New Biological Insights and Recent Therapeutic Advances in the Management of Lung Cancer

A Clinical Investigator Think Tank

CME Information

TARGET AUDIENCE

This activity is intended for medical oncologists, hematology-oncology fellows and other healthcare providers involved in the treatment of lung cancer.

OVERVIEW OF ACTIVITY

The development of new therapeutic strategies beyond cytotoxic chemotherapy has been the focus of extensive recent research and has led to an explosion in lung cancer genetic and biologic knowledge. The result has been the availability of several molecular-targeted therapies demonstrating some degree of activity in subsets of patients with non-small cell lung cancer (NSCLC) and exhibiting tolerability profiles that are distinct from those of traditional chemotherapeutic agents. These novel agents inhibit specific cell growth pathways and prolong survival for patients with NSCLC in large, randomized clinical trials. Other agents developed to block multiple cellular pathways or multiple components of a single biologic pathway are still under active investigation. While the advent of these next-generation targeted treatments presents new promise of both efficacy and enhanced safety in the management of lung cancer, it also challenges practicing oncologists to appropriately select individuals who may benefit from these agents. In addition, clinical oncologists need to determine how to integrate such therapies into standard lung cancer treatment algorithms as they become available.

Although several consensus- and evidence-based treatment guidelines are available to assist clinicians in making lung cancer treatment decisions, many areas of controversy persist within academic and community settings. This CME program brings together leading clinical investigators and general oncologists to provide biological insights into the recent therapeutic advances in the management of lung cancer. By reviewing the available clinical trial data and relevant case scenarios, this initiative will provide insight into the gaps in medical knowledge and illuminate treatment ambiguities pertinent to lung cancer.

LEARNING OBJECTIVES

- Develop an evidence-based strategy for the treatment of localized NSCLC, exploring the role of adjuvant systemic therapy
- Devise an evidence-based approach to the selection of induction and maintenance biologic therapy and/or chemotherapy for patients with advanced pan-wild-type NSCLC
- Employ an understanding of personalized medicine to individualize the use of available EGFR inhibitors in the treatment of NSCLC before and after disease progression on an EGFR tyrosine kinase inhibitor (TKI)
- Communicate the efficacy and safety of crizotinib and other emerging ALK inhibitors to appropriate patients with NSCLC, considering the predictive utility of ALK and ROS1 mutation testing.
- Evaluate the emerging data from clinical trials of the third-generation EGFR TKIs, rociletinib and AZD9291, in EGFR mutation-positive NSCLC
- Describe 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 clinical trial participation.
- Recognize the results of recently completed Phase III trials examining the efficacy and safety of the novel monoclonal antibodies necitumumab and ramucirumab for patients with advanced NSCLC.

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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 SJ et al. **Nivolumab (anti-PD-1; BMS-936558, ONO-4538) in combination with platinum-based doublet chemotherapy in advanced non-small cell lung cancer (NSCLC): Metastatic non-small cell lung cancer.** Chicago Multidisciplinary Symposium in Thoracic Oncology 2014;**Abstract 3**.

Balmanoukian AS et al. **Safety and clinical activity of MK-3475 as initial therapy in patients with advanced non-small cell lung cancer: Novel therapies/experimental therapies.** Chicago Multidisciplinary Symposium in Thoracic Oncology 2014;**Abstract 2**.

Brahmer JR et al. **Clinical activity and biomarkers of MEDI4736, an anti-PD-L1 antibody, in patients with NSCLC.** *Proc ASCO* 2014;**Abstract 8021**.

Drilon A et al. **Broad, hybrid capture-based next-generation sequencing identifies actionable genomic alterations in "driver-negative" lung adenocarcinomas.** *Clin Cancer Res* 2015;[Epub ahead of print].

Gadgeel SM et al. S**afety and activity of alectinib against systemic disease and brain metastases in patients with crizotinib-resistant ALK-rearranged non-small-cell lung cancer (AF-002JG): Results from the dose-finding portion of a phase 1/2 study.** *Lancet Oncol* 2014;15(10):1119-28.

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.

Gregorc V et al. **Predictive value of a proteomic signature in patients with non-small-cell lung cancer treated with second-line erlotinib or chemotherapy (PROSE): A biomarker-stratified, randomised phase 3 trial.** *Lancet Oncol* 2014;15(7):713-21.

Herbst RS et al. **Predictive correlates of response to the anti-PD-L1 antibody MPDL3280A in cancer patients.** *Nature* 2014;515(7528):563-7.

Janjigian YY et al. **Dual inhibition of EGFR with afatinib and cetuximab in kinase inhibitor-resistant EGFR-mutant lung cancer with and without T790M mutations.** *Cancer Discov* 2014;4(9):1036-45.

Jänne PA et al. **Clinical activity of the mutant-selective EGFR inhibitor AZD9291 in patients with EGFR inhibitor-resistant non-small cell lung cancer.** *Proc ASCO* 2014;**Abstract 8009**.

Kelly K et al. **A randomized, double-blind Phase 3 trial of adjuvant erlotinib vs placebo following complete tumor resection with or without adjuvant chemotherapy in patients with Stage IB-IIIA EGFR positive (IHC/FISH) non-small cell lung cancer: RADIANT results.** *Proc ASCO* 2014;**Abstract 7501**.

Kim DW et al. **Ceritinib in advanced anaplastic lymphoma kinase rearranged non-small cell lung cancer: Results of the ASCEND-1 trial.** *Proc ASCO* 2014;**Abstract 8003**.

Leighl NB et al. **Molecular testing for selection of patients with lung cancer for epidermal growth factor receptor and anaplastic lymphoma kinase tyrosine kinase inhibitors: American Society of Clinical Oncology endorsement of the College of American Pathologists/International Association for the Study of Lung Cancer/Association for Molecular Pathology guideline.** *J Clin Oncol* 2014;32(32):3673-9.

Mok TS et al. **Gefitinib/chemotherapy vs chemotherapy in epidermal growth factor receptor mutation-positive non-small-cell lung cancer after progression on first-line gefitinib: The phase III, randomized IMPRESS study.** *Proc ESMO* 2014;**Abstract LBA2_PR**.

Planchard D et al. **Dabrafenib in patients with BRAF V600E-mutant advanced non-small cell lung cancer: A multicenter, open-label, phase II trial (BRF113928).** *Proc ESMO* 2014;**Abstract LBA38_PR**.

Ramalingam SS et al. **Phase II study of nivolumab (anti-PD-1, BMS-936558, ONO-4538) in patients with advanced, refractory squamous non-small cell lung cancer: Metastatic non-small cell lung cancer.** Chicago Multidisciplinary Symposium in Thoracic Oncology 2014;**Abstract LB2**.

Rizvi N et al. **A Phase 2, non-comparative, open-label, multicenter, international study of MEDI4736 in patients with locally advanced or metastatic PD-L1-positive NSCLC (Stage IIIB-IV) who have received ≥ 2 prior systemic treatment regimens, including a platinum-based chemotherapy (ATLANTIC).** *Proc ESMO* 2014;**Abstract 1335TiP**.

Rizvi NA et al. **Clinical trials of MPDL3280A (anti-PDL1) in patients with non-small cell lung cancer.** *Proc ASCO* 2014;**Abstract TPS8123**.

Sequist LV et al. **First-in-human evaluation of CO-1686, an irreversible, highly selective tyrosine kinase inhibitor of mutations of EGFR (activating and T790M).** *Proc ASCO* 2014;**Abstract 8010**.

Select Publications

Seto T et al. **Erlotinib alone or with bevacizumab as first-line therapy in patients with advanced non-squamous non-small-cell lung cancer harbouring EGFR mutations (JO25567): An open-label, randomised, multicentre, phase 2 study.** *Lancet Oncol* 2014;15(11):1236-44.

Shepherd FA et al. **Adjuvant erlotinib versus placebo in non-small cell lung cancer patients with tumors carrying EGFR-sensitizing mutations from the RADIANT trial.** *Proc ASCO* 2014;**Abstract 7513**.

Thatcher N et al. **A randomized, multicenter, open-label, phase III study of gemcitabine-cisplatin (GC) chemotherapy plus necitumumab (IMC-11 F8/LY3012211) versus GC alone in the first-line treatment of patients with stage IV squamous non-small cell lung cancer.** *Proc ASCO* 2014;**Abstract 8008**.

Yang JC et al. **Afatinib versus cisplatin-based chemotherapy for EGFR mutation-positive lung adenocarcinoma (LUX-Lung 3 and LUX-Lung 6): Analysis of overall survival data from two randomised, phase 3 trials.** *Lancet Oncol* 2015;16(2):141-51.