

CONSENSUS OR CONTROVERSY: Clinical Investigators Provide Perspectives on the Treatment of Metastatic Non-Small Cell Lung Cancer in Patients without Targetable Tumor Mutations

CME Information

TARGET AUDIENCE

This activity is intended for hematologists, medical oncologists and other healthcare providers involved in the treatment of non-small cell lung cancer (NSCLC).

OVERVIEW OF ACTIVITY

Lung cancer is a devastating disease with broad-reaching impact on public health, as it accounts for 13% of all new cancer cases in the United States and the most cancer-related deaths among both men and women. A major focus of recent lung cancer research has been the development — and subsequent approval — of a number of molecular-targeted agents and the identification of related biomarkers to help guide treatment selection for those individuals who harbor specific oncogenic alterations. Despite these groundbreaking scientific advances, the truth is that only 15% to 20% of patients harbor abnormalities that are truly “actionable” in the clinic today based on FDA approvals. Fortunately for these individuals and their caregivers, over the past several years major clinical trials in patients with advanced NSCLC without a targetable mutation have witnessed unprecedented successes that will challenge the cancer community’s collective understanding of the diagnosis and optimal management of this disease.

These video proceedings from a CME symposium held during the 2017 Multidisciplinary Thoracic Cancers Symposium feature discussions with leading researchers with an expertise in the management of lung cancer about clinical research findings relevant to treatment for patients without a targetable tumor mutation to address existing uncertainties and help keep clinicians up to date and informed.

LEARNING OBJECTIVES

- Recognize available and emerging research information validating the utility of diagnostic assays designed to measure PD-L1 status, assess which testing platforms should be used and appropriately employ the results to identify potential candidates for front-line treatment with an anti-PD-1 antibody.
- Review published research data documenting the safety and efficacy of available anti-PD-1 antibodies for patients with newly diagnosed metastatic NSCLC.
- Devise an evidence-based approach to the selection of induction and maintenance systemic therapy for patients with NSCLC without a targetable mutation.
- Consider biologic and patient-related factors in the selection of second- and later-line therapy for patients with progressive NSCLC without a targetable mutation.
- Describe available and emerging data on the efficacy and safety of tumor immunotherapy directed at the PD-1/PD-L1 pathway in lung cancer, and consider this information when counseling patients regarding protocol and nonresearch options.
- Educate patients about the potential side effects associated with commonly employed chemotherapeutic, biologic and immunotherapeutic agents, and provide preventive strategies to reduce or ameliorate these toxicities.
- Describe ongoing trials evaluating novel applications of immune checkpoint inhibitors alone (eg, anti-PD-L1 antibodies) or in combination with other systemic approaches (eg, anti-PD-1/ PD-L1 with anti-CTLA-4 antibodies, anti-PD-1/PD-L1 antibodies with chemotherapy), and counsel appropriately selected patients about potential participation.

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Please note, this program has been specifically designed for the following ABIM specialty: **medical oncology**.

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FACULTY — The following faculty (and their spouses/partners) reported relevant conflicts of interest, which have been resolved through a conflict of interest resolution process:

Julie R Brahmer, MD

Director, Thoracic Oncology Program
Interim Director

Johns Hopkins Kimmel Cancer Center at Bayview
Associate Professor of Oncology
Sidney Kimmel Comprehensive Cancer Center
Johns Hopkins School of Medicine
Baltimore, Maryland

Advisory Committee: Bristol-Myers Squibb Company, Merck;

Consulting Agreements: Bristol-Myers Squibb Company, Celgene Corporation, Lilly, Merck; **Contracted Research:** AstraZeneca Pharmaceuticals LP, Bristol-Myers Squibb Company, Merck.

Corey J Langer, MD

Director of Thoracic Oncology
Abramson Cancer Center
Professor of Medicine
Perelman School of Medicine
University of Pennsylvania

Vice Chair, Radiation Therapy Oncology Group
Philadelphia, Pennsylvania

Advisory Committee: Abbott Laboratories, AstraZeneca Pharmaceuticals LP, Boehringer Ingelheim Pharmaceuticals Inc, Bristol-Myers Squibb Company, Celgene Corporation, EMD Serono Inc, Genentech BioOncology, GlaxoSmithKline, ImClone Systems, a wholly owned subsidiary of Eli Lilly and Company, Lilly, Merck, Novartis Pharmaceuticals Corporation, Pfizer Inc; **Consulting Agreements:** AstraZeneca Pharmaceuticals LP, Boehringer Ingelheim Pharmaceuticals Inc, Bristol-Myers Squibb Company, Celgene Corporation, Genentech BioOncology, GlaxoSmithKline, ImClone Systems, a wholly owned subsidiary of Eli Lilly and Company, Lilly, Merck, Novartis Pharmaceuticals Corporation, Pfizer Inc; **Contracted Research:** Advantagene Inc, Celgene Corporation, GlaxoSmithKline, Merck, Inovio Pharmaceuticals; **Data and Safety Monitoring Board:** Abbott Laboratories, Amgen Inc, Lilly, Peregrine Pharmaceuticals Inc, Synta Pharmaceuticals Corp.

Naiyer Rizvi, MD

Professor of Medicine
Director of Thoracic Oncology and Phase I Immunotherapeutics
Price Chair in Clinical Translational Research
Columbia University Medical Center
New York, New York

Advisory Committee and Consulting Agreements: AstraZeneca Pharmaceuticals LP, Merck, Novartis Pharmaceuticals Corporation, Roche Laboratories Inc; **Ownership Interest:** Gritstone Oncology.

Heather Wakelee, MD

Associate Professor of Medicine
Division of Oncology
Stanford University School of Medicine
Stanford Cancer Institute
Stanford, California

Consulting Agreements: ACEA Biosciences Inc, Genentech BioOncology, Helsinn Group, Peregrine Pharmaceuticals Inc, Pfizer Inc; **Contracted Research:** AstraZeneca Pharmaceuticals LP, Bristol-Myers Squibb Company, Celgene Corporation, Clovis Oncology, Exelixis Inc, Genentech BioOncology, Gilead Sciences Inc, Lilly, Novartis Pharmaceuticals Corporation, Pfizer Inc, Pharmacyclics LLC, an AbbVie Company, Roche Laboratories Inc, Xcovery; **Grants:** Clovis Oncology, Exelixis Inc, Gilead Sciences Inc, Pharmacyclics LLC, an AbbVie Company, Xcovery.

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Hardware/Software Requirements:

A high-speed Internet connection

A monitor set to 1280 x 1024 pixels or more

Internet Explorer 7 or later, Firefox 3.0 or later, Chrome, Safari 3.0 or later

Adobe Flash Player 10.2 plug-in or later

Adobe Acrobat Reader

(Optional) Sound card and speakers for audio

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Select Publications

- Antonia S et al. **Safety and antitumour activity of durvalumab plus tremelimumab in non-small cell lung cancer: A multicentre, phase 1b study.** *Lancet Oncol* 2016;17(3):299-308.
- Barlesi F et al. **Primary analysis from OAK, a randomized phase III study comparing atezolizumab with docetaxel in 2L/3L NSCLC.** *Proc ESMO* 2016;Abstract LBA44_PR.
- Borghaei H et al. **Nivolumab versus docetaxel in advanced nonsquamous non-small-cell lung cancer.** *N Engl J Med* 2015;373(17):1627-39.
- Brahmer J et al. **Nivolumab versus docetaxel in advanced squamous-cell non-small-cell lung cancer.** *N Engl J Med* 2015;373(2):123-35.
- Cicenas S et al. **Maintenance erlotinib versus erlotinib at disease progression in patients with advanced non-small-cell lung cancer who have not progressed following platinum-based chemotherapy (IUNO study).** *Lung Cancer* 2016;102:30-7.
- Facciabene A et al. **T-regulatory cells: Key players in tumor immune escape and angiogenesis.** *Cancer Res* 2012;72(9):2162-71.
- Garon EB et al. **Pembrolizumab for the treatment of non-small-cell lung cancer.** *N Engl J Med* 2015;372(21):2018-28.
- Garon EB et al. **Ramucirumab plus docetaxel versus placebo plus docetaxel for second-line treatment of stage IV non-small-cell lung cancer after disease progression on platinum-based therapy (REVEL): A multicentre, double-blind, randomised phase 3 trial.** *Lancet* 2014;384(9944):665-73.
- Gettinger S et al. **First-line nivolumab monotherapy and nivolumab plus ipilimumab in patients with advanced NSCLC: Long-term outcomes from CheckMate 012.** *Proc WCLC* 2016;Abstract OA03.01.
- Gettinger SN et al. **First-line monotherapy with nivolumab (NIVO; anti-programmed death-1 [PD-1]) in advanced non-small cell lung cancer (NSCLC): Safety, efficacy and correlation of outcomes with PD-1 ligand (PD-L1) expression.** *Proc ASCO* 2015;Abstract 8025.
- Gettinger SN et al. **Overall survival and long-term safety of nivolumab (anti-programmed death 1 antibody, BMS-936558, ONO-4538) in patients with previously treated advanced non-small-cell lung cancer.** *J Clin Oncol* 2015;33(18):2004-12.
- Gubens MA et al. **Phase I/II study of pembrolizumab (pembro) plus ipilimumab (ipi) as second-line therapy for NSCLC: KEYNOTE-021 cohorts D and H.** *Proc ASCO* 2016;Abstract 9027.
- Herbst RS et al. **Interim safety and clinical activity in patients with advanced NSCLC from a multi-cohort phase 1 study of ramucirumab (R) plus pembrolizumab (P).** *Proc ESMO* 2016;Abstract LBA38.
- Herbst RS et al. **Pembrolizumab versus docetaxel for previously treated, PD-L1-positive, advanced non-small-cell lung cancer (KEYNOTE-010): A randomised controlled trial.** *Lancet* 2016;387(10027):1540-50.
- Herbst R. **A randomized, phase III study comparing carboplatin/paclitaxel or carboplatin/paclitaxel/bevacizumab with or without concurrent cetuximab in patients with advanced non-small cell lung cancer (NSCLC): SWOG S0819.** *Proc WCLC* 2015;Abstract PLEN04.01.
- Hirsch FR et al. **EGFR IHC and FISH correlative analyses (SQUIRE trial): Necitumumab + gemcitabine-cisplatin vs gemcitabine-cisplatin in 1st-line squamous NSCLC.** *Proc WCLC* 2015;Abstract ORAL32.05.
- Horn L et al. **Clinical activity, safety and predictive biomarkers of the engineered antibody MPDL3280A (anti-PDL1) in non-small cell lung cancer (NSCLC): Update from a phase Ia study.** *Proc ASCO* 2015;Abstract 8029.
- Langer C et al. **Carboplatin and pemetrexed with or without pembrolizumab for advanced, non-squamous non-small-cell lung cancer: A randomised, phase 2 cohort of the open-label KEYNOTE-021 study.** *Lancet Oncol* 2016;17(11):1497-508.
- Langer C et al. **Randomized, phase 2 study of carboplatin and pemetrexed with or without pembrolizumab as first-line therapy for advanced NSCLC: KEYNOTE-021 cohort G.** *Proc ESMO* 2016;Abstract LBA46_PR.
- Mellman I et al. **Cancer immunotherapy comes of age.** *Nature* 2011;480(7378):481-9.
- Rebelatto MC et al. **Development of a PD-L1 companion diagnostic assay for treatment with MEDI4736 in NSCLC and SCCHN patients.** *Proc ASCO* 2015;Abstract 8033.
- Reck M et al. **KEYNOTE-024: Pembrolizumab (pembro) vs platinum-based chemotherapy (chemo) as first-line therapy for advanced NSCLC with a PD-L1 tumor proportion score (TPS) \geq 50%.** *Proc ESMO* 2016;Abstract LBA8_PR.
- Reck M et al. **Pembrolizumab versus chemotherapy for PD-L1-positive non-small-cell lung cancer.** *N Engl J Med* 2016;375(19):1823-33.

Select Publications

Rittmeyer A et al. **Atezolizumab versus docetaxel in patients with previously treated non-small-cell lung cancer (OAK): A phase 3, open-label, multicentre randomised controlled trial.** *Lancet* 2017;389(10066):255-65.

Socinski M et al. **CheckMate 026: A phase 3 trial of nivolumab vs investigator's choice (IC) of platinum-based doublet chemotherapy (PT-DC) as first-line therapy for stage iv/ recurrent programmed death ligand 1 (PD-L1)-positive NSCLC.** *Proc ESMO* 2016;Abstract LBA7_PR.

Soria JC et al. **Afatinib versus erlotinib as second-line treatment of patients with advanced squamous cell carcinoma of the lung (LUX-Lung 8): An open-label randomized controlled phase 3 trial.** *Lancet Oncol* 2015;16(8):897-907.

Thatcher N et al. **Necitumumab plus gemcitabine and cisplatin versus gemcitabine and cisplatin alone as first-line therapy in patients with stage IV squamous non- small-cell lung cancer (SQUIRE): An open-label, randomised, controlled phase 3 trial.** *Lancet Oncol* 2015;16(7):763-74.

Weber JS et al. **Management of immune-related adverse events and kinetics of response with ipilimumab.** *J Clin Oncol* 2012;30(21):2691-7.