Oncology Tumor Panel Series

Oncologist and Nurse Investigators Consult on Actual Patients from the Practices of the Invited Faculty

Part 3 — Non-Small Cell Lung Cancer

CNE Information

TARGET AUDIENCE

This activity has been designed to meet the educational needs of oncology nurses, nurse practitioners and clinical nurse specialists 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 that accounts for 13% of all new cancer cases in the United States and the most cancer-related deaths among both men and women. In 2015 in the United States alone it is estimated that the disease will culminate in 221,200 new cases and 158,040 deaths. Only 17% of all patients with lung cancer are alive 5 years or more after diagnosis, despite currently available therapies. Among the 15% of lung cancer cases diagnosed as early localized disease, 5-year survival rates increase to approximately 55%. Thus, early detection and treatment of lung cancer remain important issues to researchers and clinicians alike as they hold the potential for improvements in outcome. Chemotherapy has been the mainstay systemic therapeutic intervention, often combined with adjunctive radiation therapy among patients with inoperable Stage III disease, and the plethora of available cytotoxic chemotherapies exhibiting activity in lung cancer has increased substantially within the past several years. 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, and in addition to the significant strides made in understanding and targeting specific mutations responsible for the pathogenesis of lung cancer, recent insights into how to harness the body's own immune system are now being applied to the management of this disease.

These video proceedings from the third part of a 5-part integrated CNE curriculum originally held at the 2015 ONS Annual Congress feature discussions with leading lung cancer investigators and their nursing counterparts regarding actual patient cases and recent clinical research findings affecting the optimal therapeutic and supportive care for each patient scenario.

PURPOSE STATEMENT

By providing information on the latest research developments in the context of expert perspectives, this CNE activity will assist oncology nurses, nurse practitioners and clinical nurse specialists with the formulation of state-of-the-art clinical management strategies to facilitate optimal care of patients with lung cancer.

LEARNING OBJECTIVES

- Communicate the clinical relevance of gene mutations and tumor histology to patients with NSCLC.
- Discuss the benefits and risks associated with systemic treatments used in the evidence-based management of metastatic NSCLC, including chemotherapeutic agents, targeted biologic strategies and novel immunotherapies.
- Educate patients about potential side effects associated with commonly employed therapies, and provide preventive and emergent strategies to reduce or ameliorate these toxicities.
- Identify opportunities to enhance the collaborative role of oncology nurses in the comprehensive biopsychosocial care of patients with advanced NSCLC.

ACCREDITATION STATEMENT

Research To Practice is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

CREDIT DESIGNATION STATEMENT

This educational activity for 1.6 contact hours is provided by Research To Practice during the period of August 2015 through August 2016.

FOR SUCCESSFUL COMPLETION

This is a video CNE program. To receive credit, participants should read the learning objectives and faculty disclosures, watch the video, complete the Post-test with a score of 75% or better and fill out the Educational Assessment and Credit Form located at ResearchToPractice.com/ONSLung2015/CNE.

CONTENT VALIDATION AND DISCLOSURES

Research To Practice (RTP) is committed to providing its participants with high-quality, unbiased and state-of-the-art education. We assess potential conflicts of interest with faculty, planners and managers of CNE activities. Real or apparent conflicts of interest are identified and resolved through a conflict of interest resolution process. In addition, all activity content is reviewed by both a member of the RTP scientific staff and an external, independent reviewer for fair balance, scientific objectivity of studies referenced and patient care recommendations.

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

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MODERATOR — **Dr Love** is president and CEO of Research To Practice, which receives funds in the form of educational grants to develop CME/CNE activities from the following commercial interests: AbbVie Inc, Amgen Inc, Astellas Scientific and Medical Affairs Inc, AstraZeneca Pharmaceuticals LP, Bayer HealthCare Pharmaceuticals, Biodesix Inc, bioTheranostics Inc, Boehringer Ingelheim Pharmaceuticals Inc, Boston Biomedical Pharma Inc, Bristol-Myers Squibb Company, Celgene Corporation, Clovis Oncology, Daiichi Sankyo Inc, Dendreon Corporation, Eisai Inc, Exelixis Inc, Foundation Medicine, Genentech BioOncology, Genomic Health Inc, Gilead Sciences Inc, ImmunoGen Inc, Incyte Corporation, Janssen Biotech Inc, Jazz Pharmaceuticals Inc, Lilly, Medivation Inc, Merck, Myriad Genetic Laboratories Inc, NanoString Technologies, Novartis Pharmaceuticals Corporation, Novocure, Onyx Pharmaceuticals, an Amgen subsidiary, Pharmacyclics Inc, Prometheus Laboratories Inc, Regeneron Pharmaceuticals, Sanofi, Seattle Genetics, Sigma-Tau Pharmaceuticals Inc, Sirtex Medical Ltd, Spectrum Pharmaceuticals Inc, Taiho Oncology Inc, Takeda Oncology, Teva Oncology, Tokai Pharmaceuticals Inc and VisionGate Inc.

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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

Last review date: August 2015
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There is no implied or real endorsement of any product by RTP or the American Nurses Credentialing Center.

Select Publications

Camidge DR. *The International Journal of Targeted Therapies in Cancer* 2012;6(12):30-3.

Gadgeel SM et al. **Safety 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 (pts) with EGFR inhibitor-resistant non-small cell lung cancer (NSCLC).** *Proc ASCO* 2014;**Abstract 8009**.

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

Li D et al. **BIBW2992, an irreversible EGFR/HER2 inhibitor highly effective in preclinical lung cancer models.** *Oncogene* 2008;27:4702-11.

Lynch TJ Jr et al. **Epidermal growth factor receptor inhibitor-associated cutaneous toxicities: An evolving paradigm in clinical management.** *Oncologist* 2007;12(5):610-21.

Osarogiagbon RU et al. **Erlotinib after initial platinum-doublet chemotherapy in patients with epidermal growth factor receptor (EGFR) wild-type (WT) non-small cell lung cancer (NSCLC): Results of a combined patient-level analysis of the BR.21 and SATURN trials.** *Proc ASCO* 2013;**Abstract 8080**.

Patel JD et al. **PointBreak: A randomized phase III study of pemetrexed plus carboplatin and bevacizumab followed by maintenance pemetrexed and bevacizumab versus paclitaxel plus carboplatin and bevacizumab followed by maintenance bevacizumab in patients with stage IIIB or IV nonsquamous non-small-cell lung cancer.** *J Clin Oncol* 2013;31(34):4349-57.

Randomized phase III study of maintenance therapy with bevacizumab, pemetrexed, or a combination of bevacizumab and pemetrexed following carboplatin, paclitaxel and bevacizumab for advanced non-squamous NSCLC. NCT01107626

Ricciardi S et al. **Toxicity of targeted therapy in non-small-cell lung cancer management.** *Clin Lung Cancer* 2009;10(1):28-35.

Rizvi NA et al. **Activity and safety of nivolumab, an anti-PD-1 immune checkpoint inhibitor, for patients with advanced, refractory squamous non-small-cell lung cancer (CheckMate 063): A phase 2, single-arm trial.** *Lancet Oncol* 2015;16(3):257-65.

Rizvi NA et al. **Safety and clinical activity of MK-3475 as initial therapy in patients with advanced non-small cell lung cancer (NSCLC).** *Proc ASCO* 2014;**Abstract 8007**.

Rosell R et al. **Erlotinib versus standard chemotherapy as first-line treatment for European patients with advanced EGFR mutation-positive non-small-cell lung cancer (EURTAC): A multicentre, open-label, randomised phase 3 trial.** *Lancet Oncol* 2012;13(3):239-46.

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**.

S1400 phase II/III biomarker-driven master protocol for second line therapy of squamous cell lung cancer. NCT02154490

Sequist LV et al. **Rociletinib in EGFR-mutated non-small-cell lung cancer.** *N Engl J Med* 2015;372(18):1700-9.

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**.

Sequist LV et al. **Phase III study of afatinib or cisplatin plus pemetrexed in patients with metastatic lung adenocarcinoma with EGFR mutations.** *J Clin Oncol* 2013;31(27):3327-34.

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.

Select Publications

Shaw AT et al. **Ceritinib in ALK-rearranged non-small-cell lung cancer.** *N Engl J Med* 2014;370(13):1189-97.

Socinski MA et al. **Safety and efficacy analysis by histology of weekly *nab*-paclitaxel in combination with carboplatin as first-line therapy in patients with advanced non-small-cell lung cancer.** *Ann Oncol* 2013;24(9):2390-6.

Socinski MA et al. **Safety and efficacy of weekly *nab*®-paclitaxel in combination with carboplatin as first-line therapy in elderly patients with advanced non-small-cell lung cancer.** *Ann Oncol* 2013;24(2):314-21.

Socinski MA et al. **Weekly *nab*-paclitaxel in combination with carboplatin versus solvent-based paclitaxel plus carboplatin as first-line therapy in patients with advanced non-small-cell lung cancer: Final results of a phase III trial.** *J Clin Oncol* 2012;30(17):2055-62.

Soda M et al. **Identification of the transforming EML4-ALK fusion gene in non-small-cell lung cancer.** *Nature* 2007;448(7153):561-6.

Spigel DR et al. **Clinical activity, safety, and biomarkers of MPDL3280A, an engineered PD-L1 antibody in patients with locally advanced or metastatic non-small cell lung cancer (NSCLC).** *Proc ASCO* 2013;**Abstract 8008**.

Wu YL et al. **Afatinib versus cisplatin plus gemcitabine for first-line treatment of Asian patients with advanced non-small-cell lung cancer harbouring EGFR mutations (LUX-Lung 6): An open-label, randomised phase 3 trial.** *Lancet Oncol* 2014;15(2):213-22.

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.

Yang JC et al. **Afatinib for patients with lung adenocarcinoma and epidermal growth factor receptor mutations (LUX-Lung 2): A phase 2 trial.** *Lancet Oncol* 2012;13:539-48.

Zhou C et al. **Overall survival (OS) results from OPTIMAL (CTONG0802), a phase III trial of erlotinib (E) versus carboplatin plus gemcitabine (GC) as first-line treatment for Chinese patients with EGFR mutation-positive advanced non-small cell lung cancer (NSCLC).** *Proc ASCO* 2012;**Abstract 7520**.

Zhou C et al. **Erlotinib versus chemotherapy as first-line treatment for patients with advanced EGFR mutation-positive non-small-cell lung cancer (OPTIMAL, CTONG-0802): A multicentre, open-label, randomised, phase 3 study.** *Lancet Oncol* 2011;12(8):735-42.