Update in Interventional Bronchoscopy 2013

Final Outcome Report

Challenges in Pulmonary and Critical Care: 2013

Presented at:
Cleveland Clinic Florida
Weston, Florida
December 7, 2013

Report Date: December 27, 2013
Course Director

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Course Accreditation

The National Association for Continuing Education is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The National Association for Continuing Education designates this live activity for a maximum of 7 AMA PRA Category 1 Credits™. Physicians should only claim the credit commensurate with the extent of their participation in the activity.

National Association for Continuing Education is approved as a provider of nurse practitioner continuing education by the American Association of Nurse Practitioners. AANP Provider Number 121222. This program has been approved for 7.0 contact hours of continuing education (which includes 0.75 pharmacology hours).
Commercial Support

Challenges in Pulmonary and Critical Care: 2013 CME activity was supported through educational grants from the following companies:

Actelion
Baxter Healthcare
Boehringer Ingelheim Pharmaceuticals, Inc.
Boston Scientific
CSL Behring
Genentech
Grifols
7:00-7:45  Continental Breakfast and Registration
7:45-8:00  Welcome Remarks
           Franck Rahaghi, MD, MHS, FCCP
8:00-9:00  Pulmonary Hypertension: A Disease in Evolution
           Murali Chakinala, MD, FCCP
9:00-10:00 Update in Interventional Bronchoscopy 2013
            Eduardo C. Oliveira, MD
10:00-10:15 Break/Exhibits
10:15-11:15 COPD: New Developments, New Treatment Horizons
              Anas Hadeh, MD, FCCP
11:15-12:15 Alpha-1 Antitrypsin Deficiency: 50th Anniversary of a Disease
              Robert A. Sandhaus, MD, PhD
12:15-1:00  Lunch Break/Exhibits
1:00-2:00  Update in PE and CTEPH
           Charles D. Burger, MD
2:00-3:00  Idiopathic Pulmonary Fibrosis: What have we learned and where are we going?
           Franck Rahaghi, MD, MHS, FCCP
3:00-3:15  Break/Exhibits
3:15-4:15  Lung Cancer: State of the Art 2013
           Jinesh Mehta, MD
4:15-4:30  Concluding Remarks
           Franck Rahaghi, MD, MHS, FCCP
Levels of Evaluation

Consistent with the policies of the ACCME, NACE evaluates the effectiveness of all CME activities using a systematic process based on the following model:

1. Participation
2. Satisfaction
3. Learning
   A. Declarative Knowledge
   B. Procedural Knowledge
4. Competence
5. Performance
6. Patient Health
7. Community Health

Level 1: Participation

- 129 attendees
- 76% Physicians; 7% NPs; 11% PAs; 0% RNs; 7% Other
- Over 46% in community-based practice
- 45% PCPs, 33% Pulmonologists; 3% Rheumatology; 3% Dermatology; 16% Other or did not respond

Did we reach the right audience? Yes!
Level 2: Satisfaction

• 100% rated the activity as very good to excellent
• 98% indicated the activity improved their knowledge
• 96% stated that they learned new strategies for patient care
• 79% said they would implement new strategies that they learned in their practice
• 100% said the program was fair-balanced and unbiased

Were our learners satisfied? Yes!
Upon completion of this activity, I can now – Define the tools available to interventional bronchoscopy; Explain patient selection criteria for interventional bronchoscopy; and Discuss the pipeline of new procedures.

Did learners indicate they achieved the learning objectives? Yes! 98% believed they did.
Outcome Study Methodology

Goal
To determine the effect this CME activity had on learners with respect to competence to apply critical knowledge, confidence in treating patients with diseases or conditions discussed, and change in practice behavior.

Dependent Variables

• **Level 3: Competence to Apply Critical Knowledge**
  Case-based vignettes and pre- and post-test knowledge questions were asked with each session in the CME activity. Responses can demonstrate learning and competence in applying critical knowledge. The use of case vignettes for this purpose has considerable predictive value. Vignettes, or written case simulations, have been widely used as indicators of actual practice behavior. ¹

• **Practitioner Confidence**
  Confidence with the information relates directly to the likeliness of actively using knowledge. Practitioner confidence in his/her ability to diagnose and treat a disease or condition can affect practice behavior patterns.

• **Level 4: Self-Reported Change in Practice Behavior**
  Intent to change and change four weeks after CME activity.

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Faculty
Eduardo Oliveira, MD, MBA, FCCP
Chairman, Division of Medicine
Director, Interventional Pulmonology Program
Cleveland Clinic Florida
Weston, FL

Learning Objectives

• Define the tools available to interventional bronchoscopy
• Explain patient selection criteria for interventional bronchoscopy
• Discuss the pipeline of new procedures
### Key Findings

#### Update in Interventional Bronchoscopy 2013

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge/Competence</strong></td>
<td>Learners demonstrated improvement in their answers from pre to post-testing on one of the three case-based questions regarding Interventional Bronchoscopy.</td>
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<tr>
<td><strong>Confidence</strong></td>
<td>Whereas the majority of learners rated themselves as having very low confidence in their understanding of Interventional Bronchoscopy before the education most of the learners showed high gains in confidence after the program.</td>
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<tr>
<td><strong>Intent to Perform</strong></td>
<td>As a result of this program, 20% of learners who did not manage patients with lung lesions or asthma and did not consider interventional bronchoscopy as option before are considering it now, while 23% indicated that they will change their approach.</td>
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<tr>
<td><strong>Change of Practice Behavior</strong></td>
<td>87% of learners who responded to our four week survey indicated that they had changed their practice behavior to implement the learning objectives of this program within four weeks after they attended the activity.</td>
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N=61
The statements below are true with respect to electromagnetic navigation guided bronchoscopy (ENB) except:

- More Useful in the diagnosis of greater than 2 cm lung nodules
- Useful in the placement of fiducials for XRT and to aid the surgeon in the lung resection of small lung lesions
- The pneumothorax rate is slightly higher than CT guided biopsy but with a better diagnostic accuracy
- Specific CT scan data requirements are needed to plan the procedure
- Radial ultrasound improves the diagnostic yield

N = 45

Red highlight indicates no significant difference between pre and post testing.
Based on the current ACCP recommendations, the following is true regarding the evaluation of lung nodules:

- **Part solid/Ground Glass nodules > 5mm** must be followed for a longer period of time compared to solid nodules.
- PET scan has no role in the evaluation of lung nodules.
- All solid nodules greater than 8mm in high risk patients should be followed for 2 years and only removed if they grow over time.
- Patient preference should not influence the physician on how the nodule should be evaluated.
- Fleischner society guidelines should not be used to follow high risk nodules.

Red highlight indicates no significant difference between pre and post testing.
The following is true regarding Endobronchial Ultrasound (EBUS) Except

Radial probe added to navigation can improve the diagnostic yield

90 to 94% sensitive and highly specific in the evaluation of mediastinal adenopathy

Is likely responsible for the overall reduction in mediastinoscopy cases in the US

If mediastinal nodes are positive on PET, it is 95% sensitive for malignancy with a NPV of 91%

In stage IIIA disease, after induction chemo, a negative EBUS is a reliable indicator of complete response to chemoRx

Green highlight indicates significant difference between pre and post testing.

N = 47

P Value: < 0.001 - Significant
Change in Practice Behavior Question
Presented after lecture.

Which of the statements below describes your understanding of the role interventional bronchoscopy in the diagnosis and management of lung diseases?

- Pre-Contemplation Stage
  - 37%: I do not treat patients with lung lesions and asthma that would benefit from interventional bronchoscopy, nor do I plan to this year.

- Contemplation Stage
  - 20%: I do treat patients with lung lesions or asthma and did not consider interventional bronchoscopy as an option before this course, but as a result of attending this course I'm thinking of using it now.

- Preparation for Action Stage
  - 23%: I do treat patients with lung lesions or asthma and have used interventional bronchoscopy as a treatment option and this course confirmed that I don't need to change my treatment methods.

- Pre-Contemplation/Confirmation Stage
  - 20%: I do treat patients with lung lesions and asthma with interventional bronchoscopy and this course confirmed that I don't need to change my treatment methods.

N = 35
Changes in Confidence from Pre to Post-Testing
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On a scale of 1 to 5: Please rate how confident you would be treating a patient with interventional bronchoscopy:

- Not at all confident: 64%
- Slightly confident: 32%
- Moderately confident: 19%
- Pretty much confident: 11%
- Very confident: 13%

N = 61
Intention to Change Practice Behavior and Implement Learning

- **Very likely**: 56%
- **Somewhat likely**: 23%
- **Unlikely**: 1%
- **Not applicable**: 20%
Discussion and Implications
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Electromagnetic navigation is a novel diagnostic technique which allows bronchoscopic sampling of peripheral pulmonary nodules and mediastinal adenopathy. Planners conducted a needs assessment for this topic and gaps in knowledge. The objective of this activity was to educate learners about the methodology and advantages of navigational bronchoscopy, describe bronchial thermoplasty, and define patient selection for these two procedures.

Knowledge/Competence: Attendee knowledge was assessed at two points for this activity: prior to the activity and immediately following the activity using the case vignettes and knowledge questions listed above. The results indicated improvement in knowledge as measured by positive changes in pre to post-test scores on two question out of three, one in a statistically significant manner.

Practice Behavior: Forty-six percent of the attendees either claimed to change their practice or start getting involved in correctly referring patients.

Confidence: Participants indicated a strong overall increase in self-reported confidence levels in their understanding of these procedures. There was a consistent improvement in increasing confidence, more that doubling in the confident to very confident categories.

Intention for Change in Practice Behavior: Fifty Six percent of participants reported that they were very likely to utilize information learned from this activity in their practice.

Summary: Seventy nine percent of attendees suggested they were likely or very likely to change their practice patterns as a result of this event. his activity was successful in the goal of improving understanding of electromagnetic navigation bronchoscopy and bronchial thermoplasty. As a result of this physicians will be able to better select patients for these procedures.