalleled network of cancer centers. These centers house many world-renowned cancer researchers and are a vital breeding ground for the next generation of scientists and clinicians. To sustain this critical network of medical researchers, and to ensure that more life-saving breakthroughs are made in the years to come, it is absolutely imperative that the government continues to provide adequate funding for new cancer research projects.

Making Our Voices Heard



Recent genomic discoveries are so promising that we are now on the cusp of a whole new realm of understanding that will help us deliver more personalized, less invasive cancer care. Despite these successes, there are areas where the progress has not kept pace. Additionally, cancer incidence is projected to nearly double by 2020, particularly among the aging Baby Boomer population. These trends signal a clear call for action to address specific areas of need and opportunity, including:

- Developing early detection tools and better treatments for the most lethal cancers.
- Addressing existing disparities in health outcomes by putting our cancer prevention, early detection, and treatment knowledge to use in all populations.
- Improving quality of care and reducing suffering by advancing pain and symptom management, and other research supporting quality of life for cancer patients, survivors, and their loved ones.

To ensure the research being supported today yields the cancer treatments of tomorrow, Congress must make funding for cancer research a top priority, and, at a minimum, sustain the support they are currently providing. We must continue to build on these vital investments to NIH in order to realize the promise emerging from this funding.

| <i>National Institutes of Health (NIH) & National Cancer Institute (NCI) Funding (in billions)</i> | | | | | | |
|--|-----------------|-----------------|----------------|----------------|----------------|----------------|
| | FY 2009* | FY 2010* | FY 2011 | FY 2012 | FY 2013 | FY 2014 |
| NIH | \$30.32 | \$31.01 | \$30.40 | \$30.62 | \$28.93 | \$29.93 |
| NCI | \$4.96 | \$5.10 | \$5.06 | \$5.07 | \$4.78 | \$4.92 |

**FY 2009 and FY 2010 funding levels do not include funds provided through the American Recovery and Reinvestment Act.*

ACS CAN is Leading the Charge

In addition to its federal lobbying efforts, one of ACS CAN’s most effective strategies is to mobilize our grassroots advocates in support of cancer research at NCI and in pioneering state research programs around the nation. As the leader of One Voice Against Cancer (OVAC), an influential collaboration of more than forty-five organizations all advocating for increased funding for federal cancer research and prevention programs, ACS CAN is spearheading the effort to secure greater government investment by combining the voices of hundreds of thousands of constituents nationwide. Throughout Congressional consideration of the FY 2014 spending bill, ACS CAN organized three OVAC lobby days specifically focused on protecting and increasing cancer research funding. Additionally, ACS CAN coordinated rolling in-district “drop bys” of grassroots volunteers at their local Congressional offices, forcing representatives to actively engage in discussions about cancer research funding in their communities. Additionally, thousands of volunteers sent emails and made phone calls to their members of Congress at key points in the budget process. Volunteers also utilized online social networks such as Facebook and Twitter, as well as mobile text message alerts, to garner nationwide support for research dollars.

Remarkable Advances and Achievements

Thankfully, our efforts to achieve greater funding for cancer research will build upon amazing breakthroughs already realized in just the past few years. We know that cancer begins silently, often many years before it inflicts noticeable damage on patients. Researchers are exploring ways to detect cancer earlier and use targeted treatments that are “personalized” to the patient to reduce cancer burden and costs while improving individual quality of life.

Today, researchers are making remarkable progress in every area of cancer research—prevention, detection, treatment and care—moving discoveries from the lab to the bedside. Cancer researchers have delivered advances this past year that will change the standard of care for a number of hard-to-treat cancers. Some of those breakthrough discoveries include:

- **Potential drug targets identified in common childhood brain cancer:** Researchers studying the genetic roots of the most common malignant childhood brain tumor, medulloblastoma, have discovered missteps in three of the four subtypes of the cancer that involve genes already targeted for drug development. In all, 41 genes were associated for the first time to medulloblastoma by the NCI-funded St. Jude Children’s Research Hospital – Washington University Pediatric Cancer Genome Project.
- **Researchers discover new mechanism behind resistance to cancer treatment:** Developing resistance to chemotherapy is a nearly universal, ultimately lethal consequence for cancer patients with solid tumors – such as those of the breast, prostate, lung and colon – that have metastasized, or spread, throughout the body. A team at the Fred Hutchinson Cancer Research Center has discovered a key factor that drives this drug resistance – information that ultimately may be used to improve the effectiveness of therapy and buy time for patients with advanced cancer.
- **Study finds LIFR protein suppresses breast cancer metastasis:** A receptor protein suppresses local invasion and metastasis of breast cancer cells, the most lethal aspect of the disease, according to the University of Texas MD Anderson Cancer Center. High-throughput RNA sequencing identified the leukemia inhibitory factor receptor (LIFR) as a novel suppressor of breast cancer metastasis, and this would not have been possible without NCI funding.

ACS CAN is committed to ensuring that our progress in developing new life-saving screening and treatment methods continues by securing government funding for the research projects that make such cancer breakthroughs possible.

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