

AACR Cancer Progress Report 2017: Harnessing Research Discoveries to Save Lives

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Clinical Cancer Research (CCR) is proud to announce the release of the *American Association for Cancer Research (AACR) Cancer Progress Report 2017*. This seventh edition of the annual report focuses on the research that contributed to advances in cancer prevention, detection, diagnosis, and treatment, made between August 1, 2016, and July 31, 2017. The full report can be accessed at <http://cancerprogressreport.org>.

The *AACR Cancer Progress Report* is a cornerstone of the AACR's efforts to educate the public about cancer and the importance of biomedical research and to advocate for increased federal funding for the NIH, NCI, and FDA. Each edition of the report contains information of interest to the research community and the public, and all six prior editions are freely available on the report website (<http://cancerprogressreport.org>).

This year's report chronicles how we are harnessing research discoveries to save and improve lives, like the lives of the eight individuals featured in the report, who shared their experiences with cancer. The report highlights the rapid pace of FDA approvals for molecularly targeted therapeutics and immunotherapeutics that underscore our major strides toward precision cancer medicine. For instance, between August 1, 2016, and July 31, 2017, the FDA approved the use of a checkpoint inhibitor, pembrolizumab, for the treatment of any solid tumors containing one of two genetic abnormalities, marking the first ever tumor-site agnostic approval of any anticancer therapeutic.

The report also highlights research areas where there are significant gaps in our knowledge, such as the underlying causes of cancer health disparities, and the need for all sectors of the biomedical research community to come together to address this critical issue. Notably, the report illustrates how unwavering, bipartisan support from Congress, in the form of increased funding for the NIH, NCI, and FDA, is vital if we are to keep the momentum at which we make lifesaving progress for everyone.

The *AACR Cancer Progress Report 2017* has eight main sections. The first section, "Cancer in 2017," provides an overview of the current situation: Research has powered substantial progress against cancer, but the disease continues to exert a huge personal and financial toll both nationally and internationally. The second section, "Comprehending Cancer Development," is an overview of the underlying biology of cancer that provides the foundation for therapeutic advances against the disease.

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More than 50% of global cancer cases are preventable, and the third section, "Preventing Cancer; Understanding Risk Factors," delineates the common cancer risk factors and some of the policy and regulatory initiatives directed at cancer prevention.

Regular personalized screenings can dramatically reduce the risk of developing or being diagnosed with certain advanced cancers and the section on "Screening for Cancer Prevention and Early Detection," explains the five types of cancer screening tests that are used for cancer prevention and early detection before an individual may show signs or symptoms of disease.

The next section of the report, "Harnessing Research Discoveries to Save Lives," describes recent advances across the continuum of clinical cancer care, from cancer prevention to management of cancer survivorship issues. Highlighted in detail are the scientific bases for the new anticancer therapeutics approved by the FDA between August 1, 2016, and July 31, 2017, and how some of these therapeutics are transforming lives. Notable among these newly approved agents are avelumab (Bavencio), the first therapeutic ever approved by the FDA for the treatment of Merkel cell carcinoma, a rare but lethal form of skin cancer, as well as midostaurin (Rydapt), the first molecularly targeted therapeutic for the treatment of acute myeloid leukemia.

The section, "Looking to The Future" highlights several ongoing data-sharing initiatives that collect, harmonize, and analyze immense volumes of information that include patient history, diagnostics, genetic tests, treatment decisions, and measured and patient-reported outcomes from large numbers of cancer patients. Many researchers, including AACR President Michael A. Caligiuri, MD, are hopeful that the next breakthroughs in cancer care will be fueled by harnessing these "big data sets." As noted in the section, "Working Together to Overcome Cancer through Public Policy," this research will only be possible by investing in research talent, tools, and infrastructure, and by advancing regulatory policies that support endeavors across the spectrum of biomedical research.

Federal support for the NIH, NCI, and FDA has made possible much of the remarkable progress against cancer detailed in the current as well as six prior editions of the report. Thus, the *AACR Cancer Progress Report 2017* concludes with a call to action for all Americans to join the AACR in urging Congress to implement a strategy for providing robust, sustained, and predictable annual budget increases for the NIH, NCI, and FDA.

In brief, this report highlights how many lives are being transformed by research. However, it also reminds us that we must invest more time, effort, and resources if we are to accelerate the pace at which we make progress against cancer and bring hope to patients and their loved ones everywhere.

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