

[National Cancer Moonshot Initiative](#)

Aims to accelerate advancements in cancer prevention and treatment, in part by leveraging new genomic technologies.

Updated last **October 11, 2016**
for the 01/12/2016 Initiative.

WHAT IT DOES

The [National Cancer Moonshot Initiative](#) is a \$1 billion action plan intended to identify new ways to prevent, diagnose, and treat cancer by increasing financial resources, data access and collaboration among scientists, physicians, philanthropists, and patients. The initiative aims to produce “a decade’s worth of advances in five years.”

President Obama has appointed Vice President Joe Biden to lead the [Cancer Moonshot Task Force](#), which will carry out the initiative as planned:

- FY 2016: The Moonshot Initiative will immediately provide \$195 million to the National Institutes of Health (NIH) to fund new cancer research.
- FY 2017: The Administration will propose a budget of \$755 million in mandatory funds for NIH and Food and Drug Administration (FDA) cancer-related research.
- New investments, beginning with the Departments of Defense (DOD) and Veterans Affairs (VA), will further facilitate focus on specific cancers and large studies to enhance diagnosis and treatment.

Within the Department of Health and Human Services (HHS), this Initiative will support the following research:

- Prevention and cancer vaccine development to protect against viruses, such as human papilloma virus (HPV), that can cause cancer (notably, genetic changes in cancers may be targeted by vaccines).
- Early cancer detection using new genomic and proteomic technologies to identify markers of cancer, as well as a focus on the development of more sensitive cancer screening methods.
- Cancer immunotherapy and combination therapy that will continue to expand previous research done on activating the immune system to attack solid tumors.
- Work with healthcare providers to focus on underrepresented populations and develop new approaches for cancer testing and clinical trials, as well as attempting to lessen the disparities in current health care.
- Genomic analysis of tumor and surrounding cells to learn more about their genetic changes and mutations, in order to advance immunotherapy and targeted drug therapy.
- Enhanced data sharing and promotion of new tools to share information about genomic abnormalities, treatment response, and long-term outcomes, which will increase the knowledge available in both the private and public sectors.
- Pediatric cancer studies that will develop new approaches to treat childhood cancers.
- Oncology Center of Excellence, a new program to be initiated by the FDA to expedite the development of novel combination products, such as diagnostic tests and the use of combinations of drugs, biologics and devices to treat cancer.
- Vice President’s Exceptional Opportunities in Cancer Research Fund, which will focus on high-risk, high-return research identified by collaborative work within the research community.

RELEVANT SCIENCE

Researchers have determined that [cancer](#) is not a single disease but rather a collection of diseases that involve uncontrollable cell growth and division. The Cancer Moonshot Initiative aims to provide the vision and necessary funding to allow researchers to expand

their search for new detection methods, novel treatment approaches, and better understanding of disease progression. Important scientific approaches this initiative will fund include the following:

- [Cancer vaccines](#) are critical approaches to prevent and/or treat cancer. Vaccines target infectious pathogens that are known to cause cancer. They work by activating a patient's immune system to produce [cytotoxic T-cells](#), or immune cells known as killer T-cells, that recognize and destroy cancer cells. This form of protection is called immunotherapy because it is utilizing the immune system, or the body's protective mechanisms, to abolish cancer cells.
- [Genomic](#) and [proteomic](#) technologies used in cancer detection and treatment determines genes or proteins that are altered due to mutations in cancer cells. A catalog or library of these alterations can be used for future molecular interventions and treatments to restore normal gene or protein function. Scientists hope to increase the sensitivity of the technology to be able to detect key changes in DNA or protein earlier in disease progression in order to identify when cancerous growth begins.

RELEVANT EXPERTS

[Sandeep Dave](#), MD, MS

ENDORSEMENTS & OPPOSITION

Endorsements:

- In August 2016, Hillary Clinton [endorsed](#) the Cancer Moonshot Initiative in a press release. She stated: "As president, I will take up the charge. Together, we will make cancer as we know it a disease of the past."
- U.S. Representative Mark DeSaulnier is [supportive](#) of the Cancer Moonshot but has called for a unified approach to cancer research, putting aside political agendas and divisions amongst researchers who study different forms of cancer.

STATUS

- President Obama announced the Initiative during his final State of the Union address on January 12, 2016 and officially established the White House Cancer Moonshot Task Force via a [January, 28, 2016 memorandum](#).
- On September 7, 2016 a [Blue Ribbon Panel Report](#) conveyed to the National Cancer Advisory Board 10 transformative research recommendations to reach the Moonshot Initiative's goals.
- The FDA is creating the [Oncology Center of Excellence](#) (OCE) to bring together the skills of scientists and reviewers with expertise in drugs and devices.
- In April 2016, philanthropist Sean Parker joined the effort to further cancer research and gave \$250 million to cancer immunotherapy research.

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RECOMMENDED CITATION

Duke SciPol, "National Cancer Moonshot Initiative" available at <http://scipol.duke.edu/content/national-cancer-moonshot->

[initiative](#) (10/11/2016).