Consensus or Controversy?

Clinical Investigators Provide Perspectives on the Current and Future Application of Immune Checkpoint Inhibition in the Management of Metastatic Lung Cancer

CME Information

TARGET AUDIENCE

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

OVERVIEW OF ACTIVITY

The past several years have seen an explosion in the emergence of new therapies that leverage the natural ability of the human body to attack and treat cancer. Known as immune-mediated therapies or cancer immunotherapies, these promising treatments are taking center stage at medical conferences and generating excitement all over the world. Perhaps the most exciting arena in this regard has been the development and assessment of a class of checkpoint inhibitors that inhibit PD-1 or PD-L1. To date, studies with these agents, alone and in combination with other agents, have demonstrated a high degree of activity with manageable toxicity. The availability of these novel compounds has rapidly upended traditional therapeutic sequencing and caused both shifts and rifts in clinical management algorithms, and a number of controversies and questions remain with regard to the current application of these agents in clinical practice.

These video proceedings from a CME symposium held during the 2018 SITC Annual Meeting feature discussions with leading researchers with an expertise in lung cancer. By providing information on the latest research developments and their potential application to routine practice, this activity is designed to assist medical oncologists, hematology-oncology fellows and other healthcare professionals with the optimal incorporation of immune checkpoint inhibitors in metastatic lung cancer.

LEARNING OBJECTIVES

- Review research data documenting the safety and efficacy of anti-PD-1/PD-L1 antibodies as monotherapy or in combination with chemotherapy for newly diagnosed metastatic nonsquamous non-small cell lung cancer (NSCLC), and use this information to guide up-front decision-making for these individuals.
- Appraise recent Phase III data describing the activity and safety of combining an anti-PD-L1 antibody, anti-angiogenic therapy and chemotherapy for patients with newly diagnosed metastatic nonsquamous NSCLC, and determine the potential utility of this approach in clinical practice.
- Describe available research data documenting the efficacy and safety associated with the use of an anti-PD-1/PD-L1 antibody in combination with platinum-based chemotherapy for patients with newly diagnosed metastatic squamous NSCLC, and evaluate the potential clinical and research implications of these findings.
- Understand the biologic rationale for and published research data with the use of combinations targeting multiple immune checkpoints, and, where applicable, refer patients for ongoing trials or other related expanded access programs.
- Consider emerging research data and available guideline recommendations informing the use of immune checkpoint inhibitors for patients with small cell lung cancer (SCLC).
- Recall the design of ongoing clinical trials evaluating anti-PD-1/PD-L1 antibodies alone or in combination with other systemic therapies for NSCLC and SCLC, and counsel appropriate patients about availability and participation.

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Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 1.75 Medical Knowledge MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the CME activity provider's responsibility

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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:

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Hardware/Software Requirements:
A high-speed Internet connection
A monitor set to 1280 x 1024 pixels or more
Internet Explorer 11 or later, Firefox 56 or later, Chrome 61 or later, Safari 11 or later, Opera 48 or later
Adobe Flash Player 27 plug-in or later
Adobe Acrobat Reader
(Optional) Sound card and speakers for audio

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Select Publications

A multinational, multicenter, phase III, randomized open-label trial of pembrolizumab versus docetaxel in previously treated subjects with non-small cell lung cancer. NCT02864394

A phase III, open-label, multicenter trial of avelumab (MSB0010718C) versus platinum-based doublet as a first-line treatment of recurrent or stage IV PD-L1+ non-small cell lung cancer. NCT02576574

Antonia SJ et al. **Nivolumab alone and nivolumab plus ipilimumab in recurrent small-cell lung cancer (CheckMate 032): A multicentre, open-label, phase 1/2 trial.** *Lancet Oncol* 2016;17(7):883-95.

Borghaei H et al. **Nivolumab (nivo) + platinum-doublet chemotherapy (chemo) vs chemo as first-line (1L) treatment (Tx) for advanced non-small cell lung cancer (NSCLC) with <1% tumor PD-L1 expression: Results from CheckMate 227.** *Proc ASCO* 2018;**Abstract 9001**.

Brahmer JR et al. **Management of immune-related adverse events in patients treated with immune checkpoint inhibitor therapy: American Society of Clinical Oncology clinical practice guideline summary.** *J Oncol Pract* 2018;14(4):247-9.

Brahmer JR et al. **The Society for Immunotherapy of Cancer consensus statement on immunotherapy for the treatment of non-small cell lung cancer (NSCLC).** *J Immunother Cancer* 2018;6(1):75.

Cappuzzo F et al. **IMpower130: Progression-free survival (PFS) and safety analysis from a randomised phase 3 study of carboplatin + *nab*-paclitaxel (CnP) with or without atezolizumab (atezo) as first-line (1L) therapy in advanced non-squamous NSCLC.** *Proc ESMO* 2018;**Abstract LBA53**.

Carlino MS, Long GV. **Ipilimumab combined with nivolumab: A standard of care for the treatment of advanced melanoma?** *Clin Cancer Res* 2016;22(16):3992-8.

Chung HC et al. **Phase 2 study of pembrolizumab in advanced small-cell lung cancer (SCLC): KEYNOTE-158.** *Proc ASCO* 2018;**Abstract 8506**.

Gandhi L et al; KEYNOTE-189 Investigators. **Pembrolizumab plus chemotherapy in metastatic non-small-cell lung cancer.** *N Engl J Med* 2018;378(22):2078-92.

Gettinger S et al. **Nivolumab plus erlotinib in patients with EGFR-mutant advanced NSCLC.** *J Thorac Oncol* 2018;13(9):1363-72.

Hellmann MD et al. **Nivolumab plus ipilimumab in lung cancer with a high tumor mutational burden.** *N Engl J Med* 2018;378(22):2093-104.

Hellmann MD et al. **Tumor mutational burden and efficacy of nivolumab monotherapy and in combination with ipilimumab in small-cell lung cancer.** *Cancer Cell* 2018;33(5):853-61.

Horn L et al. **First-line atezolizumab plus chemotherapy in extensive-stage small-cell lung cancer.** *N Engl J Med* 2018;[Epub ahead of print].

Hude I et al. **The emerging role of immune checkpoint inhibition in malignant lymphoma.** *Haematologica* 2017;102(1):30-42.

Jotte RM et al. **IMpower131: Primary PFS and safety analysis of a randomized phase III study of atezolizumab + carboplatin + paclitaxel or *nab*-paclitaxel vs carboplatin + *nab*-paclitaxel as 1L therapy in advanced squamous NSCLC.** *Proc ASCO* 2018;**Abstract LBA9000**.

Kim DW et al. **Safety and clinical activity results from a phase Ib study of alectinib plus atezolizumab in ALK+ advanced NSCLC (aNSCLC).** *Proc ASCO* 2018;**Abstract 9009**.

Lee CK et al. **Checkpoint inhibitors in metastatic EGFR-mutated non-small cell lung cancer — A meta-analysis.** *J Thorac Oncol* 2017;12(2):403-7.

Lopes G et al. **Pembrolizumab (pembro) versus platinum-based chemotherapy (chemo) as first-line therapy for advanced/metastatic NSCLC with a PD-L1 tumor proportion score (TPS) ≥ 1%: Open-label, phase 3 KEYNOTE-042 study.** *Proc ASCO* 2018;**Abstract LBA4**.

Mazieres J et al. **Efficacy of immune-checkpoint inhibitors (ICI) in non-small cell lung cancer (NSCLC) patients harboring activating molecular alterations (ImmunoTarget).** *Proc ASCO* 2018;**Abstract 9010**.

Open-label, randomized trial of nivolumab (BMS-936558) plus pemetrexed/platinum or nivolumab plus ipilimumab (BMS-734016) vs pemetrexed plus platinum in stage IV or recurrent non-small cell lung cancer (NSCLC) subjects with epidermal growth factor receptor (EGFR) mutation, T790M negative who failed 1L EGFR tyrosine kinase inhibitor therapy. NCT02864251

Paz-Ares L et al; KEYNOTE-407 Investigators. **Pembrolizumab plus chemotherapy for squamous non-small-cell lung cancer.** *N Engl J Med* 2018;[Epub ahead of print].

Select Publications

Pujol J et al. **A randomized non-comparative phase II study of anti-PD-L1 atezolizumab or chemotherapy as second-line therapy in patients with small cell lung cancer: Results from the IFCT-1603 trial.** *Proc ESMO* 2018;**Abstract 1664O**.

Ramalingam SS et al. **Tumor mutational burden (TMB) as a biomarker for clinical benefit from dual immune checkpoint blockade with nivolumab (nivo) + ipilimumab (ipi) in first-line (1L) non-small cell lung cancer (NSCLC): Identification of TMB cutoff from CheckMate 568.** *Proc AACR* 2018;**Abstract CT078**.

Shaw AT et al. **Avelumab (anti–PD-L1) in combination with crizotinib or lorlatinib in patients with previously treated advanced NSCLC: Phase 1b results from JAVELIN Lung 101.** *Proc ASCO* 2018;**Abstract 9008**.

Socinski MA et al; IMpower150 Study Group. **Atezolizumab for first-line treatment of metastatic nonsquamous NSCLC.** *N Engl J Med* 2018;378(24):2288-301.