

FINAL REPORT

Guidance in Advanced NSCLC From an International Panel of Experts: Selection of First-line and Maintenance Therapy



CLINICAL CARE OPTIONS

Program Overview

Guidance in Advanced NSCLC From an International Panel of Experts: Selection of First-line and Maintenance Therapy

URL: [http://clinicaloptions.com/Oncology/Treatment Updates/NSCLC Guidance.aspx](http://clinicaloptions.com/Oncology/Treatment_Updates/NSCLC_Guidance.aspx)

Launch Date: Thursday, May 29, 2014

Data Period: Thursday, May 29, 2014, to Saturday, May 30, 2015 (366 days*)

Online Components: 1 CME-Certified Interactive Virtual Presentation
1 Downloadable Slideset
1 Interactive Decision Support Tool

Faculty: Giorgio V. Scagliotti, MD, PhD

*Program data period may exceed 1 year depending on the publication schedule of educational components.

User Breakdown

Guidance in Advanced NSCLC From an International Panel of Experts: Selection of First-line and Maintenance Therapy

Data Period: Thursday, May 29, 2014, to Saturday, May 30, 2015 (366 days)

Degree Types by Nationality	All Specialties	Gynecological Oncology	Hematology	Hematology/Oncology	Oncology	Radiation Oncology	Surgical Oncology	Urology	FP/GP/IM	Other Specialties
US Physician:	189		4	97	52	4	3	1	12	16
Non-US Physician:	1626	4	26	320	979	62	12	3	58	162
Total	1815	4	30	417	1031	66	15	4	70	178
US Nurse:	55		4	13	28	1				9
Non-US Nurse:	43	1		3	25	1		1		12
Total	98	1	4	16	53	2		1		21
US Pharmacist:	52			18	26					8
Non-US Pharmacist:	136		2	20	72				2	40
Total	188		2	38	98				2	48
US Other HCP:	32			7	21					4
Non-US Other HCP:	55		7	6	29	1				12
Total	87		7	13	50	1				16
US Non-HCP:	114		2	19	45	1			1	46
Non-US Non-HCP:	403	1	9	38	197	5	3	3	7	140
Total	517	1	11	57	242	6	3	3	8	186
US NP/PA:	7			2	3				1	1
Non-US NP/PA:	3				2					1
Total	10			2	5				1	2
Total:	2715	6	54	543	1479	75	18	8	81	451

Traffic and Usage

Guidance in Advanced NSCLC From an International Panel of Experts: Selection of First-line and Maintenance Therapy

Data Period: Thursday, May 29, 2014, to Saturday, May 30, 2015 (366 days)

Unique Visits: 5030

Page Views: 34,388

Presentation Views: 578

Print Views: 3

Slideset Downloads: 3524

Tool Views: 14,231

Email Promotions: 2

Opened Emails: 14.8%

Individuals Clicking: 1.4%

CME Information

Guidance in Advanced NSCLC From an International Panel of Experts: Selection of First-line and Maintenance Therapy

Data Period: Thursday, May 29, 2014, to Saturday, May 30, 2015 (366 days)

Number of CME Posttests Completed: 50*

Credits Claimed: 37.50*

Evaluation Responses:

100% of participants answered "Strongly Agree" or "Agree" to "The content was evidence based"

98% of participants answered "Strongly Agree" or "Agree" to "The educational material provided useful information for my practice"

100% of participants answered "Strongly Agree" or "Agree" to "The activity enhanced my current knowledge base"

98% of participants answered "Strongly Agree" or "Agree" to "The activity provided appropriate and effective opportunities for active learning (eg, case studies, discussion, questions and answers)"

100% of participants answered "Strongly Agree" or "Agree" to "The opportunities provided to assess my own learning were appropriate (eg, questions before, during, or after the activity)"

90% of participants answered "Very confident" or "Somewhat confident" to "How confident are you that you will be able to make your intended changes?"

100% of participants answered "Yes" to "Was this activity fair, balanced, objective, and free of commercial bias?"

3365 number of patients that clinicians claiming credit reported will benefit from their participation

*Test collection and credit claimed numbers are dependent on the number of activities per program and the amount of CME credits available per activity.

USF Health

CME Information

Guidance in Advanced NSCLC From an International Panel of Experts: Selection of First-line and Maintenance Therapy

Data Period: Thursday, May 29, 2014, to Saturday, May 30, 2015 (366 days)

Evaluation Responses:

Based on your participation in this activity, do you intend to change your practice behavior? (Choose only one of the following options)

I do plan to implement changes in my practice based on the information presented	40%
My current practice has been reinforced by the information presented	60%
I need more information before I will change my practice	0%

CME Information

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Data Period: Thursday, May 29, 2014, to Saturday, May 30, 2015 (366 days)

Evaluation Responses:

If you plan to change your practice behavior, what type of changes do you plan to implement? (Check all that apply)

Apply latest guidelines	49%
Choice of treatment/management approach	24%
Change in pharmaceutical therapy	6%
Change in current practice for referral	7%
Change in diagnostic testing	10%
Change in differential diagnosis	3%
Other, please specify:	0%

CME Information

Guidance in Advanced NSCLC From an International Panel of Experts: Selection of First-line and Maintenance Therapy

Data Period: Thursday, May 29, 2014, to Saturday, May 30, 2015 (366 days)

Evaluation Responses:

Which of the following do you anticipate will be the primary barrier to implementing these changes?

Formulary restrictions	12%
Insurance/financial issues	30%
Time constraints	4%
Lack of multidisciplinary support	10%
System constraints	10%
Treatment-related adverse events	0%
Patient adherence/compliance	0%
None	34%
Other, please specify:	0%

Educational Outcomes Assessment

The following represents the final analysis of the level 4 outcomes assessment included in this activity, using all available data.

This represents the final analysis of outcomes on this program.

Data Collection Period	May 30, 2014, to July 8, 2014
Selection Criteria	32 CCO non-US global healthcare provider participants only, all responses from US-based learners has been eliminated from this analysis
Outcomes Level & Methodology	Knowledge/Competence (Level 3/4) Determined subjectively Identical baseline and postactivity surveys matched by individual learner
Format	Outcomes questions delivered before and after delivery of informing content. Following presentation of posttest questions, faculty discussed the question and rationale behind each correct answer providing reinforcement of the education

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Competence Outcomes Questions

Learning objective: Outline the importance of obtaining biopsy tissue that is adequate for histologic as well as molecular analyses to colleagues and patients

Case history

The Case of Mr. Freeman

A 52-year-old male never smoker who presents with cough productive of mucoid sputum, a 3-kg weight loss, and pain in the right posterolateral rib cage

- Chest x-ray and subsequent chest CT scan reveal multiple bilateral lung masses with distal RUL atelectasis and ipsilateral hilar and mediastinal adenopathies
- Bronchoscopy shows friable tumor occluding RUL bronchus
- Biopsy confirms NSCLC with adenocarcinoma histology
- Abdominal CT was positive for bilateral adrenal masses, confirmed by PET uptake, brain MRI negative
- No clinically relevant medical history
- ECOG performance status 1

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Competence Outcomes Questions

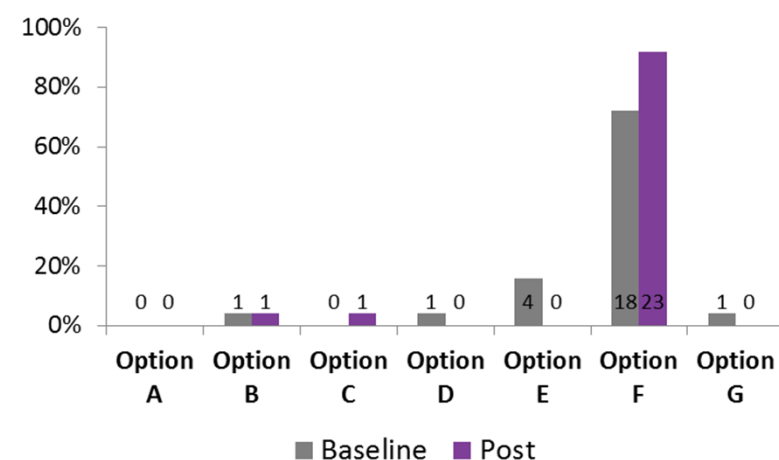
Learning objective: Outline the importance of obtaining biopsy tissue that is adequate for histologic as well as molecular analyses to colleagues and patients

Case history: See previous slide

1. What is your next step?

	Baseline	Post	Change
a) Start any reversible EGFR TKI	0%	0%	0%
b) Start afatinib	4%	4%	0%
c) Start cisplatin + pemetrexed	0%	4%	+4%
d) Request immunohistochemistry staining to subtype tumor	4%	0%	-4%
e) Order EGFR mutation test	16%	0%	-16%
f) Order EGFR mutation and ALK translocation tests	72%	92%	+20%
g) Unsure	4%	0%	-4%

Optimal or recommended response in bold.



Educational Impact Summary

- Learners are showing a numerical improvement in their ability to outline the importance of obtaining biopsy tissue that is adequate for histologic as well as molecular analyses to colleagues and patients
 - Question 1 shows a high (72%) optimal response at baseline, indicating that one quarter of learners would not plan to order EGFR mutation and ALK translocation tests with a patient like Mr. Freeman (younger, never-smoker, with metastatic NSCLC adenocarcinoma)
 - Postactivity optimal response was greatly improved (92%, Δ +20%), indicating that the education was beneficial for the majority of learners who answered incorrectly at baseline and also served to reinforce the understanding of those who selected the optimal response at baseline
 - We cannot call this change statistically significant yet, but the data are clearly trending toward significance ($P = .0736$). Additional participation will likely lead to a statistically significant finding for this question item
 - Most clinicians would benefit from reinforcement education on this topic, since:
 - There is typically loss in learners' understanding in the weeks following participation
 - Nonparticipating clinicians who are comparable to the participants are likely also in need of education on this topic

Expert Guidance in Advanced NSCLC: Selection of First-line and Maintenance Therapy

Competence Outcomes Questions

Learning objective: Utilize clinical, histologic, and molecular factors to make optimal first-line treatment choices for patients with advanced non-small-cell lung cancer

Case history

The Case of Mr. Brown

A 61-year-old male long-time smoker (30 pack-year) presents with cough productive of mucoid sputum, a 3-kg weight loss, and pain in right posterolateral rib cage

- Chest x-ray and subsequent chest CT scan reveals a 4-cm RUL mass with distal RUL atelectasis and ipsilateral hilar and mediastinal adenopathy
- Bronchoscopy shows friable tumor occluding RUL bronchus. Biopsy confirms NSCLC adenocarcinoma histology. EGFR mutation and ALK FISH tests were negative
- Abdominal CT and brain MRI both negative
- Bone scan: focal areas show increased uptake in a single right lateral rib and L3 vertebral body consistent with metastatic disease.
- Labs: CBC normal, alkaline phosphatase 10% above upper limit of normal
- Medical history: coronary heart disease status post angioplasty x 2 vessels, hypertension well controlled on atenolol and amlodipine besylate
- ECOG performance status 1

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Competence Outcomes Questions

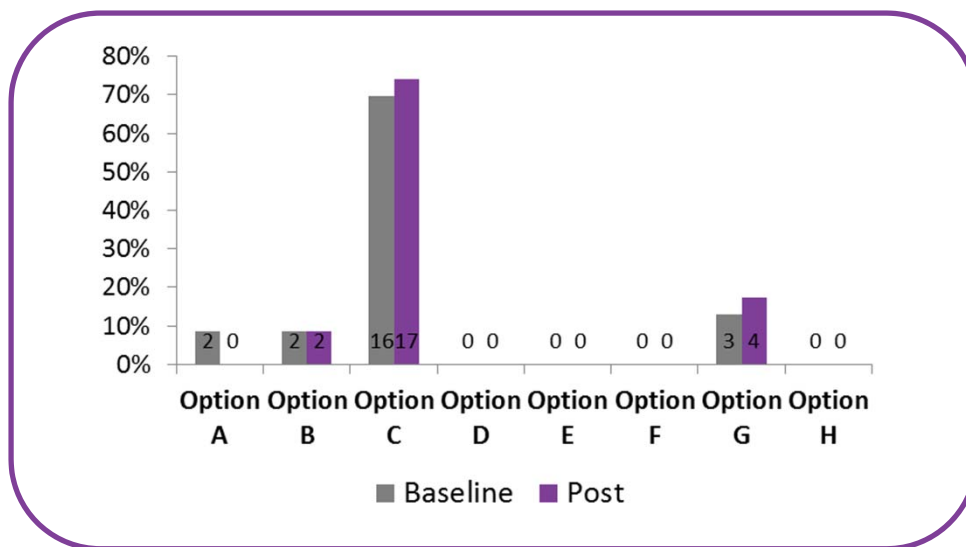
Learning objective: Utilize clinical, histologic, and molecular factors to make optimal first-line treatment choices for patients with advanced non-small-cell lung cancer

Case history: See previous slide

2. Which of the following treatment options would you recommend for initial therapy?

	Baseline	Post	Change
a) Cisplatin + gemcitabine	9%	0%	-9%
b) Carboplatin + paclitaxel	9%	9%	0%
c) Cisplatin + pemetrexed	70%	74%	+4%
d) Carboplatin + docetaxel	0%	0%	0%
e) Cisplatin + vinorelbine	0%	0%	0%
f) Cisplatin + vinorelbine + cetuximab	0%	0%	0%
g) Carboplatin + paclitaxel + bevacizumab	13%	17%	4%
h) Unsure	0%	0%	0%

Optimal or recommended response in bold.



Educational Impact Summary

- Learners are showing a modest numerical improvement in their intent to use clinical, histologic, and molecular factors to make optimal first-line treatment choices for patients with advanced non-small-cell lung cancer
 - Question 2 shows a high (83%) optimal response at baseline, indicating that more than 15% of learners lacked the insight into an optimal first-line treatment strategy for patients like Mr. Brown (former heavy-smoker, metastatic NSCLC adenocarcinoma, EGFR-/ALK-)
 - Postactivity optimal response was improved (93%, $\Delta +10\%$), indicating that the education had value for learners who answered incorrectly at baseline and also served to reinforce the understanding of those who selected the optimal response at baseline
 - The entire delta of 10% reflected a change from doublet chemotherapy containing gemcitabine to a doublet with pemetrexed consistent with category 1 evidence for better survival outcomes with doublets containing pemetrexed in patients with metastatic NSCLC and adenocarcinoma histology
 - We cannot call this change statistically significant, and the data are not trending toward significance ($P = .6170$) at this interim time point. Additional participation is needed to definitively determine the impact of this specific question item
 - Most clinicians would benefit from reinforcement education on this topic, since:
 - There is typically loss in learners' understanding in the weeks following participation
 - Nonparticipating clinicians who are comparable to the participants are likely also in need of education on this topic, given the low optimal response at baseline

Expert Guidance in Advanced NSCLC: Selection of First-line and Maintenance Therapy

Competence Outcomes Questions

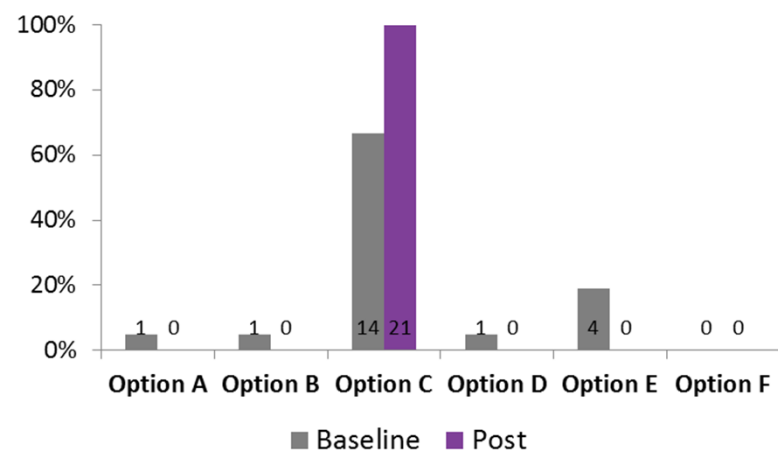
Learning objective: Apply current clinical evidence, expert guidance, and treatment recommendations to choose a maintenance strategy that is most likely to improve outcomes in patients with advanced non-small-cell lung cancer

Case history: Mr. Brown had a PR to 4 cycles of cisplatin and pemetrexed with resolution of all symptoms and is highly committed to continue therapy.

3. Which therapy would you recommend for maintenance?

	Baseline	Post	Change
a) Erlotinib	5%	0%	-5%
b) Docetaxel	5%	0%	-5%
c) Pemetrexed	67%	100%	+33%
d) Bevacizumab	5%	0%	-5%
e) Pemetrexed and bevacizumab	19%	0%	-19%
f) Unsure	0%	0%	0%

Optimal or recommended response in bold.



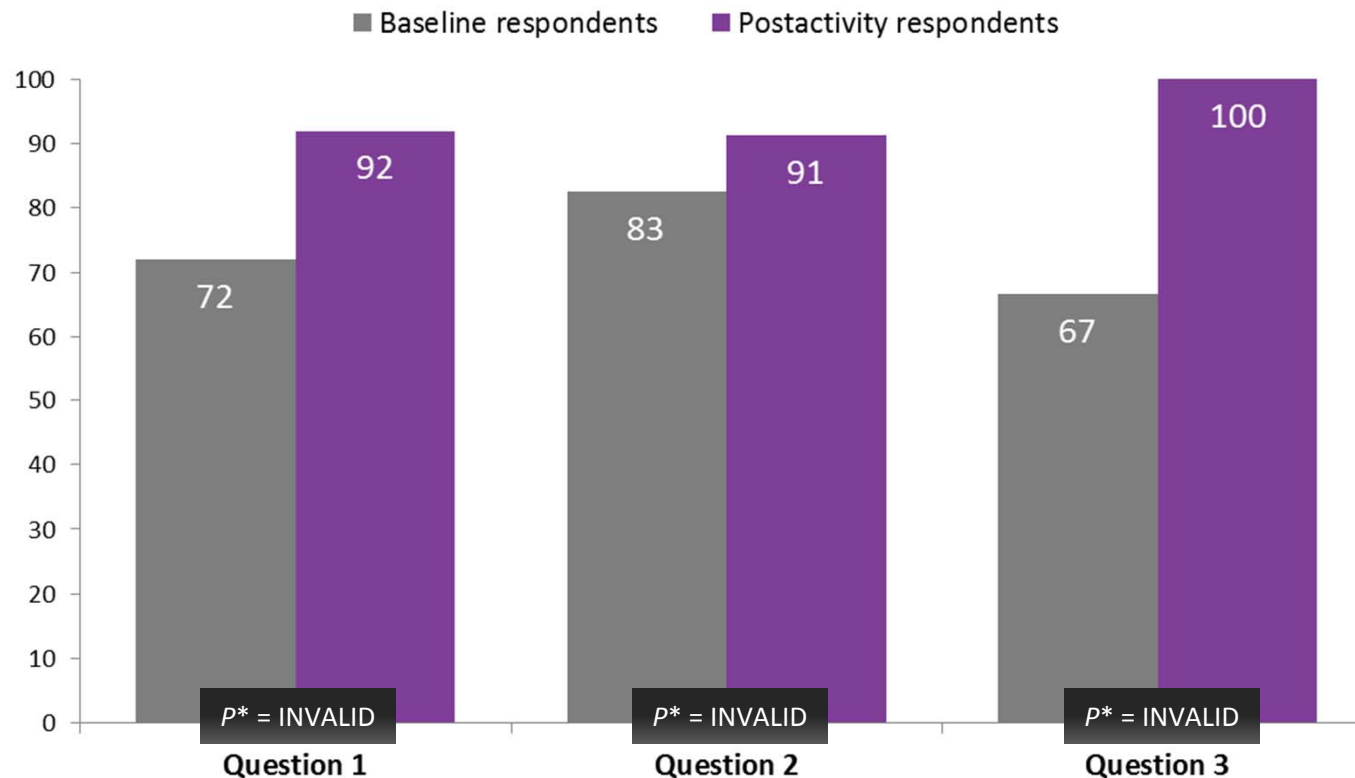
Educational Impact Summary

- Learners are showing a numerical improvement in their ability to apply current clinical evidence, expert guidance, and treatment recommendations to choose a maintenance strategy that is most likely to improve outcomes in patients with advanced non-small-cell lung cancer
 - Question 3 shows a moderate (63%) optimal response at baseline, indicating that more than one third of learners lacked the ability to select an appropriate maintenance strategy for patients like Mr. Brown (a partial response to first-line chemotherapy)
 - Postactivity optimal response was greatly improved (100%, $\Delta +37\%$), indicating that the education had value for learners who answered incorrectly at baseline and also served to reinforce the understanding of those who selected the optimal response at baseline
 - We cannot call this change statistically significant yet, but the data are clearly trending toward significance ($P = .0233$). Additional participation will likely lead to a statistically significant finding for this question item
 - Most clinicians would benefit from reinforcement education on this topic, since:
 - There is typically loss in learners' understanding in the weeks following participation
 - Nonparticipating clinicians who are comparable to the participants are likely also in need of education on this topic, given the low optimal response at baseline

Expert Guidance in Advanced NSCLC: Selection of First-line and Maintenance Therapy

Summary of Competence Change

% selecting the optimal response for each multiple choice item



Effect size[†] across all 3 multiple-choice competence items: **+0.91**

**P* values are calculated to assess whether the difference between baseline and postactivity responses is statistically significant or occurred merely by chance. A *P* value of < .05 is generally judged as significant.

[†]Effect size is valuable for measuring the overall effectiveness of an educational program, emphasizing the size of the difference between the baseline and postassessment groups across all questions. Effect size has a range of -3 to +3. Benchmarks suggest < 0.3 is a “small” effect size and > 0.8 is a “large” effect size.

Expert Guidance in Advanced NSCLC: Selection of First-line and Maintenance Therapy

Educational Impact Summary

- Overall, practical significance testing using Cohen’s d indicates that the program had a very positive impact on learners, with a effect size calculation of +0.91
 - Effect sizes benchmarks in medical education show that +0.5 is a “medium” effect size and +0.8 is a “large” effect size
- The combination of positive deltas and moderate to high percentages achieving optimal postactivity responses indicate that this program had an important educational impact
 - The outcomes highlight ongoing educational need with the learner set described within this report and in learners like those who participated in the activity
- 100% of the learners indicated that their practice is either consistent with, or that they intend to change their practice to, the recommendations in the activity*
 - This indicates that most clinicians agreed that the activity represents the best practices in treatment
- A median of ~ 22 patients per clinician was reported as being positively impacted by the learners’ participation in the activity*
 - Extrapolation of this value to the total number of healthcare provider participants (N = 1022) indicates that approximately 22,500 patients may have been positively affected by this educational program to date

Question	Change, Pre/Post, %	Significant? (P Value)	Postactivity Optimal, %
1	+20	N/A	92
2	+10	N/A	91
3	+37	N/A	100

*Data from CME evaluations.

Web Metrics Definitions

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Unique Users

Unique users measures the number of different identifiable individuals who access CCO Web products or a given product on the Web platform. CCO will only report a unique user once per program, regardless of the number of visits that they make to that program.

CCO will only report unique users who registered and signed in to the program. In addition, because all users are registered, CCO can categorize “unique users” as physicians, nurses, pharmacists, industry, and other categories including general demographics.

Unique Visits

A *unique visit* to a program is recorded whenever a member directs their browser to any page in a given program. A second visit by the same member would require a new browser window to be opened or a 20-minute lapse in activity.

Page View

A *page view* is logged whenever a user interacts with the Web site; this count includes page views, submission of an answer to a polling question, submission of a posttest or evaluation, and any other action that shows a user interacting with the Web site.

Email Promotions

An *email promotion* includes a unique message of copy and graphics sent to any internal or external list segment. CCO will, on occasion, resend a specific message to additional segments. Resends are not included in the count, but performance data are considered.

CME Credits Earned

CME credits earned reflects the number of credits claimed within each professional educational program/category.