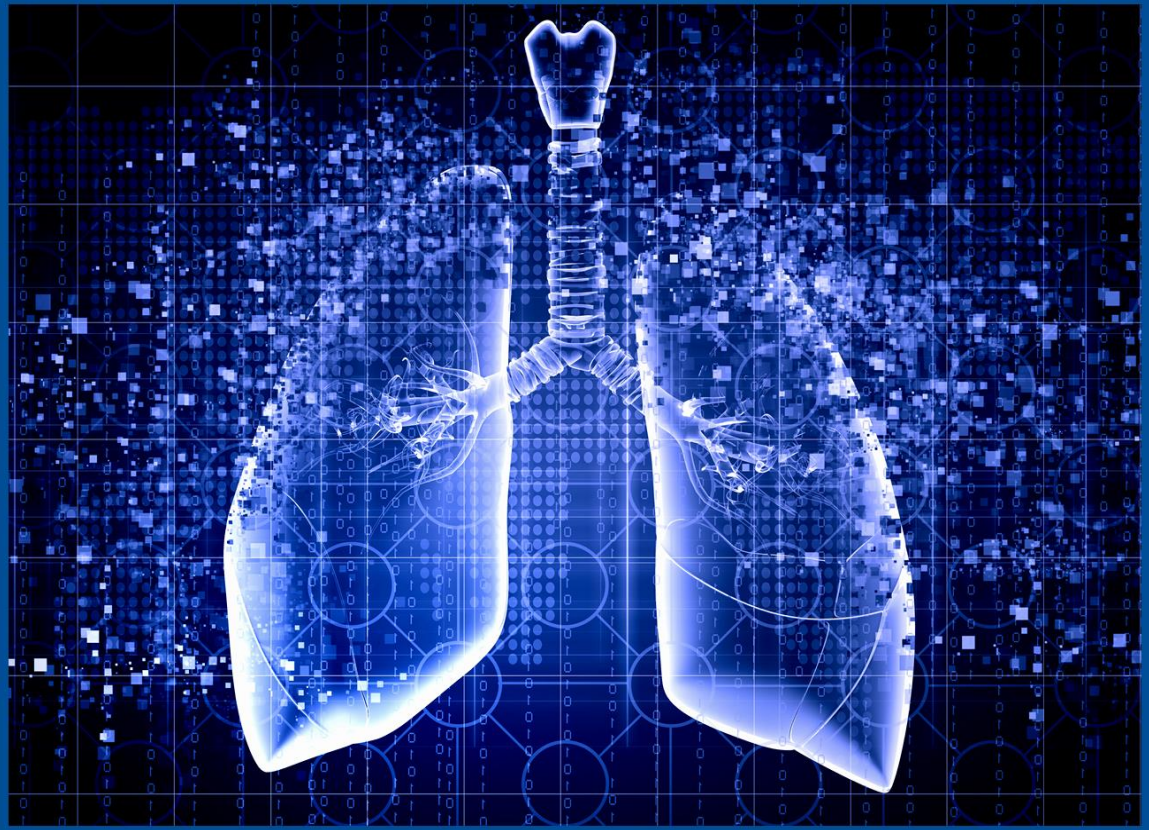
CLINICAL IMPLICATIONS OF EMERGING DATA:
Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA



Final Report
Grant ID: 008776

CLINICAL IMPLICATIONS OF EMERGING DATA:
Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

Background:

This online educational initiative was designed to improve the knowledge and competency of *allergists, pulmonologists, rheumatologists, and primary care physicians* in the diagnosis and treatment of eosinophilic lung disease and Eosinophilic Granulomatosis with Polyangiitis (EGPA). The activity features expert faculty, interactive polling with immediate feedback, and resources to help attendees convert information into practice.

Learning Objectives:

1. Distinguish clinical features of EGPA
2. Review best practices in diagnosis of eosinophilia
3. Evaluate current and emerging treatments in EGPA

Launch Date: March 30, 2018

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The ArcheMedX platform utilizes a unique method of engaging learners by creating contextual moments in the video, defined as *Learning Moments,* which include educator notes and questions that nudge the learner to slow-down and reflect, guiding the learner into a deeper understanding of the information provided.

CLINICAL IMPLICATIONS OF EMERGING DATA: Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

Final Report: Faculty and Activity Impact

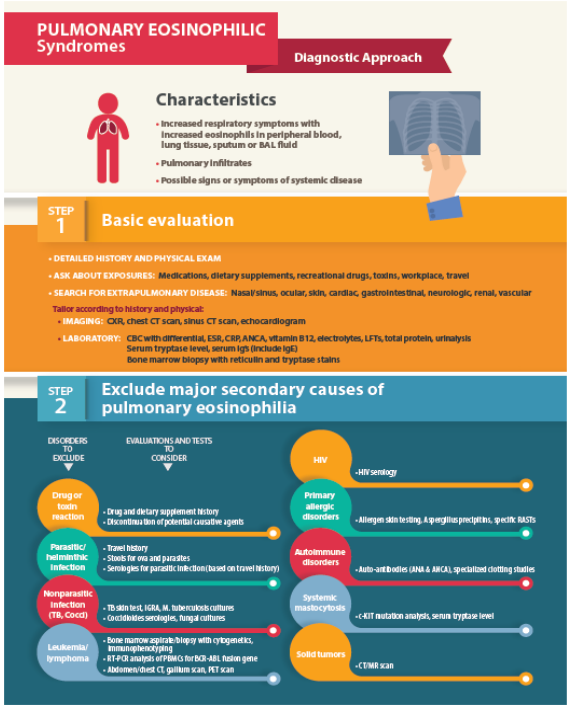
Program Director
Michael E. Wechsler, MD, MMSc
Professor, Department of Medicine
National Jewish Health

"EGPA is increasingly recognized as an important clinical entity that warrants prompt recognition and good understanding. This program facilitated participant appreciation of the importance of diagnosing EGPA and how to treat it effectively."

"Format was excellent, enjoyed and appreciate the links to the papers and relevant handouts"

"I thought it was excellent and appreciated the attached reference material"

"Excellent presentation both from the perspectives of content and style"



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CLINICAL IMPLICATIONS OF EMERGING DATA:
Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

Final Report: Activity Impact

Completer Breakdown:

78% Prescribers

- 61% MD/DO
- 17% NP/PA

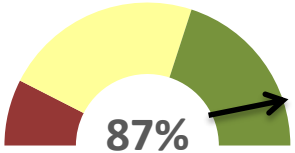
*Data as of 3/31/2019

Module Metrics

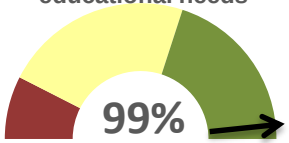
- ✓ Total Participants: **3,121**
- ✓ Learners: **2,948**
- ✓ Completers: **795**
- ✓ Certificates: **415**
- ✓ Engagement Score: **3.7**

*Data as of 3/31/2019

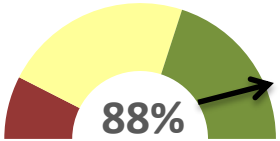
Respondents intend to make changes in practice as a result of the activity



Learners report activity met their educational needs



Learners report activity addressed overcoming barriers to optimal patient care



n=564

Overall relative knowledge gain

from pre- to post-activities

32%

*Data as of 3/31/2019

Multidimensional Engagement Strategy

14 Learning Moments:

- 11 Educator Notes
- 3 Polling Questions
- 1 Reflective Question
- Downloadable Infographic

CLINICAL IMPLICATIONS OF EMERGING DATA:
Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

Final Report: Participation

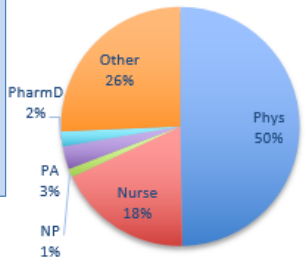
Unique Learners
The ArcheMedX platform data is based on **paired learners** to validate the knowledge gains and customize each learner's experience

1,168	649	55%	2,848
Unique Starts	Unique Completes	Completion Rate	Learning Actions

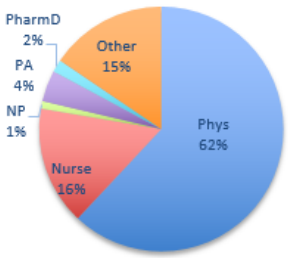
605	568
Post-test Completes	Eval Completes

Profession

Unique Starts

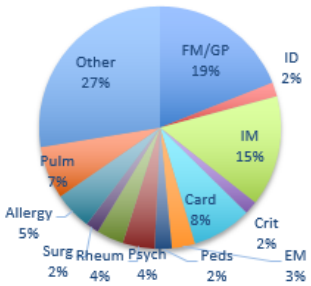


Unique Completes

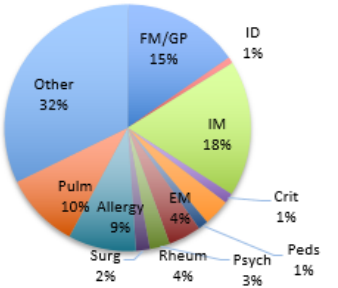


Specialty

Unique Starts



Unique Completes



**Data as of 3/31/2019, unique users*

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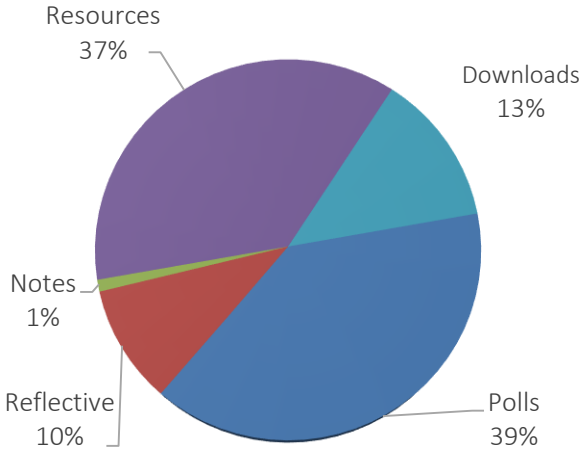
CLINICAL IMPLICATIONS OF EMERGING DATA:
Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

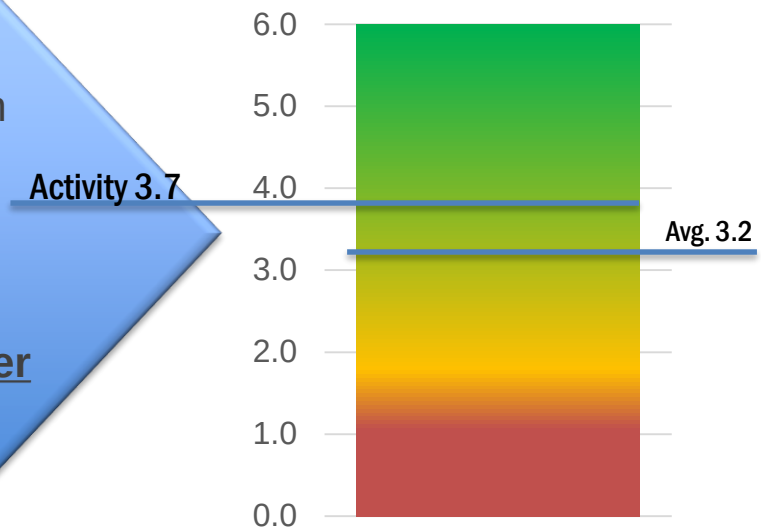
Final Report: Engagement

Learning Actions



The engagement score for the activity shows the average number of actions taken by the learner while in the activity. **This activity achieved an engagement score of 3.7 which is 15% higher than the average ArcheMedX engagement score.**

Engagement Score 3.7



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*Data as of 3/31/2019

CLINICAL IMPLICATIONS OF EMERGING DATA: Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

Final Report: Learning Actions

Learning Actions/Moments Review

The ArcheMedX platform analyzes each action a learner takes while participating in the activity, providing a view into the depth of engagement by each learner. Learners for this activity completed 2,848 actions while viewing the activity, including answering a variety of questions and viewing numerous resources.

In addition, the ArcheMedX platform tracks the *Learning Moments* served as educator notes, nudges that drive the learner to dive deeper into supporting content. Learners for this activity had 6,646 views of educator notes and 230 resource views.

2,848 Actions

	Count
Polling Questions – Responses (3)	1384
Reflective Questions – Responses (1)	214
Resource Views (17)	1055
Resource Downloads	372
Added to Notes	22
Notes Taken	37

6,876 Moments

	Count
Educator Notes (11)	
- Views	6646
- Resource Views	230

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(x) Denotes quantity

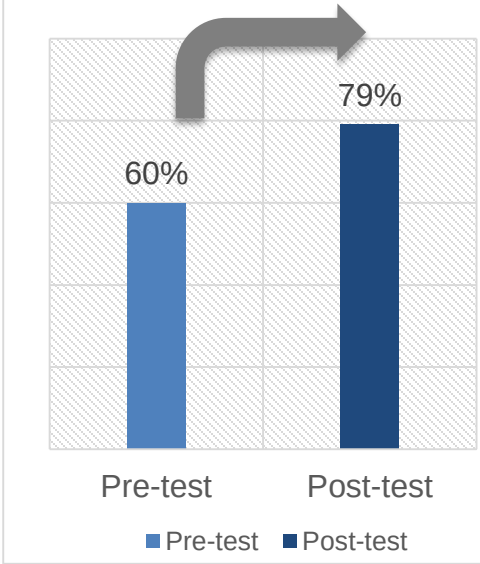
***Data as of 3/31/2019**

CLINICAL IMPLICATIONS OF EMERGING DATA: Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

Final Report: Knowledge & Competence

	Learning Objective		
	1	2	3
Assessments Relative Change	◆	◆	◆
Learning Moments/Actions			
Educator Notes	1929 (3)	2668 (4)	2049 (4)
Polling Questions	338 (1)	409 (1)	358 (1)
Reflective Questions	-	279 (1)	-
Resources			
Total Views	66 (3)	551 (6)	278 (7)
EN Views	23 (3)	165 (4)	42 (4)
Downloads	25	209	91

(x) Denotes quantity



Relative Change = 32%

All aspects of the education, including assessment questions and actions taken by learners in the activity (notes, questions answered, resources viewed/downloaded) are mapped to *learning objectives,* providing a detailed analysis of how each learner engaged with the various elements for each learning objective.

Post-test answer data is based on first attempt

Level 3 and 4 outcomes were measured by comparing participants' pre- and post-test answers. Attendees' responses to these questions demonstrated that **participants gained knowledge as a result of the activity.**

***Data as of 3/31/2019**

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CLINICAL IMPLICATIONS OF EMERGING DATA: Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

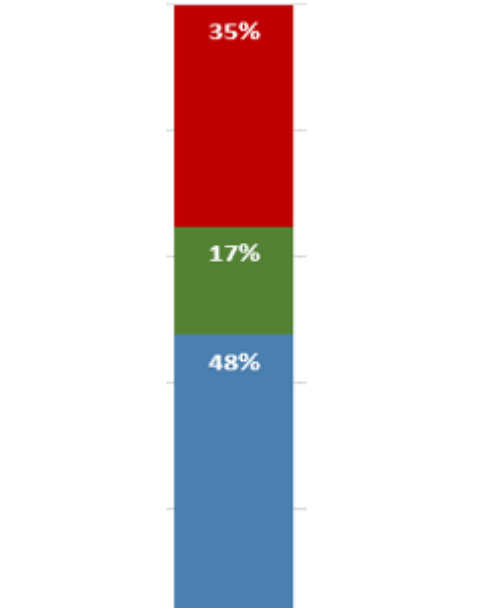
Question 1

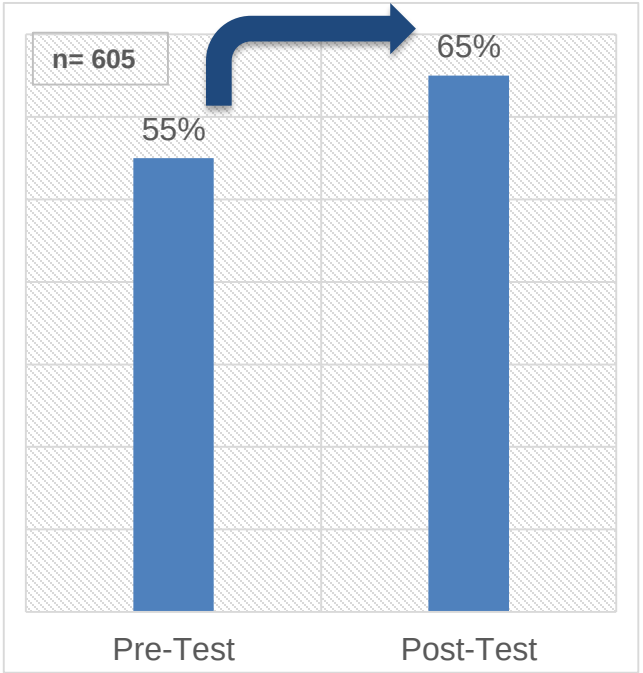
Final Report: Questions

A previously healthy 26 year-old woman is admitted to the ICU with acute hypoxemic respiratory failure and a blood eosinophil count of 1200/mm^3. Prior to intubation, she complained of 3 days of rapidly increasing non-productive cough, dyspnea, and fevers. She denied recent travel, animal exposure, and illicit drug use. She is a non-smoker, takes no medications, and works as a telemarketer. Physical exam is remarkable for bibasilar inspiratory lung crackles and temperature of 40 degrees Celsius. CXR shows diffuse, bilateral, ground-glass pulmonary infiltrates and small bilateral pleural effusions. Which of the following tests is most likely to provide a diagnosis for this patient's lung disease?

A. Bone marrow aspirate for cytology and cytogenetics
B. Stool examination for ova and parasites
C. Serum tryptase level and HIV serology
D. Bronchoscopy, with bronchoalveolar lavage fluid cell count and differential

Participant assessment: Reinforced – Improved – Unaffected by Question





*Post-test answer data is based on first attempt

Data as of 3/31/2019

CLINICAL IMPLICATIONS OF EMERGING DATA: Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

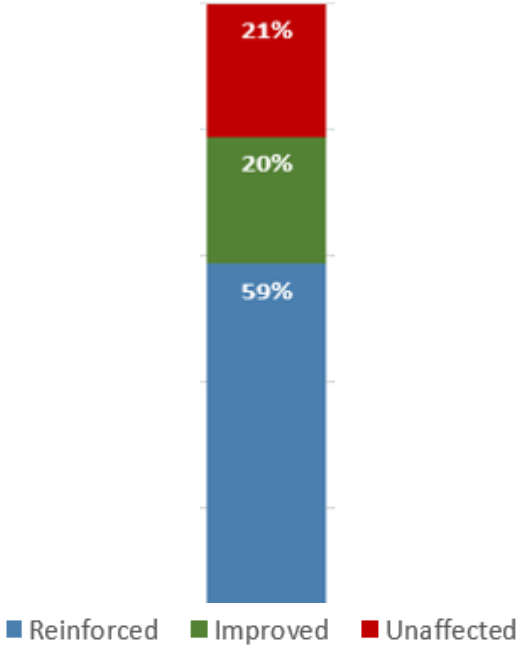
Question 2

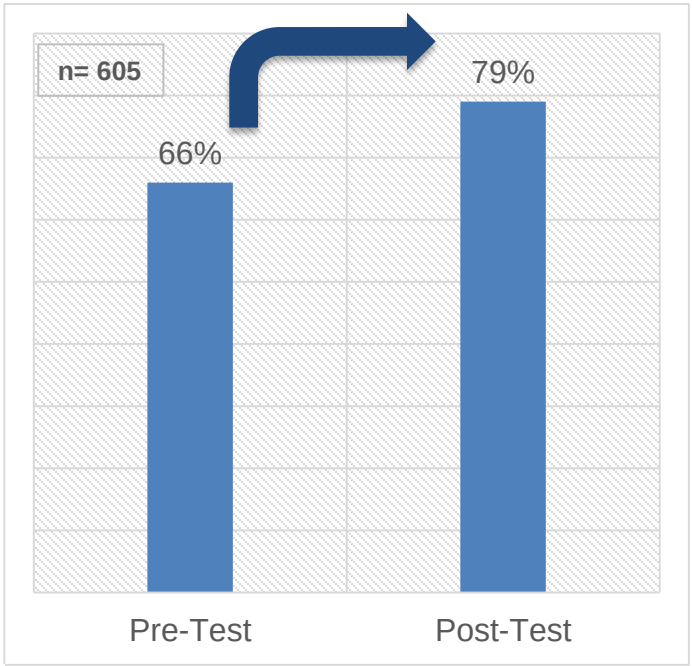
Final Report: Questions

Which of the following abnormalities frequently occurs in patients with eosinophilic granulomatosis with polyangiitis (a disorder formerly called Churg-Strauss syndrome) but rarely occurs in patients with chronic eosinophilic pneumonia?

A. Vasculitis
B. c-KIT mutation
C. Fulminant respiratory failure
D. BCR-ABL fusion gene

Participant assessment: Reinforced – Improved – Unaffected by Question





*Post-test answer data is based on first attempt

Data as of 3/31/2019

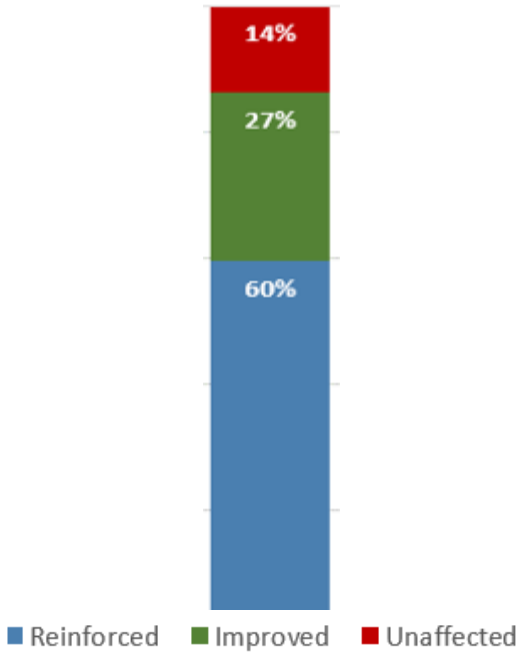
Question 3

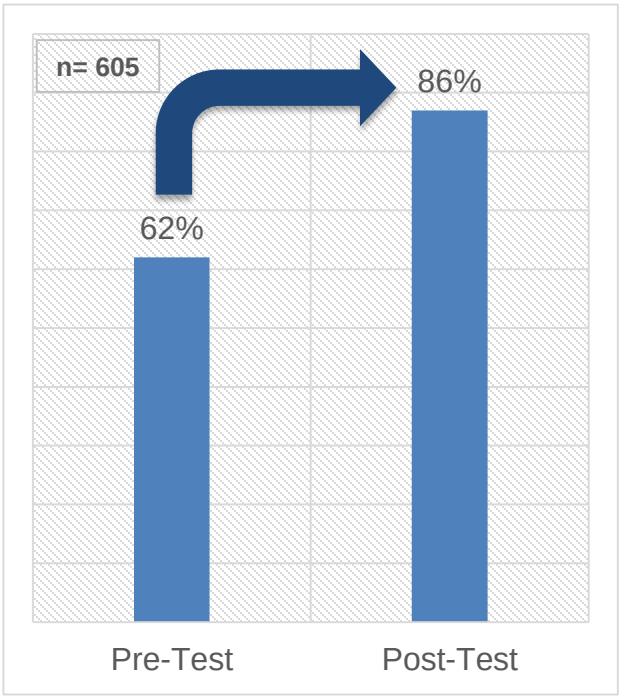
Final Report: Questions

A 64 year-old man with a 20 year history of severe asthma is newly diagnosed with eosinophilic granulomatosis with polyangiitis (EGPA), a disease formerly called Churg-Strauss syndrome. Which of the following is true about the initial treatment of EGPA?

A. It should include mepolizumab.
B. It should include rituximab.
C. <u>It should include systemic corticosteroids</u>.
D. It should include omalizumab, an anti-IgE antibody therapy.

Participant assessment: Reinforced – Improved – Unaffected by Question





*Post-test answer data is based on first attempt

Data as of 3/31/2019

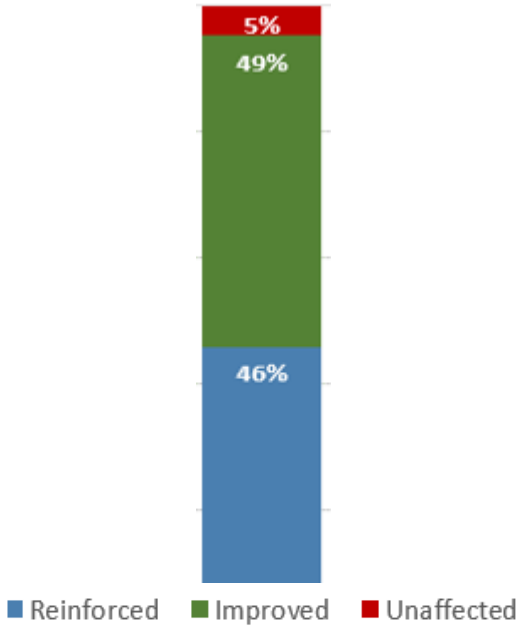
Question 4

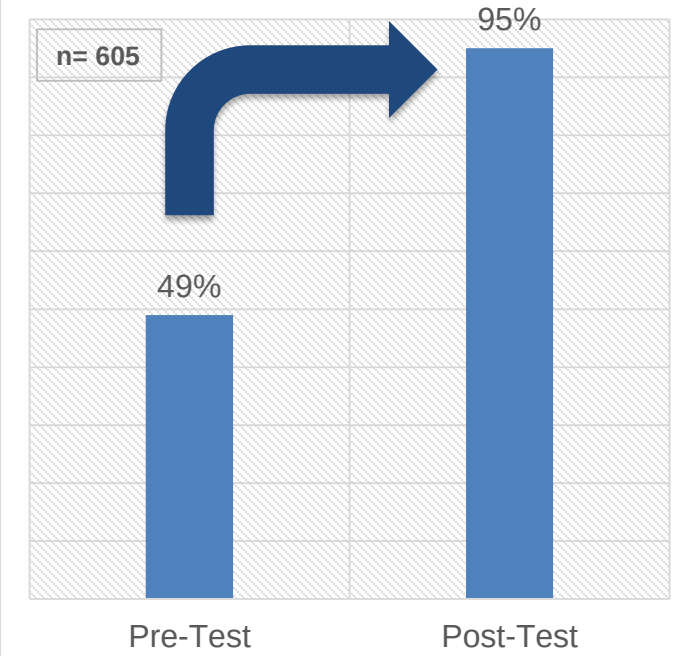
Final Report: Questions

Which of the following tests should be part of the basic evaluation of a patient who has a peripheral blood eosinophil count of 2000/mm^3 and pulmonary infiltrates on CXR?

A. ANCA
B. Aspergillus precipitins
C. TB skin test
D. Stools for ova and parasites

Participant assessment: Reinforced – Improved – Unaffected by Question





*Post-test answer data is based on first attempt

Data as of 3/31/2019

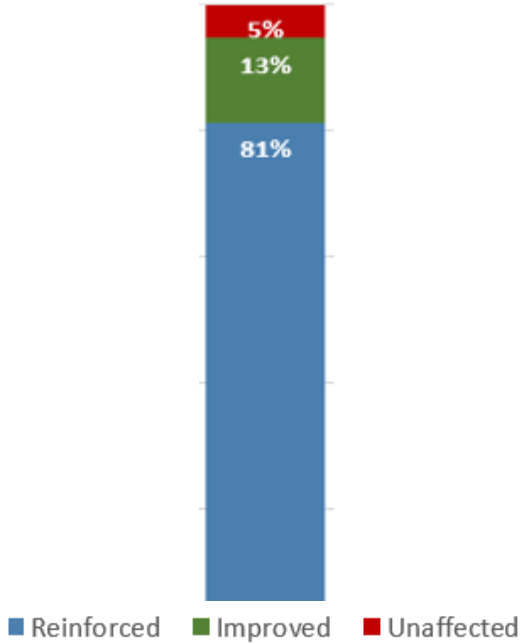
CLINICAL IMPLICATIONS OF EMERGING DATA: Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

Question 5

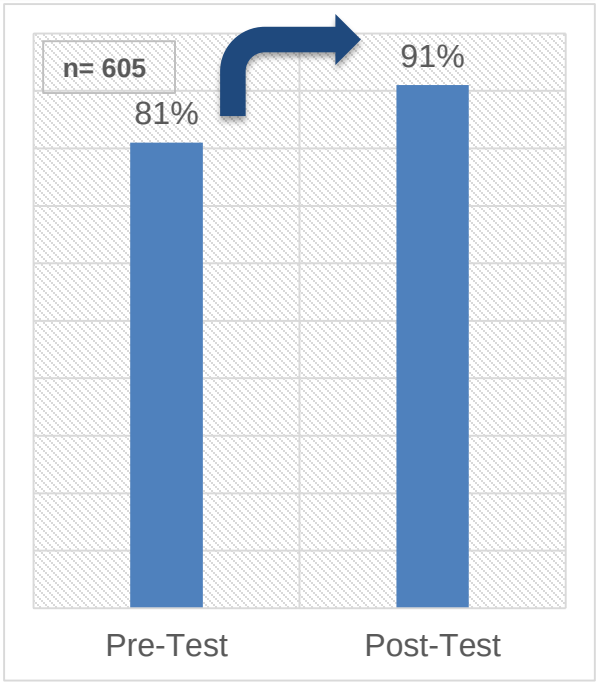
A 55 year-old woman with severe asthma complains of 2 months of increased shortness of breath, dry cough, and left leg pain. Physical exam shows scattered bilateral lung crackles and a few tender, purple lesions on both legs. The peripheral blood eosinophil count is 2500/mm^3. Chest CT shows patchy bilateral ground-glass opacities. Biopsy of the skin lesions shows eosinophilic vasculitis of small blood vessels. Nerve conduction studies show mononeuritis multiplex. Which of the following is the most likely diagnosis?

A. Acute eosinophilic pneumonia
B. Chronic eosinophilic pneumonia
C. Hypereosinophilic syndrome
D. EGPA

Participant assessment: Reinforced – Improved – Unaffected by Question



Final Report: Questions

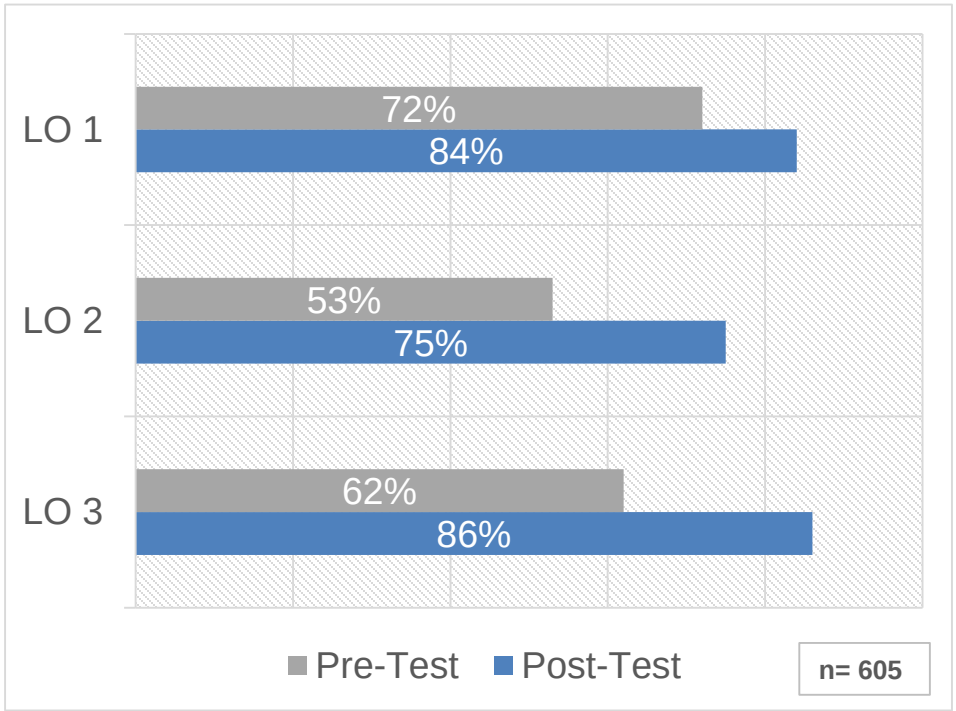


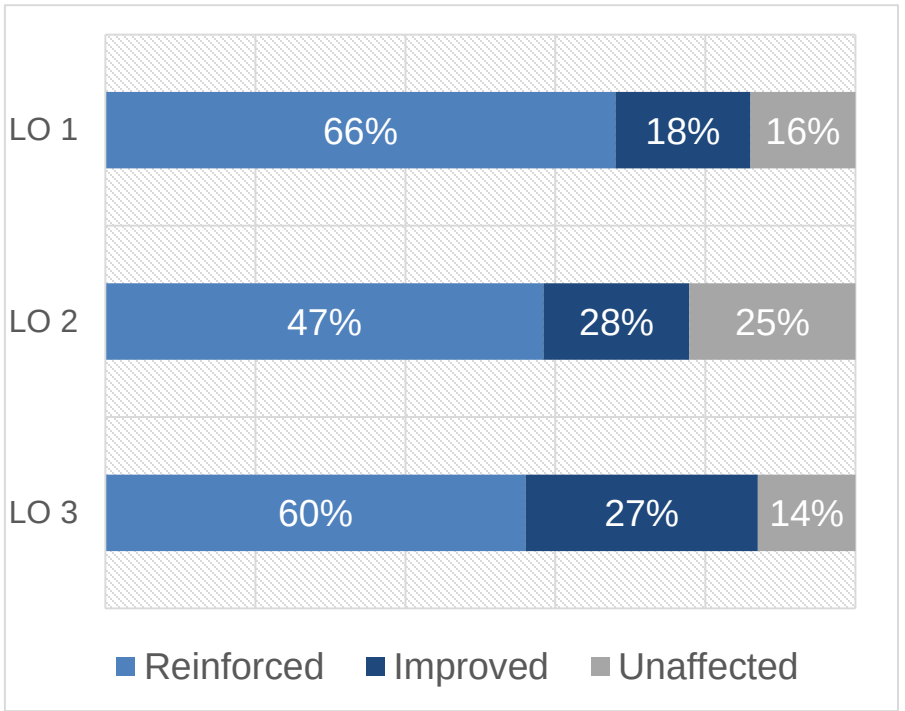
*Post-test answer data is based on first attempt

Data as of 3/31/2019

CLINICAL IMPLICATIONS OF EMERGING DATA: Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

Final Report: Knowledge & Competence

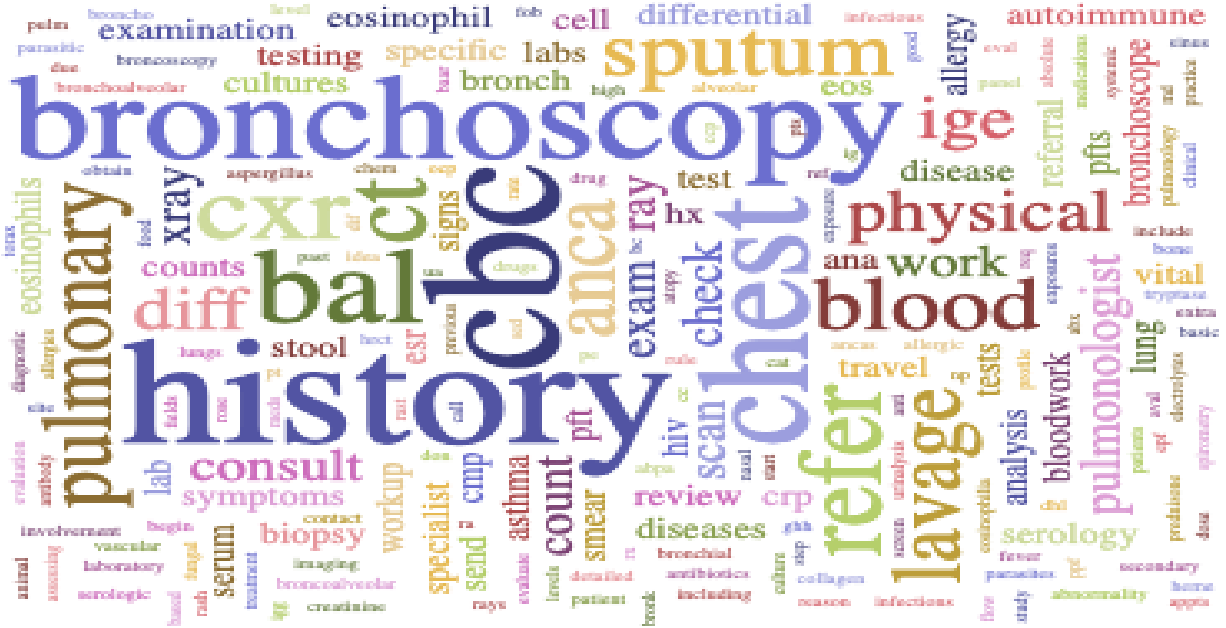




*Data as of 3/31/2019

CLINICAL IMPLICATIONS OF EMERGING DATA:
Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

When a patient presents with eosinophilia and pulmonary infiltrates, what steps do you take to arrive at a correct diagnosis?



Final Report: Reflective Question

Reflective questions are designed to slow down the learner and encourage them to reflect on their own practice, comparing what they are learning in the activity to their prior body of knowledge and how they manage their current patient population.

n=214

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CLINICAL IMPLICATIONS OF EMERGING DATA:
Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

Accreditation Details: National Jewish Health is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The National Jewish Health Office of Professional Education will produce and certify this program and will adhere to the updated ACCME guidelines. **NJH designates this educational activity for a maximum .5 *AMA PRA Category 1 Credits*™.**

Educational Outcomes Strategy: National Jewish Health will provide knowledge and competence-measuring outcomes for this activity. Pre-tests and post-tests will be distributed to measure the participants' knowledge and competence in the topics covered during this educational initiative. Evaluations will be collected to understand participants' engagement in the activity, intention to change, and appropriateness of the learning modalities and content. To measure whether or not the identified gaps were addressed, NJH will provide outcomes on knowledge and competence to meet Moore's Level 4 Outcomes Level.

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CLINICAL IMPLICATIONS OF EMERGING DATA:
Diagnosis and Treatment of Eosinophilic Lung Diseases and EGPA

Thank you for your support of this educational initiative!

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