Proceedings from the 14th Annual

Winter Lung Cancer Conference

CME Information

TARGET AUDIENCE

This educational activity has been designed to meet the educational needs of medical oncologists, hematology-oncology fellows and other allied cancer professionals involved in the treatment of lung cancer.

OVERVIEW OF ACTIVITY

Lung cancer is a devastating disease with broad-reaching impact on public health as it accounts for 14% of all new cancer cases in the United States and the most cancer-related deaths among both men and women. In the year 2017, it is estimated that more than 222,500 individuals will be diagnosed and more than 155,870 will die from the disease. Today, however, this field is seeing renewed optimism as recent research advances have led to an explosion in lung cancer genetic and biologic knowledge among scientists and clinicians working in this area of cancer medicine. Over the past several years major clinical trials in advanced lung cancer have witnessed a host of promising successes, many of which are already being operationalized in clinical practice. Even so, these achievements will doubtlessly continue to be dissected and will further challenge the collective understanding of the biology and optimal management of this disease. Several consensus- and evidence-based treatment guidelines are currently available and aim to assist clinicians with making lung cancer treatment decisions in the face of this dynamic clinical environment, but despite the existence of these tools, many areas of controversy persist within academic and community settings.

This CME activity will use the perspectives of a multidisciplinary panel of clinical investigators on key challenges and controversies in the treatment of lung cancer to address the existing management uncertainties of clinician learners and help keep them up to date in a continuously evolving therapeutic environment.

LEARNING OBJECTIVES

- Develop an evidence-based strategy for the treatment of localized non-small cell lung cancer (NSCLC), exploring the role of (neo)adjuvant systemic therapy.
- Apply the results of emerging clinical research to optimize the multimodality management of Stage III NSCLC.
- Employ an understanding of personalized medicine to individualize the use of available EGFR inhibitors in the treatment of NSCLC.
- Describe mechanisms of tumor resistance to EGFR tyrosine kinase inhibitors, and identify investigational therapeutic opportunities to circumvent this process.
- Communicate the efficacy and safety of crizotinib, ceritinib, alectinib, brigatinib and emerging ALK inhibitors to appropriate patients with NSCLC, considering the predictive utility of ALK and ROS1 mutation testing.
- 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.
- Assess new oncogenic pathways mediating the growth of unique NSCLC tumor subsets, and recall emerging data with experimental agents exploiting these targets.
- Formulate management strategies for small cell lung cancer, considering the contributory roles of local and systemic therapy.
- Consider the use of multimodality therapy for appropriate patients with mesothelioma who may potentially be cured with this approach, and devise optimal management strategies for advanced disease.
- Recall the design of ongoing clinical trials evaluating novel investigational agents in lung cancer, and counsel appropriately selected patients about availability and participation.

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

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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

History, Major Findings and Lessons Learned from the Lung Cancer Mutation Consortium

Paul A Bunn Jr, MD

Aisner D et al. **Effect of expanded genomic testing in lung adenocarcinoma (LUCA) on survival benefit: The Lung Cancer Mutation Consortium II (LCMC II) experience.** *Proc ASCO* 2016;**Abstract 11510**.

Awad MM. **Impaired c-Met receptor degradation mediated by MET exon 14 mutations in non-small-cell lung cancer.** *J Clin Oncol* 2016;34(8):879-81.

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Ceccon M et al. **Treatment efficacy and resistance mechanisms using the second-generation ALK inhibitor AP26113 in human NPM-ALK-positive anaplastic large cell lymphoma.** *Mol Cancer Res* 2015;13(4):775-83.

Friboulet L et al. **The ALK inhibitor ceritinib overcomes crizotinib resistance in non-small cell lung cancer.** *Cancer Discov* 2014;4(6):662-73.

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Kodityal S et al. **A novel acquired ALK F1245C mutation confers resistance to crizotinib in ALK-positive NSCLC but is sensitive to ceritinib.** *Lung Cancer* 2016;92:19-21.

Kris MG et al. **Using multiplexed assays of oncogenic drivers in lung cancers to select targeted drugs.** *JAMA* 2014;311(19):1998-2006.

Maemondo M et al. **Gefitinib or chemotherapy for non-small-cell lung cancer with mutated EGFR.** *N Engl J Med* 2010;362(25):2380-8.

Mitsudomi T et al. **Gefitinib versus cisplatin plus docetaxel in patients with non-small-cell lung cancer harbouring mutations of the epidermal growth factor receptor (WJTOG3405): An open label, randomised phase 3 trial.** *Lancet Oncol* 2010;11(2):121-8.

Mok TS et al. **Gefitinib or carboplatin-paclitaxel in pulmonary adenocarcinoma.** *N Engl J Med* 2009;361(10):947-57.

Ou S-H et al. **Efficacy and safety of the ALK inhibitor alectinib in ALK+ non-small-cell lung cancer (NSCLC) patients who have failed prior crizotinib: An open-label, single-arm, global phase 2 study (NP28673).** *Proc ASCO* 2015;**Abstract 8008**.

Ramalingam S et al. **Osimertinib as first-line treatment for EGFR mutation-positive advanced NSCLC: Updated efficacy and safety results from two Phase I expansion cohorts.** *Proc ELCC* 2016;**Abstract LBA1_PR**.

Rosell R et al. **Erlotinib versus chemotherapy (CT) in advanced non-small cell lung cancer (NSCLC) patients (p) with epidermal growth factor receptor (EGFR) mutations: Interim results of the European Erlotinib Versus Chemotherapy (EURTAC) phase III randomized trial.** *Proc ASCO* 2011;**Abstract 7503**.

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Shaw AT et al. **Resensitization to crizotinib by the lorlatinib ALK resistance mutation L1198F.** *N Engl J Med* 2016;374(1):54-61.

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Session 1: Current and Future Application of Immunotherapy in Non-Small Cell Lung Cancer (NSCLC)

Roy S Herbst, MD, PhD

Facciabene A et al. **T-regulatory cells: Key players in tumor immune escape and angiogenesis.** *Cancer Res* 2012;72(9):2162-71.

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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**.

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Borghaei H et al. **Nivolumab versus docetaxel in advanced nonsquamous non-small-cell lung cancer.** *N Engl J Med* 2015;373(17):1627-39.

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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**.

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Larkin J et al. **Combined nivolumab and ipilimumab or monotherapy in untreated melanoma.** *N Engl J Med* 2015;373(1):23-34.

Session 2: EGFR Mutation-Positive NSCLC

Paul A Bunn Jr, MD

Aisner D et al. **Effect of expanded genomic testing in lung adenocarcinoma (LUCA) on survival benefit: The Lung Cancer Mutation Consortium II (LCMC II) experience.** *Proc ASCO* 2016;**Abstract 11510**.

Drilon A et al. **Broad, hybrid capture-based next-generation sequencing identifies actionable genomic alterations in lung adenocarcinomas otherwise negative for such alterations by other genomic testing approaches.** *Clin Cancer Res* 2015;21(16):3631-9.

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Lippitz B et al. **Stereotactic radiosurgery in the treatment of brain metastases: The current evidence.** *Cancer Treat Rev* 2014;40(1):48-59.

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Weickhardt AJ et al. **Continuation of EGFR/ALK inhibition after local therapy of oligoprogressive disease in EGFR mutant (Mt) and ALK+ non-small cell lung cancer (NSCLC).** *Proc ASCO* 2012;**Abstract 7526**.

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