CONSENSUS OR CONTROVERSY: Clinical Investigators Provide Perspectives on Targeted Treatment of Metastatic Non-Small Cell Lung Cancer

TARGET AUDIENCE
This activity is intended for hematologists, medical oncologists and other healthcare providers 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, as it accounts for 13% of all new cancer cases in the United States and the most cancer-related deaths among both men and women. Despite the many advances over the past few decades related to surgery, radiation therapy and chemotherapy, death rates attributable to lung cancer have remained relatively unchanged. Today, however, scientists and clinicians working in this area of cancer medicine have renewed optimism that these trends have started to change as recent research advances have led to an explosion in lung cancer genetic and biologic knowledge. A major focus of recent lung cancer research has been the development — and subsequent approval — of a number of molecular-targeted agents and the identification of related biomarkers to help guide treatment selection for those individuals who harbor specific oncogenic alterations. This has created a paradigm shift in the way patients with advanced NSCLC are initially stratified and counseled, moving from a “one-size-fits-all” approach to a customized, biomarker-driven treatment algorithm. Significantly, this has also created an imperative for clinicians to appropriately and actively attempt to identify and subsequently treat specific patients.

These video proceedings from a CME symposium held during the 2017 Multidisciplinary Thoracic Cancers Symposium feature discussions with leading researchers with an expertise in the management of lung cancer about clinical research findings relevant to treatment for patients with targetable tumor mutations to address existing uncertainties and help keep clinicians up to date and informed on the targeted treatment of NSCLC.

LEARNING OBJECTIVES
• Discriminate among molecular determinants that may be used to refine NSCLC prognosis and/or predict therapeutic response to an individual treatment, and apply available clinical guidelines to appropriately select patients for biomarker assessment.
• Recognize available and emerging research information validating the utility of blood-based diagnostic assays to identify/measure lung cancer biomarkers, and assess how, if at all, these testing platforms can be used by practicing oncologists outside of a research setting.
• Recognize the abilities and limitations of multiplex and next-generation sequencing platforms, and determine their clinical and/or research application for patients with NSCLC.
• Employ an understanding of personalized medicine to individualize the use of available EGFR tyrosine kinase inhibitors (TKIs) in the long-term management of EGFR mutation-positive NSCLC.
• Describe mechanisms of tumor resistance to EGFR TKIs and the clinical significance of T790M mutations, and discern how available and investigational therapies can be optimally employed in the protocol and nonresearch care of patients with progressive EGFR mutation-positive disease.
• Communicate the efficacy and safety of approved and other emerging ALK inhibitors to appropriate patients with NSCLC, considering the predictive utility of ALK mutation testing.
• Assess newly recognized oncogenic pathways mediating the growth of unique NSCLC tumor subsets, and recall emerging data with experimental agents exploiting these targets.

ACCREDITATION STATEMENT
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CREDIT DESIGNATION STATEMENT
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AMERICAN BOARD OF INTERNAL MEDICINE (ABIM) — MAINTENANCE OF CERTIFICATION (MOC)
Successful completion of this CME activity enables the participant to earn up to 1.75 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 to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

Please note, this program has been specifically designed for the following ABIM specialty: medical oncology.

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**HOW TO USE THIS CME ACTIVITY**

This CME activity consists of a video component. To receive credit, the participant should 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/ThoracicCancers17/Targeted/CME.

**CONTENT VALIDATION AND DISCLOSURES**

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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 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:** March 2017

**Expiration date:** March 2018
Select Publications

A Phase 3 multicenter open-label study of brigatinib (AP26113) versus crizotinib in patients with ALK-positive advanced lung cancer. NCT02737501

A Phase III, double-blind, randomised study to assess the safety and efficacy of AZD9291 versus a standard of care epidermal growth factor receptor tyrosine kinase inhibitor as first line treatment in patients with epidermal growth factor receptor mutation positive, locally advanced or metastatic non small cell lung cancer. NCT02296125

A Phase III, double-blind, randomized, placebo-controlled multi-centre, study to assess the efficacy and safety of AZD9291 versus placebo, in patients with epidermal growth factor receptor mutation positive Stage IB-IIIA non-small cell lung carcinoma, following complete tumour resection with or without adjuvant chemotherapy (ADAlURA). NCT02511106


Select Publications


Reungwetwattana T et al. The race to target MET exon 14 skipping alterations in non-small cell lung cancer: The why, the how, the who, the unknown, and the inevitable. Lung Cancer 2017;103:27-37.


Solomon BJ et al. Safety and efficacy of lorlatinib (PF-06463922) from the dose-escalation component of a study in patients with advanced ALK+ or ROS1+ non-small cell lung cancer (NSCLC). Proc ASCO 2016;Abstract 9009.

Wakelee HA et al. Epidermal growth factor receptor (EGFR) genotyping of matched urine, plasma and tumor tissue from non-small cell lung cancer (NSCLC) patients (pts) treated with rociletinib. Proc ASCO 2016;Abstract 9001.