

Lingering Controversies and Emerging Therapeutic Strategies for Patients with Locally Advanced Non-Small Cell Lung Cancer

CME Information

TARGET AUDIENCE

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

OVERVIEW OF ACTIVITY

Non-small cell lung cancer (NSCLC) accounts for 84% of all lung cancer cases, and approximately one third of the patients in this population present with locally advanced, or Stage III, disease. Expected 5-year survival rates for these patients range from 36% (Stage IIIA) to 13% (Stage IIIC). Therefore, the clinical care of these individuals remains one of the most significant challenges in solid tumor oncology. Recent breakthroughs have led to the advent of new treatment modalities, and in order to offer optimal patient care, including the option of clinical trial participation, clinicians must be well informed of these advances.

Because of the heightened role of radiation oncologists in the multidisciplinary management of locally advanced NSCLC and the significant research developments currently unfolding, this CME program focuses specifically on meeting the educational needs of those specialists. By providing access to the latest data sets and expert perspectives, this activity will assist radiation oncologists in the formulation of up-to-date clinical management strategies for locally advanced NSCLC.

LEARNING OBJECTIVES

- Evaluate the benefits, risks and long-term outcomes associated with local and systemic treatment modalities for locally advanced NSCLC, and consider this information when counseling patients regarding current therapeutic recommendations.
- Consider available and emerging clinical data in the selection of the optimal technique and dose of radiation therapy for patients with locally advanced NSCLC.
- Understand the biologic basis for the investigation of immune checkpoint inhibitors in combination with chemoradiation therapy for patients with nonmetastatic NSCLC.
- Appreciate the recent FDA approval of anti-PD-L1 antibody consolidation therapy for patients with unresectable Stage III NSCLC who have not experienced disease progression after concurrent chemoradiation therapy, and discern how this strategy can be appropriately and safely integrated into routine clinical practice.

- Recognize immune-related adverse events and other common side effects associated with the use of immune checkpoint inhibitors as consolidation therapy for patients with Stage III NSCLC, and offer supportive strategies to minimize and/or manage these toxicities.
- Recall the design of ongoing clinical trials evaluating novel therapeutic approaches for locally advanced NSCLC, and counsel appropriate patients about availability and participation.

ACCREDITATION STATEMENT

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This activity provides Category 1 CME that may be used as self-assessment credit toward Part 2 of the American Board of Radiology (ABR) Maintenance of Certification (MOC) Program. It is the responsibility of each individual to remain apprised of the current requirements for his or her board-specific MOC program. For more information about the ABR MOC Program, visit www.theabr.org.

HOW TO USE THIS CME ACTIVITY

This CME activity consists of a video component. To receive credit, the participant should review the CME information, watch the video, complete the Post-test with a score of 80% or better and fill out the Educational Assessment and Credit Form located at ResearchToPractice.com/LCURadOnc119/Video/CME. The corresponding audio program is available as an alternative at ResearchToPractice.com/LCURadOnc119.

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by both a member of the RTP scientific staff and an external, independent physician reviewer for fair balance, scientific objectivity of studies referenced and patient care recommendations.

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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— Planners, scientific staff and independent reviewers for Research To Practice have no relevant conflicts of interest to disclose.

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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

- Antonia SJ et al. **Overall survival with durvalumab after chemoradiotherapy in stage III NSCLC.** *N Engl J Med* 2018;379(24):2342-50.
- Antonia SJ et al. **Durvalumab after chemoradiotherapy in stage III non-small-cell lung cancer.** *N Engl J Med* 2017;377(20):1919-29.
- Bradley JD et al. **Long-term results of RTOG 0617: A randomized phase 3 comparison of standard dose versus high dose conformal chemoradiation therapy +/- cetuximab for stage III NSCLC.** *Proc ASTRO 2017*;Abstract 227.
- Bradley JD et al. **Standard-dose versus high-dose conformal radiotherapy with concurrent and consolidation carboplatin plus paclitaxel with or without cetuximab for patients with stage IIIA or IIIB non-small-cell lung cancer (RTOG 0617): A randomised, two-by-two factorial phase 3 study.** *Lancet Oncol* 2015;16(2):187-99.
- Cao C et al. **A systematic review and meta-analysis of stereotactic body radiation therapy versus surgery for patients with non-small cell lung cancer.** *J Thorac Cardiovasc Surg* 2019;157(1):362-73.
- Cavanna L et al. **Immune checkpoint inhibitors in EGFR-mutation positive TKI-treated patients with advanced non-small-cell lung cancer network meta-analysis.** *Oncotarget* 2019;10(2):209-15.
- Chun SG et al. **Impact of intensity-modulated radiation therapy technique for locally advanced non-small-cell lung cancer: A secondary analysis of the NRG Oncology RTOG 0617 randomized clinical trial.** *J Clin Oncol* 2017;35(1):56-62.
- Dudley JC et al. **Microsatellite instability as a biomarker for PD-1 blockade.** *Clin Cancer Res* 2016;22(4):813-20.
- Durm GA et al. **Phase II trial of concurrent chemoradiation with consolidation pembrolizumab in patients with unresectable stage III non-small cell lung cancer: Hoosier Cancer Research Network LUN 14-179.** *Proc ASCO 2018*;Abstract 8500.
- Forde P et al. **Neoadjuvant PD-1 blockade in resectable lung cancer.** *N Engl J Med* 2018;378(21):1976-86.
- Giaddui T et al. **Establishing the feasibility of the dosimetric compliance criteria of RTOG 1308: Phase III randomized trial comparing overall survival after photon versus proton radiochemotherapy for inoperable stage II-IIIB NSCLC.** *Radiat Oncol* 2016;11:66.
- 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.
- Kamran SC et al. **Multi-criteria optimization achieves superior normal tissue sparing in a planning study of intensity-modulated radiation therapy for RTOG 1308-eligible non small cell lung cancer patients.** *Radiother Oncol* 2016;118(3):515-20.
- Liao Z et al. **Bayesian adaptive randomization trial of passive scattering proton therapy and intensity-modulated photon radiotherapy for locally advanced non-small-cell lung cancer.** *J Clin Oncol* 2018;36(18):1813-22.
- 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) \geq 1%: Open-label, phase 3 KEYNOTE-042 study.** *Proc ASCO 2018*;Abstract LBA4.
- Pennell NA et al. **SELECT: A phase II trial of adjuvant erlotinib in patients with resected epidermal growth factor receptor-mutant non-small-cell lung cancer.** *J Clin Oncol* 2019;37(2):97-104.
- Ramalingam S et al. **Osimertinib as first-line treatment of EGFR mutation-positive advanced non-small-cell lung cancer.** *J Clin Oncol* 2018;36(9):841-9.
- Rizvi H et al. **Molecular determinants of response to anti-programmed cell death (PD)-1 and anti-programmed death-ligand 1 (PD-L1) blockade in patients with non-small-cell lung cancer profiled with targeted next-generation sequencing.** *J Clin Oncol* 2018;36(7):633-41.
- Rusch VW et al. **Neoadjuvant atezolizumab in resectable non-small cell lung cancer (NSCLC): Initial results from a multicenter study (LCMC3).** *Proc ASCO 2018*;Abstract 8541.
- Shaverdian N et al. **Previous radiotherapy and the clinical activity and toxicity of pembrolizumab in the treatment of non-small-cell lung cancer: A secondary analysis of the KEYNOTE-001 phase 1 trial.** *Lancet Oncol* 2017;18(7):895-903.
- Soria JC et al. **Osimertinib in untreated EGFR-mutated advanced non-small-cell lung cancer.** *N Engl J Med* 2018;378(2):113-25.