

Clinical Investigator and Nursing Perspectives on the Management of Common Cancers

FACULTY INTERVIEWS

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LUNG CANCER Edition



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Oncology Nursing Update Lung Cancer Edition

A Continuing Nursing Education Audio Series

OVERVIEW OF ACTIVITY

Lung cancer is one of the most rapidly evolving fields in oncology nursing and is a major public health concern, with more than 228,000 new cases and 160,000 deaths from metastatic lung cancer estimated to have occurred in the United States during 2013. Progress in the screening, prevention and treatment of this disease has been limited, and approximately 85% of patients who develop lung cancer will die of it. Traditional chemotherapy, surgery and radiation therapy have had a modest effect on long-term outcomes. However, the advent of biologic agents in lung cancer has led to recent improvements in disease-free and overall survival in select patient populations. Published results from ongoing clinical trials lead to the continual emergence of new therapeutic agents and changes in the use of existing treatments. To provide oncology nurses with therapeutic strategies to address the disparate needs of patients with lung cancer, the *Oncology Nursing Update* audio series employs one-on-one interviews with medical oncologists and nurses who are experts in caring for patients with lung cancer. Upon completion of this CNE activity, oncology nurses should be able to formulate an up-to-date and more complete approach to the care of patients with lung cancer.

PURPOSE STATEMENT

To present the most current research developments in lung cancer and to provide the perspectives of a nurse practitioner and clinical investigator on the diagnosis and treatment of lung cancer.

LEARNING OBJECTIVES

- Discuss the benefits and risks associated with systemic therapies used in the evidence-based treatment
 of lung cancer, including tyrosine kinase inhibitors (TKIs), chemotherapy regimens and targeted biologic
 treatments.
- Develop a plan of care to manage the side effects associated with these therapies to support quality of life and continuation of treatment.
- Establish an evidence-based approach to the selection of induction and maintenance biologic therapy and/or chemotherapy for patients with advanced non-small cell lung cancer (NSCLC).
- Identify opportunities to enhance the collaborative role of oncology nurses in the comprehensive biopsychosocial care of patients with lung cancer.

ACCREDITATION STATEMENT

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CREDIT DESIGNATION STATEMENT

This educational activity for 1.2 contact hours is provided by Research To Practice during the period of February 2014 through February 2015.

FOR SUCCESSFUL COMPLETION

This is an audio CNE program. This book contains CNE information, including learning objectives, faculty disclosures, a Post-test and an Educational Assessment and Credit Form. The corresponding website **ResearchToPractice**. **com/ONULung114** also includes links to relevant abstracts and full-text articles.

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CNE INFORMATION



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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: **Dr Spigel** — Advisory Committee: Boehringer Ingelheim Pharmaceuticals Inc, Bristol-Myers Squibb Company, Celgene Corporation, Genentech BioOncology, Lilly, Novartis Pharmaceuticals Corporation, Pfizer Inc, Sanofi. **Ms Eaby-Sandy** — Consulting Agreements: Amgen Inc, Boehringer Ingelheim Pharmaceuticals Inc, Genentech BioOncology; **Speakers Bureau**: Amgen Inc, Genentech BioOncology, Lilly.

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SELECT PUBLICATIONS

Cappuzzo F et al. Erlotinib as maintenance treatment in advanced non-small-cell lung cancer: A multicentre, randomised, placebo-controlled phase 3 study. *Lancet Oncol* 2010;11(6):521-9.

Ciuleanu T et al. Maintenance pemetrexed plus best supportive care versus placebo plus best supportive care for non-small-cell lung cancer: A randomised, double-blind, phase 3 study. *Lancet* 2009;374(9699):1432-40.

Hashemi-Sadraei N, Pennell NA. Advanced non-small cell lung cancer (NSCLC): Maintenance therapy for all? *Curr Treat Options Oncol* 2012;13(4):478-90.

Janjigian YY et al. Activity of afatinib/cetuximab in patients (PTS) with EGFR mutant non-small cell lung cancer (NSCLC) and acquired resistance (AR) to EGFR inhibitors. *Proc ESMO* 2012;Abstract 12270.

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

Oxnard GR et al. New strategies in overcoming acquired resistance to epidermal growth factor receptor tyrosine kinase inhibitors in lung cancer. *Clin Cancer Res* 2011;17(17):5530-7.

Patel JD et al. A randomized, open-label, Phase 3, superiority study of pemetrexed (Pem)+carboplatin (Cb)+bevacizumab (B) followed by maintenance Pem+B versus paclitaxel (Pac)+Cb+B followed by maintenance B in patients (pts) with stage IIIB or IV non-squamous non-small cell lung cancer (NS-NSCLC). ASTRO 2012;Abstract LBPL1.

Paz-Ares LG et al. **PARAMOUNT:** Final overall survival results of the phase III study of maintenance pemetrexed versus placebo immediately after induction treatment with pemetrexed plus cisplatin for advanced nonsquamous non-small-cell lung cancer. *J Clin Oncol* 2013;31(23):2895-902.

Paz-Ares L et al. Maintenance therapy with pemetrexed plus best supportive care versus placebo plus best supportive care after induction therapy with pemetrexed plus cisplatin for advanced non-squamous non-small-cell lung cancer (PARAMOUNT): A double-blind, phase 3, randomised controlled trial. Lancet Oncol 2012;13(3):247-55.

Pirker R et al. EGFR expression as a predictor of survival for first-line chemotherapy plus cetuximab in patients with advanced non-small-cell lung cancer: Analysis of data from the phase 3 FLEX study. Lancet Oncol 2012;13(1):33-42.

Pirker R et al. Cetuximab plus chemotherapy in patients with advanced non-smallcell lung cancer (FLEX): An open-label randomised phase III trial. *Lancet* 2009;373(9674):1525-31.

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

Saif MW et al. Erlotinib-induced skin rash. Pathogenesis, clinical significance and management in pancreatic cancer patients. *JOP* 2008;9(3):267-74.

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.

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. 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.

Spigel DR et al. Randomized phase II trial of onartuzumab in combination with erlotinib in patients with advanced non-small-cell lung cancer. *J Clin Oncol* 2013;31(32):4105-14.

Spigel DR et al. Final efficacy results from OAM4558g, a randomized phase II study evaluating MetMAb or placebo in combination with erlotinib in advanced NSCLC. *Proc* ASCO 2011; Abstract 7505.

Wu YL et al. LUX-Lung 6: A randomized, open-label, phase III study of afatinib (A) versus gemcitabine/cisplatin (GC) as first-line treatment for Asian patients (pts) with EGFR mutation-positive (EGFR M+) advanced adenocarcinoma of the lung. *Proc ASCO* 2013;Abstract 8016.

Yang JC et al. Symptom control and quality of life in LUX-Lung 3: A phase III study of afatinib or cisplatin/pemetrexed in patients with advanced lung adenocarcinoma with EGFR mutations. J Clin Oncol 2013;31(27):3342-50.

Yang JC et al. LUX-Lung 3: A randomized, open-label, phase III study of afatinib versus pemetrexed and cisplatin as first-line treatment for patients with advanced adenocarcinoma of the lung harboring EGFR-activating mutations. *Proc ASCO* 2012; Abstract LBA7500.

POST-TEST

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QUESTIONS (PLEASE CIRCLE ANSWER):

- 1. Which of the following is an <u>irreversible</u> EGFR TKI?
 - a. Gefitinib
 - b. Erlotinib
 - c. Afatinib
 - d. None of the above

2. Which of the following EGFR TKIs is approved by the FDA for the treatment of lung cancer?

- a. Afatinib
- b. Erlotinib
- c. Both a and b

3. Which of the following side effects is of concern when counseling patients with NSCLC who are about to initiate treatment with erlotinib?

- a. Alopecia
- b. Mild diarrhea
- c. Rash
- d. Both b and c
- 4. Cetuximab in combination with afatinib has demonstrated significant responses in patients with EGFR-mutant, metastatic NSCLC with acquired resistance to EGFR TKIs.
 - a. True
 - b. False

- Evaluation of *nab* paclitaxel in combination with carboplatin versus standardformulation paclitaxel in combination with carboplatin in patients with advanced squamous cell carcinoma of the lung indicated ______ in patients who received *nab* paclitaxel/carboplatin.
 - a. Greater efficacy, improved tolerability
 - b. Similar efficacy, similar tolerability
 - c. Less efficacy, improved tolerability
- 6. The monoclonal antibody onartuzumab is a(n) _____.
 - a. EGFR inhibitor
 - b. KRAS inhibitor
 - c. MET inhibitor

7. Which of the following are potential contraindications to the use of bevacizumab?

- a. Squamous cell histology
- b. Hemoptysis
- c. Severe hypertension
- d. Recent myocardial infarction
- e. Recent stroke
- f. All of the above

Management strategies for the dermatologic toxicities associated with EGFR TKI use include ______.

- a. Oral antibiotics
- b. Topical clindamycin
- c. Hydrocortisone cream
- d. Erlotinib dose reduction or discontinuation
- e. All of the above

EDUCATIONAL ASSESSMENT AND CREDIT FORM

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Research To Practice is committed to providing valuable continuing education for oncology clinicians, and your input is critical to helping us achieve this important goal. Please take the time to assess the activity you just completed, with the assurance that your answers and suggestions are strictly confidential.

PART 1 — Please tell us about your experience with this educational activity

How would you characterize your level of knowledge on the following topics?

4 = Excellent $3 = Good$ $2 = A$		= Suboptimal
	BEFORE	AFTER
Existing and emerging clinical strategies to prevent and manage EGFR TKI-associated dermatotoxicities	4321	4321
Comparative toxicity with weekly <i>nab</i> paclitaxel versus standard-formulation paclitaxel	4321	4321
Recent FDA approval of afatinib and integration into clinical treatment algorithms	4321	4321
Contraindications to the use of bevacizumab in patients with metastatic NSCLC	4321	4321
Has the activity unfairly influenced you toward a particular product or □ Yes □ No f yes, please describe what was presented:		
Will this activity help you improve patient care? Yes No Not applicable f yes, how will it help you improve patient care?		
Did the activity meet your educational needs and expectations?		
f no, please explain:		
Please respond to the following learning objectives (LOs) by circling th $4 = $ Yes $3 = $ Will consider $2 = $ No $1 = $ Already doing N/M = LO no	e appropriate s	election:
As a result of this activity, I will be able to:		
 Discuss the benefits and risks associated with systemic therapies used evidence-based treatment of lung cancer, including tyrosine kinase inhil (TKIs), chemotherapy regimens and targeted biologic treatments 	oitors	2 1 N/M N/A
• Develop a plan of care to manage the side effects associated with these therapies to support quality of life and continuation of treatment		1 N/M N/A
 Establish an evidence-based approach to the selection of induction and maintenance biologic therapy and/or chemotherapy for patients with advanced non-small cell lung cancer (NSCLC). 		2 1 N/M N/A
 Identify opportunities to enhance the collaborative role of oncology nurs the comprehensive biopsychosocial care of patients with lung cancer. 	es in 	2 1 N/M N/A

EDUCATIONAL ASSESSMENT AND CREDIT FORM (continued)

What other practice changes will you make or consider making as a result of this activity?

What additional information or training do you need on the activity topics or other oncologyrelated topics?

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Additional comments about this activity:

As part of our ongoing, continuous quality-improvement effort, we conduct postactivity followup surveys to assess the impact of our educational interventions on professional practice. Please indicate your willingness to participate in such a survey.

Yes, I am willing to participate in a follow-up survey.

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PART 2 — Please tell us about the faculty and editor for this educational activity

4 = Excellent	3 =	Good	2	= Ade	equate	1 = Sub	poptin	nal	
Faculty		Knowled	lge of	subje	ct matter	Effective	ness	as an	educator
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Beth Eaby-Sandy, MSN, CRNP, OCN		4	3	2	1	4	3	2	1
Editor		Knowledge of subject matter		Effectiveness as an educator					
Neil Love, MD		4	3	2	1	4	3	2	1

Please recommend additional faculty for future activities:

Other comments about the faculty and editor for this activity:

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