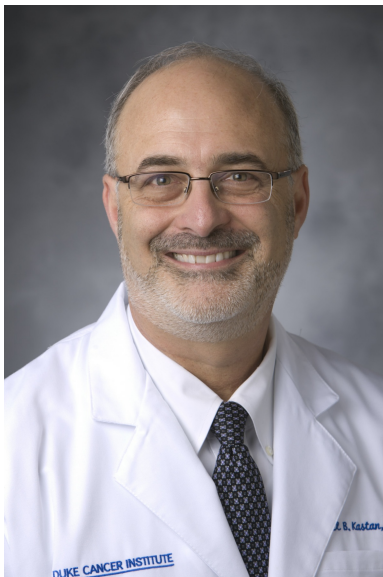


NOVEMBER 2019



Artificial Intelligence, Workforce Training, Patient Advocacy & More Reflections on the 2019 AACI/CCAF Annual Meeting

By Michael B. Kastan, MD, PhD



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Commentary Overview

- Disruptive technologies in many fields of medicine, including pathology and radiology, will rapidly evolve to change the way we prevent, diagnose, and treat cancer.
- Challenges in training the cancer workforce are growing, made even more challenging by the increasing number of older Americans and cancer survivors.
- Compassionate and empathetic medical staff can help ease the psychosocial and financial hardships for families facing a cancer diagnosis.
- The development of a vaccine for HPV-related cancers shows how outstanding basic science focused on a clinically relevant problem can lead to transformative approaches to cancer prevention and treatment.

As chair of AACI's 2019 Annual Meeting Program Committee, I took a keen interest in watching the event unfold last month in Washington, DC. From panel discussions on CAR T-cell therapy and the biology of cancer metastases to economic issues like controlling costs for patients and cancer centers, the meeting held something for everybody in the cancer research enterprise. Here, in no particular order, are some of my reflections on the 2019 AACI/CCAF Annual Meeting.

Artificial Intelligence: Disruptive Technologies

The session on artificial intelligence (AI), moderated by my Duke Cancer Institute colleague **Warren Kibbe, PhD**, was fascinating. Many aspects of these disruptive technologies—especially in the fields of pathology and radiology—are already upon us and will rapidly evolve

in the future to change the way we prevent, diagnose, and treat cancer.

In one presentation, **Georgia Tourassi, PhD**, of Oak Ridge National Laboratory in Tennessee, detailed the role of AI in modernizing the National Cancer Surveillance Program and highlighted a partnership between the National Cancer Institute (NCI) and the U.S. Department of Energy (DOE) aimed at enabling the most challenging deep learning problems in cancer research to run on the most capable supercomputers in the DOE.

Demographics and the Cancer Workforce

An enlightening session on the importance and challenges of training the cancer workforce—of the present *and* the future—was timely and relevant. By 2030, 1 in 5 Americans will be of retirement age and there are projected to be more than 22 million cancer survivors, up from nearly 17 million in 2019. We will not be able to achieve our potential if we do not have sufficient numbers of scientists, physicians, nurses, physician extenders, and the like to support the growing number of cancer patients in the U.S. and worldwide.

Focusing on the need for physician scientists in cancer research and care, **Elizabeth Lawlor, MD, PhD**, of the University of Michigan Rogel Cancer Center, urged an increase in the pipeline and action to minimize attrition, arguing that "outdated" expectations for publication and available time are discouraging doctors from entering the field or pushing them out along the way.

Ideas were shared in several sessions on the ever-changing challenges presented by the business side of medicine and its impact on cancer centers and patients with cancer. Topics included diversifying revenue sources to meet the varied needs of cancer care and research, upcoming changes in payor strategies, and approaches to impacting catchment areas with resources and infrastructure on hand.

Financial Matters for Patients and Cancer Centers

Keynote speaker **Devon Still** also highlighted cancer care financial issues from the patient perspective. A former professional football player, Still is the father of a young daughter who was diagnosed with stage IV neuroblastoma, and a passionate cancer advocate. He gave a moving presentation addressing the need for compassionate and empathetic medical staff, the importance of science and clinical trials, and the challenges that so many families face with the psychosocial and financial hardships of a cancer diagnosis. This is especially true for single-parent households, where jobs and other responsibilities make it difficult to be with a family member during chemotherapy treatment or other hospital visits. Through the Still Strong Foundation, Still has raised more than \$2 million to provide assistance to families whose children are battling cancer.

Outstanding presentations on NCI's Cancer Center Support Grant (CCSG) and the ever-evolving assessment criteria and expectations were scattered across several sessions. These discussions were of particular interest and benefit to cancer center directors and administrators.

As moderator of the "CCSG Nuts and Bolts" session, **Kimberly Kerstann, PhD**, of Winship Cancer Institute of Emory University, offered a number of important lessons from her own institution's CCSG application experience, including the need to: be prepared to defend cancer relevance and "high impact" research; focus on the written proposal pre-application and on updates post-application; set a high bar for first site visit rehearsal; develop "leitmotifs" for center-wide theme reminders; and plan for oral responses to difficult application-based questions.

Highlights From NCI

Finally, NCI Acting Director **Douglas R. Lowy, MD**, AACI's 2019 Distinguished Scientist Awardee, talked about the journey of developing a hugely successful vaccine for HPV-related cancers. This story was a paradigm for how outstanding basic science focused on a clinically relevant problem can lead to transformative approaches to cancer prevention and treatment.

Dr. Lowy also made news in announcing the expansion of the CCSG award period from five to seven years for qualifying centers. Following Dr. Lowy, Henry Ciolino, PhD, director of NCI's

Office of Cancer Centers, provided details about the CCSG extension, including the requirement that a center have stable leadership and at least 15 years of CCSG funding.

I very much appreciate the hard work of the annual meeting program committee over the past year in putting together a high-quality program that addressed the needs and interests of a broad array of cancer professionals.

Our Mission

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To promote the work of its members, AACI publishes *Commentary*, a monthly editorial series focusing on major issues of common interest to North American cancer centers, authored by cancer center leaders and subject matter experts.



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