

P R E S I D E N T ' S C A N C E R P A N E L

NATIONAL CANCER PROGRAM

NATIONAL CANCER INSTITUTE

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

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The Future of Cancer Research: Accelerating Scientific Innovation October 26, 2010

The President's Cancer Panel held the second meeting of its 2010-2011 series, *The Future of Cancer Research: Accelerating Scientific Innovation*, on October 26, 2010, in Philadelphia, Pennsylvania. The meeting included expert testimony and discussion regarding opportunities to facilitate progress within the National Cancer Program (NCP). Many presenters spoke of the need to promote and renew innovation within the NCP. Most government funding mechanisms, as well as research and development strategies of the private sector, favor the pursuit of incremental progress rather than high-risk, creative projects with potential to yield transformative findings. Grant review processes contribute to this unbalanced portfolio, in part because the lengthy review process is not compatible with the spontaneous approach to research that drives innovation.

Researchers from diverse fields must be brought together to conduct the transdisciplinary research necessary to address challenges facing the NCP. Engineers and mathematicians are among those who have not been traditionally included in cancer research but whose perspective and expertise may help drive new discoveries. It is critical that review panels include representation from these fields so that proposed research can be evaluated fairly. Also important are meaningful partnerships with patients and communities that will be served by the interventions being developed. Researchers with experience in community-based participatory research may be a valuable resource for other scientists attempting to engage the populations they are studying. Advocacy organizations also play an important role in this regard and can themselves drive innovation and enhance efficiency through partnerships with researchers.

The Panel also heard that there is a need to shift the focus in cancer care from tumor management to the overall health of the patient. Cancer research and treatment should not be limited to an organ-specific approach. This paradigm shift will require the identification of and ability to monitor biomarkers that are indicative of patient health. Expanding approaches to delivering patient care were also discussed. New technologies—such as interactive Web portals—can facilitate physician-patient communication outside the traditional health care setting and enhance efficiency and reduce costs. As well, resources as common as telephones can be used to connect health care providers with patients who do not have access to or may not have adopted new technologies. Health care reimbursement and records systems need to be modified to incorporate these alternative approaches to care delivery.

Investment in infrastructure is needed to support the future of the NCP. Biospecimens will play a central role in cancer research in the coming decades. Efforts must be made to ensure that an adequate supply of specimens are collected and stored and that the quality of the specimens is sufficient to yield meaningful information for clinical and research applications. This will require development of standards, as well as behavior change on the part of clinicians and researchers. Health information technology, including electronic health records (EHR), is critical to the future of cancer care and research. Widespread adoption of EHR will provide a foundation for transformative change, facilitating the collection and analysis of large amounts of data from across the country. Researchers should have open access to such data, as this information will support the development of algorithms that can generate individualized guidelines for disease prevention and care, an improvement from the current population-based approach to guideline development. Availability of EHR data for analysis will depend on the willingness of individuals to share their information. In this regard, it will be important to foster trust within the U.S. population and create a system that serves the interests of the American people and safeguards against abusive uses of information.

The Panel will summarize findings and recommendations from this meeting, along with the other meetings in the series, in its 2010-2011 Annual Report to the President of the United States.