



## Oncology Dose-Finding Workshop Part 3

July 20, 2017

W. Washington DC Hotel, Washington, DC

Room: Great

**Purpose:** Given the recent history of approvals based on the results of early phase trials driven by extraordinary efficacy data, the incentive for conducting rigorous dose-finding trials may not be overtly apparent. However, the increasing need for the development of combination therapy due to resistance to monotherapy and poor tolerance of approved dosing regimens underscores the need for a more efficient process of dose selection in the early stages of study design.

**Theme:** FDA and AACR have successfully held Oncology Dose Finding Workshops in 2015 and 2016. Patient and dose selection of oncology drugs will be of critical importance, as recent approvals of immune checkpoint inhibitors (ICIs) and early, promising readouts from studies combining ICIs with chemotherapy, targeted therapy, and other immun-oncology agents will put enormous pressures on the current clinical trial infrastructure of the U.S. and the international community. A recent article in The Cancer Letter reported that 803 clinical trials currently testing PD-1 and PD-L1 drugs had over 160,000 slots for adult patients. As more ICIs enter the market, additional trials will seek to combine these products with standard of care therapies, novel small molecules, targeted antibodies, and other biologic therapies such as vaccines and engineered T-cells. This year's workshop will focus on approaches to combination therapy and best practices regarding patient and dose selection, biomarkers to aid in selection, and novel endpoints that can define patient benefit.

### Workshop Cochairs:

**Amy E. McKee, MD**

Supervisory Associate Director, Office of Hematology and Oncology Products, Center for Drug Evaluation and Research, FDA

**Elizabeth M. Jaffee, MD**

AACR President-elect 2017-2018; The Dana and Albert "Cubby" Broccoli Professor of Oncology; Deputy Director, The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins; Co-Director, Gastrointestinal Cancer Program The Johns Hopkins University School of Medicine

## AGENDA

8:00 AM Welcome and workshop objectives – Elizabeth M. Jaffee, MD

8:05 AM Outcomes update from previous dose finding workshops – Amy E. McKee, MD

### SESSION I: Immuno-Oncology (IO) Overview – Scope of the problem

8:15 AM Robert H. Vonderheide, MD, D Phil - Abramson Cancer Center, University of Pennsylvania  
Immune Vulnerabilities and Therapeutic Opportunities in Pancreatic Cancer

**8:35 AM** David F. McDermott, MD - Beth Israel Deaconess Medical Ctr.  
Improving Kidney Cancer Therapy through Novel Clinical Trial Design

**8:55 AM** Leisha A. Emens, MD, PhD – Johns Hopkins Univ. School of Medicine  
Provoking Breast Cancer Immunity with Strategic Immunotherapy Combinations

**9:15 AM** Joaquim Bellmunt, MD, PhD – Harvard Medical School; Dana-Farber Cancer Institute  
Strategic Immunotherapy Combinations and Sequencies in Urothelial Cancer

**9:35 AM** PANEL DISCUSSION

**Moderator** Amy E. McKee, MD  
Session I speakers and the following additional panelists:  
Daniel S. Chen, MD, PhD – Genentech, Inc.  
Nolan A. Wages, PhD - Univ. of Virginia

**10:15 AM** BREAK

**SESSION II: Key Translational and Design Questions for IO Agents**

**10:30 AM** Tiffany K. Ricks, PhD – FDA  
Nonclinical Safety Evaluation of Novel Cancer Immunotherapeutic Combinations

**10:45 AM** Daniel S. Chen, MD, PhD – Genentech, Inc.  
Next Wave: Considerations for Novel Cancer Immunotherapy Combination Development

**11:05 AM** Bernard A. Fox, PhD – Earle A. Chiles Research Inst.  
Important Considerations for Developing Effective Immunoo-Oncology Combinations: Immunity,  
Co-stimulation and Checkpoint Blockade

**11:25 AM** PANEL DISCUSSION

**Moderator** Elizabeth M. Jaffee, MD  
Session II speakers and the following additional panelists:  
Marc R. Theoret, MD – FDA  
R. Todd Bunch, PhD – Bristol-Myers Squibb  
Leisha A. Emens, MD, PhD  
David F. McDermott, MD

**12:15 PM** LUNCH (on your own)

**SESSION III: Considerations for Dose Selection of IO Combination Products**

- 1:15 PM**      **Laura L. Fernandes, PhD, and Chao Liu, PhD – FDA**  
**Regulatory Perspectives**
- 1:30 PM**      **René Bruno, PhD – Genentech, Inc. / Roche**  
**Tumor Growth Rate - OS Models to Inform Drug Development Decisions**
- 1:50 PM**      **Amit Roy, PhD – Bristol-Myers Squibb**  
**BMS Experience in I-O Combination Dose Selection: IPI + NIVO**
- 2:10 PM**      **Eric H. Rubin, MD – Merck**  
**Approaches to Dose-Finding for Combinations with Immuno-Oncology Agents**
- 2:30 PM**      **Israel Lowy, MD, PhD - Regeneron Pharmaceuticals, Inc.**  
**Duration of Treatment with Anti-PD-1: When is Enough, Enough?**

**2:50 PM**      **PANEL DISCUSSION**

- Moderator**      **Eric H. Rubin, MD**  
**Session III speakers and the following additional panelists:**  
**Qi Liu, PhD - FDA**  
**Lei Nie, PhD - FDA**  
**Marc R. Theoret, MD**  
**Nolan A. Wages, PhD**

**4:00 PM**      **WRAP-UP & ADJOURN**