

Differential Diagnosis and Treatment selection for Eosinophilic Granulomatosis with Polyangiitis (EGPA)



Final Live and Online Activity
Outcomes Report

*This educational activity was supported by a grant
from GlaxoSmithKline*



#1 in Respiratory Care



Differential Diagnosis and Treatment selection for Eosinophilic Granulomatosis with Polyangiitis (EGPA)

Program Overview (Live and Online Activity)

Eosinophilic granulomatosis with polyangiitis (EGPA), formerly known as Churg-Strauss Syndrome (CSS), is a hypereosinophilic syndrome (HES) characterized by eosinophilic vasculitis and one or more of the following: asthma, pulmonary infiltrates, sinusitis, and neuropathy. For patients with EGPA, the risk of permanent tissue and organ damage is significant. Although there are treatments available, patients with EGPA tend to remain dependent on glucocorticoid therapy and are prone to relapse.

Successful diagnosis of EGPA begins with a physician's understanding of the HESs and ability to distinguish EGPA from other causes of eosinophilia and eosinophilic lung disease. This presents a challenge for many physicians because these disorders (aside from asthma) are relatively uncommon in everyday practice, even for pulmonary and allergy subspecialists.

This program included a live CME symposium held in conjunction with American College of Chest Physicians (ACCP) Annual Meeting (CHEST 2019) in New Orleans, and an online enduring activity recorded there. The program includes a patient perspective video to bring the challenges of the patient journey to life and a downloadable clinical diagnosis and treatment infographic along with a panel discussion between specialists who are experts in their fields of asthma, rheumatology and pulmonology who share their own experiences in diagnosing and treating patients with EGPA.

“Heightened awareness of the signs and symptoms of this disease will increase my ability to include it in the differential earlier and therefore potentially provide earlier definitive treatment for those affected by it... **I always thought I did not see these cases, now I wonder and will look harder.**” - online participant



Program Overview

Learning Objectives

- Identify clinical features that distinguish EGPA from other eosinophilic lung diseases
- Review best practices for early evaluation and differential diagnosis of EGPA
- Select appropriate treatments for patients with EGPA



Target Audience

This activity is designed to meet the needs of pulmonologists, allergists and rheumatologists with an interest in better diagnosing and treating patients with EGPA and other eosinophilic diseases.

Program Faculty



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MD, MMSc**
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Salt Lake City, Utah

Program Summary Dashboard

Differential Diagnosis & Treatment Selection for Eosinophilic Granulomatosis with Polyangiitis (EGPA)

Program Faculty: Michael E. Wechsler, MD, MMSc, Paneez Houry, MD, MHSc, FAAAAI, Curry Koenig, MD, MS

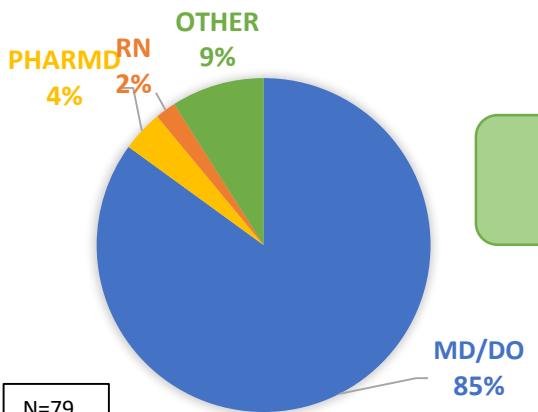
Live: CHEST 2019 Annual Meeting Symposium | New Orleans, LA | October 21, 2019

Online: freeCME – 11/12/2019 – 11/12/2020 | myCME – 4/24/2020 – 11/12/2020



Live Program Participation

79 Learners | 79 Certs



85%
Physicians

N=79

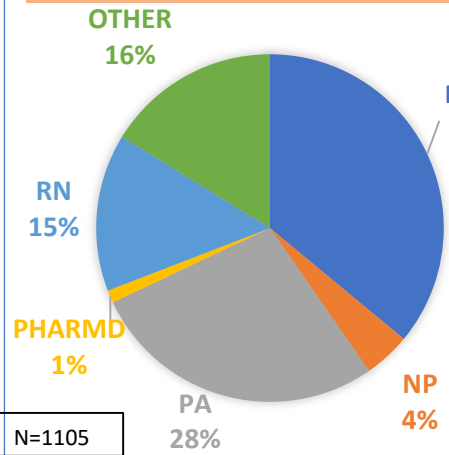
97%
Pulmonology

Specialty	# of Evaluation Respondents
Pulmonology	30
Other	1
Total	31

Because the live program was offered as a symposium at the CHEST 2019 Annual Meeting, specialty data was not available for all live attendees. The specialty breakdown above represents evaluation respondents (N=31).

Online Program Participation

1588 Learners | 1105 Completers | 1091 Certs



N=1105

68%
Physicians and advanced practice providers

30%
Pulmonology, allergy and immunology, rheumatology, internal medicine and primary care

Specialty	# of Completers
Primary Care	153
Surgery	92
Emergency Medicine	78
Internal Medicine	62
Pulmonology	41
Allergy and Immunology	41
Cardiology	36
Pediatrics	35
Dermatology	35
Radiology	34
Rheumatology	33
Acute Care	31
Anesthesiology	26
Critical Care	18
Neurology	18
Other	372
Total	1105

Learning Objectives

1. Identify clinical features that distinguish EGPA from other eosinophilic lung diseases
2. Review best practices for early evaluation and differential diagnosis of EGPA
3. Select appropriate treatments for patients with EGPA

Satisfaction

Evaluation respondents in the live and online activities reported:

The activity was "good" or "excellent" at meeting the learning objectives

Live – 100% | Online – 93%

The activity was clinically relevant

Live – 100% | Online – 97%

The activity was free of commercial bias

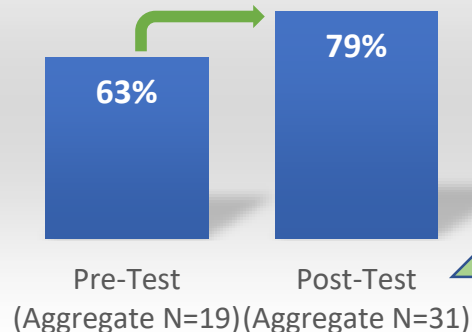
Live – 100% | Online – 96%

N=31

N=1101

Knowledge

Live Program

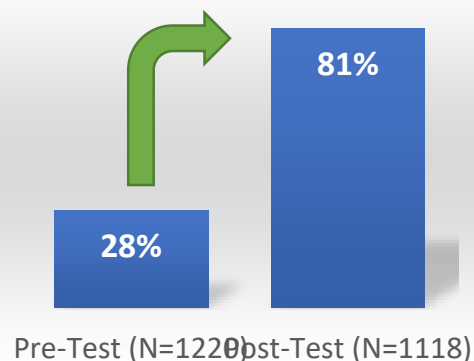


25%
relative gain in
knowledge
from pre- to
post-activity

74%
average
relative
gain
in
knowledge
for
program
overall

189%
relative gain in
knowledge
from pre- to
post-activity

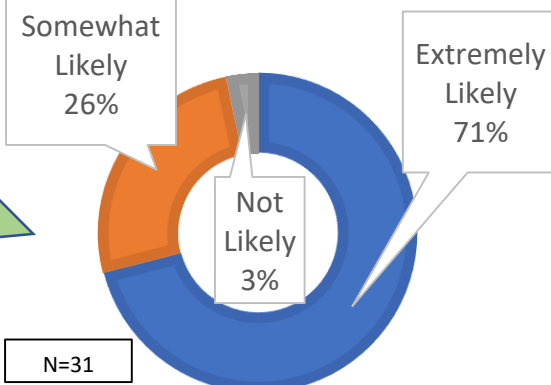
Online Program



Competence

Evaluation respondents in the live and online activities were asked how likely they are to make changes in their practice as a result of what they learned in the activity:

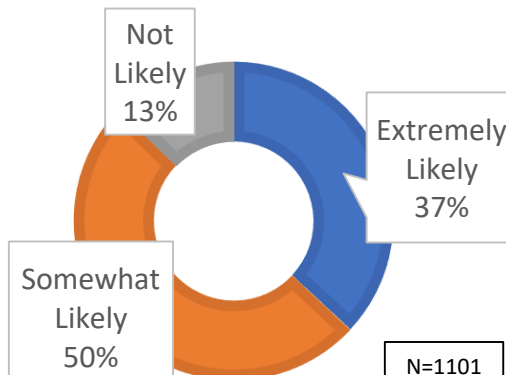
LIVE PROGRAM



92%
average
proportion of
evaluation
respondents
who intend to
make practice
changes post-
activity

100% of live
and **94%** of
online
evaluation
respondents
reported the
activity reinforced
and/or improved
their skills

ONLINE PROGRAM



Performance

80% of follow-up survey respondents (N=5) made changes to practice as a result of what they learned in the activity:

- ✓ Changed screening/prevention practices
- ✓ Incorporated different diagnostic strategies into patient evaluation
- ✓ Used alternative communication techniques with patients and families
- ✓ Modified treatment plans

20% of follow-up survey respondents still remained committed to making changes to practice

Performance change data was collected from live program learners only

Top 3 Practice Changes

Evaluation respondents in the live and online activities reported specific intended practice changes as a result of what they learned:

- 1 Improve workup and evaluation to diagnose EGPA
- 2 Initiate new medications and treatment strategies
- 3 Collaborate with other specialists to provide multidisciplinary patient care

Patient Impact

1,136 evaluation respondents in the live and online activities

Who treat 5,734 patients with eosinophilic lung diseases weekly

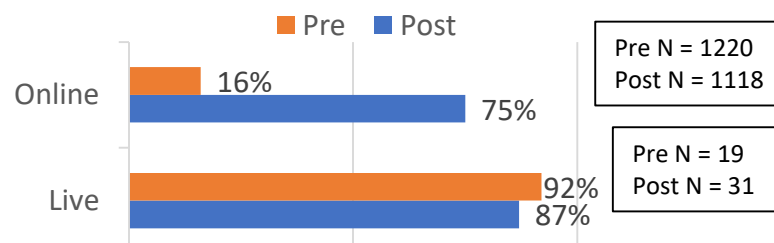
Based on self-reported number of patients seen on a weekly basis with condition discussed in activity (multiplied by 52 for annual estimate).

Potential to impact 298,168 patient visits annually

Persistent Gaps and Needs

✓ A gap persists related to **selecting treatments for patients with EGPA.**

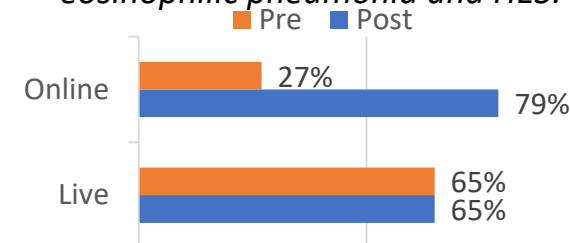
Learners were asked to identify a clinical scenario in which cyclophosphamide should be considered:



The live activity (97% pulmonologists) saw a knowledge decrease from pre to post. In the online activity, 25% still remained unable to identify the correct clinical scenario at post-test.

✓ A gap persists in **distinguishing EGPA from other eosinophilic lung diseases.**

Learners were asked to identify which clinical finding is most helpful in distinguishing EGPA from chronic eosinophilic pneumonia and HES:



35% remained unable to recognize that ANCA is most helpful in distinguishing EGPA from these other conditions

In the live activity (97% pulmonologists), there was **no knowledge change from pre to post**

Program Insights

- Further education is needed on the clinical presentation of EGPA to support providers in differential diagnosis.
- Specific diagnostic strategies were the top cited takeaway and the top intended practice change among learners. The reference aid and clinical cases used to illustrate differential diagnosis were effective tools for supporting learner change.
- Providers would benefit from further education on treatment selection for patients at various stages of disease progression.

Differential Diagnosis and Treatment selection for Eosinophilic Granulomatosis with Polyangiitis (EGPA)

Online Enduring Activity Outcomes

In an effort to exceed projected reach, National Jewish Health posted the enduring activity on two distribution providers' platforms.

Online Enduring Activity on freeCME 11/12/2019 – 11/12/2020



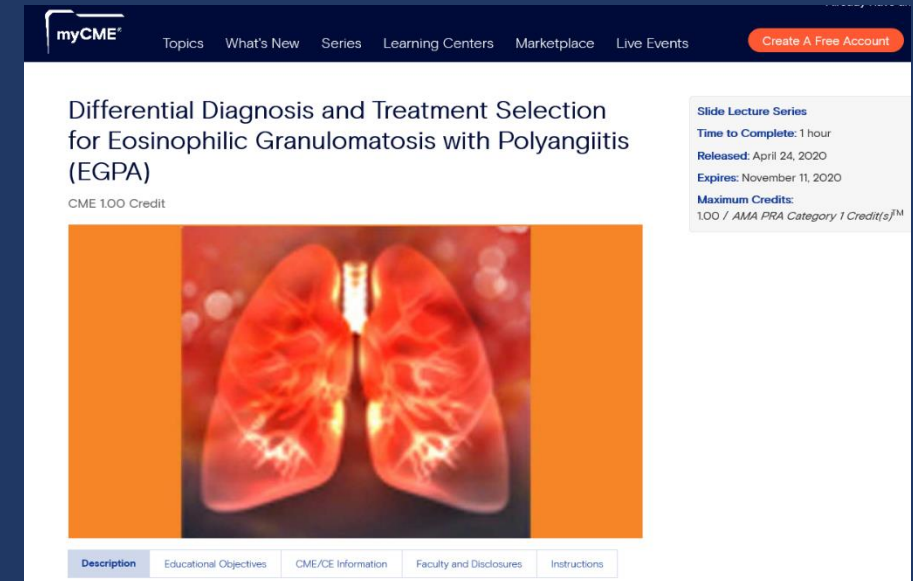
The screenshot shows the freeCME website interface. At the top left is the freeCME logo. Navigation links include Home, Courses, Specialties, Events, and About Us. A search bar and member login options are also visible. The main content area features a course card with a red and orange graphic of lungs and the title 'Differential Diagnosis and Treatment Selection for Eosinophilic Granulomatosis with Polyangiitis (EGPA)'. Below the card, a table provides course details:

Released On	Expires On	Media Type	Completion Time
November 12, 2019	November 11, 2020	Internet	60 minutes

Additional details include Specialty: Allergy & Immunology, Pulmonology, Rheumatology and Topic(s): EGPA.

<https://learning.freecme.com/a/33470P34sZcA>

Online Enduring Activity on myCME 4/24/2020 – 11/12/2020



The screenshot shows the myCME website interface. At the top right is the myCME logo and navigation links: Topics, What's New, Series, Learning Centers, Marketplace, Live Events, and a 'Create A Free Account' button. The main content area features a course card with a red and orange graphic of lungs and the title 'Differential Diagnosis and Treatment Selection for Eosinophilic Granulomatosis with Polyangiitis (EGPA)'. Below the card, a table provides course details:

Released On	Expires On	Media Type	Completion Time
November 12, 2019	November 11, 2020	Internet	60 minutes

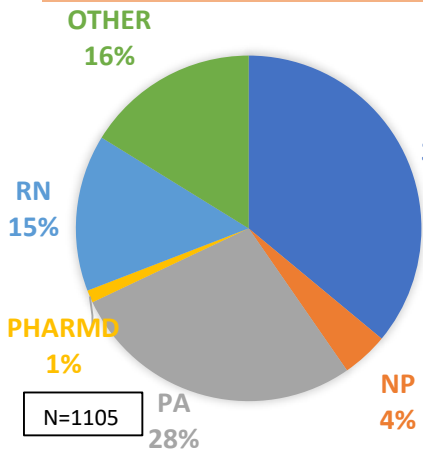
Additional details include Specialty: Allergy & Immunology, Pulmonology, Rheumatology and Topic(s): EGPA.

<https://www.mycme.com/courses/differential-diagnosis-and-treatment-selection-for-eosinophilic-granulomatosis-with-polyangiitis-egpa-7051>

Educational Impact: Online Dashboard

Participation

1588 Learners 1105 Completers



Target Specialties:

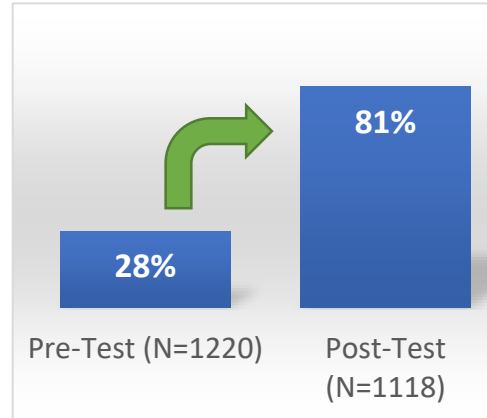
153 Primary Care
62 Internal Medicine
41 Pulmonology
41 Allergy & Immunology
33 Rheumatology

68% Physicians and advanced practice providers

Satisfaction

- ✓ **96%** of evaluation respondents report the activity was free of commercial bias (N=1101)
- ✓ **97%** of evaluation respondents report the activity was clinically relevant (N=1101)
- ✓ **94%** of evaluation respondents report the learning objectives were met (N=1101)

Learner Impact



189% overall relative gain in knowledge from pre-activity to post-activity

NARROWING THE GAPS BY OBJECTIVE

Distinguish EGPA from other eosinophilic lung diseases

148% increase in knowledge from pre to post test

Best practices for early evaluation and differential diagnosis of EGPA

169% increase in knowledge from pre to post test

Select appropriate treatments for patients with EGPA

271% increase in knowledge from pre to post test

Performance

- ✓ **93%** of learners report that the activity improved their ability to treat or manage patients
- ✓ **87%** of learners report that they intend to make changes in their practice based on what they learned

1105 completers who treat **5622** patients with eosinophilic lung diseases weekly

Potential to impact **292,370** patient visits annually

Learning Needs

Diagnostic strategies were the top takeaway cited by completers

- Asthma
- COPD
- Sarcoidosis
- Pulmonary fibrosis
- Pulmonary hypertension
- Dermatology

Clinical Reference Aid

Learner Evaluation – Clinical Reference Aid

EOSINOPHILIC GRANULOMATOSIS WITH POLYANGIITIS (EGPA):

Diagnosis & Treatment Approaches

Characteristics

- Moderate to severe asthma
- Peripheral blood eosinophilia (> 10% eosinophils)
- Pulmonary infiltrates
- Paranasal sinus abnormality
- Mononeuropathy or polyneuropathy
- Extravascular eosinophil/eosinophilic vasculitis of small- to medium-sized blood vessels
- Positive ANCA



STEP 1 Basic evaluation

- DETAILED HISTORY AND PHYSICAL EXAM
- ASK ABOUT EXPOSURES: Medications, dietary supplements, recreational drugs, toxins, workplace, travel
- SEARCH FOR EXTRAPULMONARY DISEASE: Nasal/sinus, ocular, skin, cardiac, gastrointestinal, neurologic, renal, vascular
- Talk according to history and physical.
- IMAGING TESTING: CXR, chest CT scan, sinus CT scan, EMG/NCV, echocardiogram or cardiac MRI
- LABORATORY: CBC with differential, ESR, CRP, ANCA, MPD/PTD, vitamin B12, electrolytes, LFTs, total protein, urinalysis
- Serum tryptase level, serum IgE (include IgG), Troponin
- Some measure exhaled and inspired with nebulizer and tryptase status

STEP 2 Exclude major secondary causes of pulmonary eosinophilia

DISORDERS TO EXCLUDE	EXAMINATIONS AND TESTS TO CONSIDER
<ul style="list-style-type: none"> Drug or toxin reactions Parasitic/Infectious Infections Neoplastic Infections (TB, Cocci) Myeloid dysplasia/leukemias 	<ul style="list-style-type: none"> Drug and dietary supplement history Discontinuation of potential causative agents Serum history Search for oral parasites Search for genetic infections (based on travel history) TB skin test, GMA, H. Infection culture Coccidioides serology, fungal culture Blood immunophenotyping and molecular phenotyping (eg. NPM1, FLT3-ITD) Flow cytometry analysis with cytoxic, immunophenotyping
<ul style="list-style-type: none"> Primary Allergic Bronchopulmonary Aspergillosis Atypical hypersensitivity disorders Systemic vasculitis Solid tumors 	<ul style="list-style-type: none"> EB serology Pharmacologic (skin testing and specific IgE testing, Aspergillus specific IgG and precipitin) Anti-aspergillus (IgE & ascomycete) testing for peripheral eosinophilia (asthma), localized chronic aspergilloma EB serology, eosinophil count, serum tryptase level CXR scan

STEP 3 Exclude other diseases associated with eosinophilia

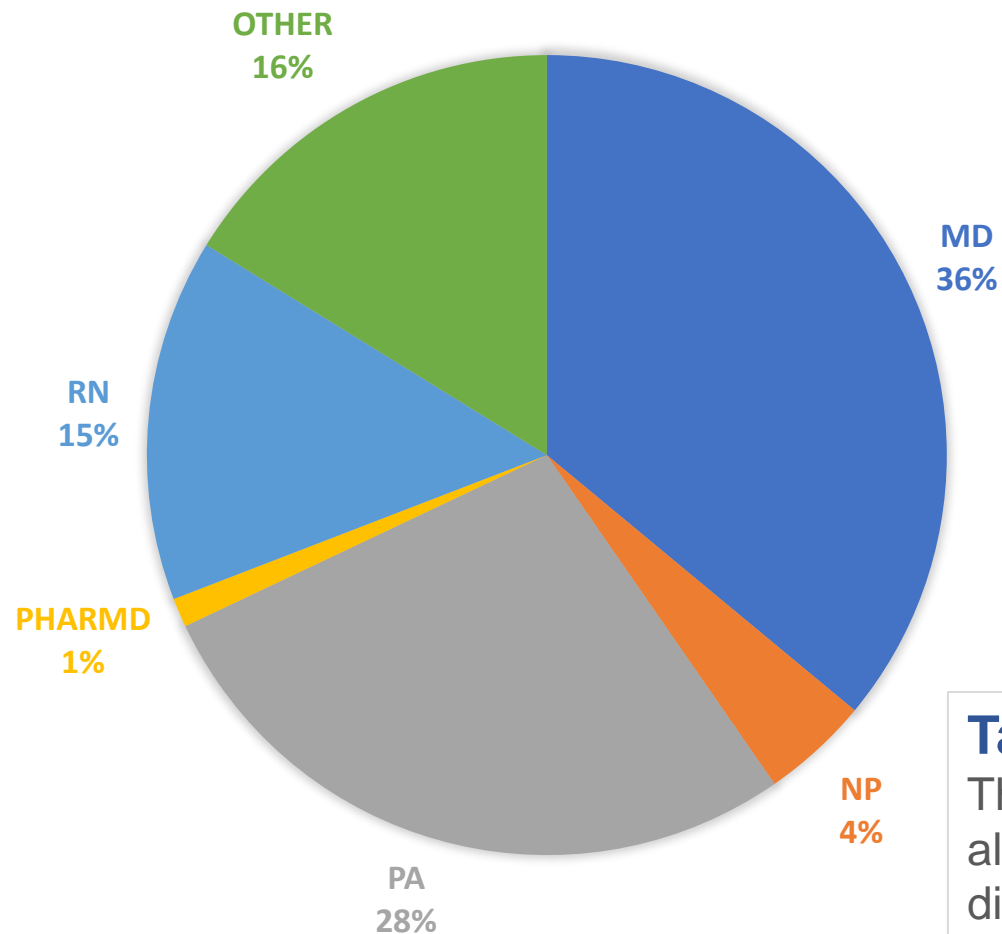
LUNG DISEASES	SYSTEMIC DISEASES
<ul style="list-style-type: none"> Allergic eosinophilic bronchitis Allergic bronchopulmonary aspergillosis Bronchocentric granulomatosis Cryptogenic organizing pneumonia Hypersensitivity pneumonitis Idiopathic pulmonary fibrosis Pulmonary Langerhans cell histiocytosis Post-infectious pneumonitis 	<ul style="list-style-type: none"> Rheumatoid arthritis Sarcoidosis Sjogren syndrome Hyper eosinophilic Syndrome

89% of evaluation respondents report that they are somewhat to extremely likely to use the clinical reference aid infographic in practice

N = 1101

Differential Diagnosis and Treatment selection for Eosinophilic Granulomatosis with Polyangiitis (EGPA)

Level 1 Outcome: Participation (Online Enduring Completers)



Designation	# of Completers
MD/DO	398
NP	48
PA	305
PHARMD	13
RN	162
OTHER	179
Total	1105

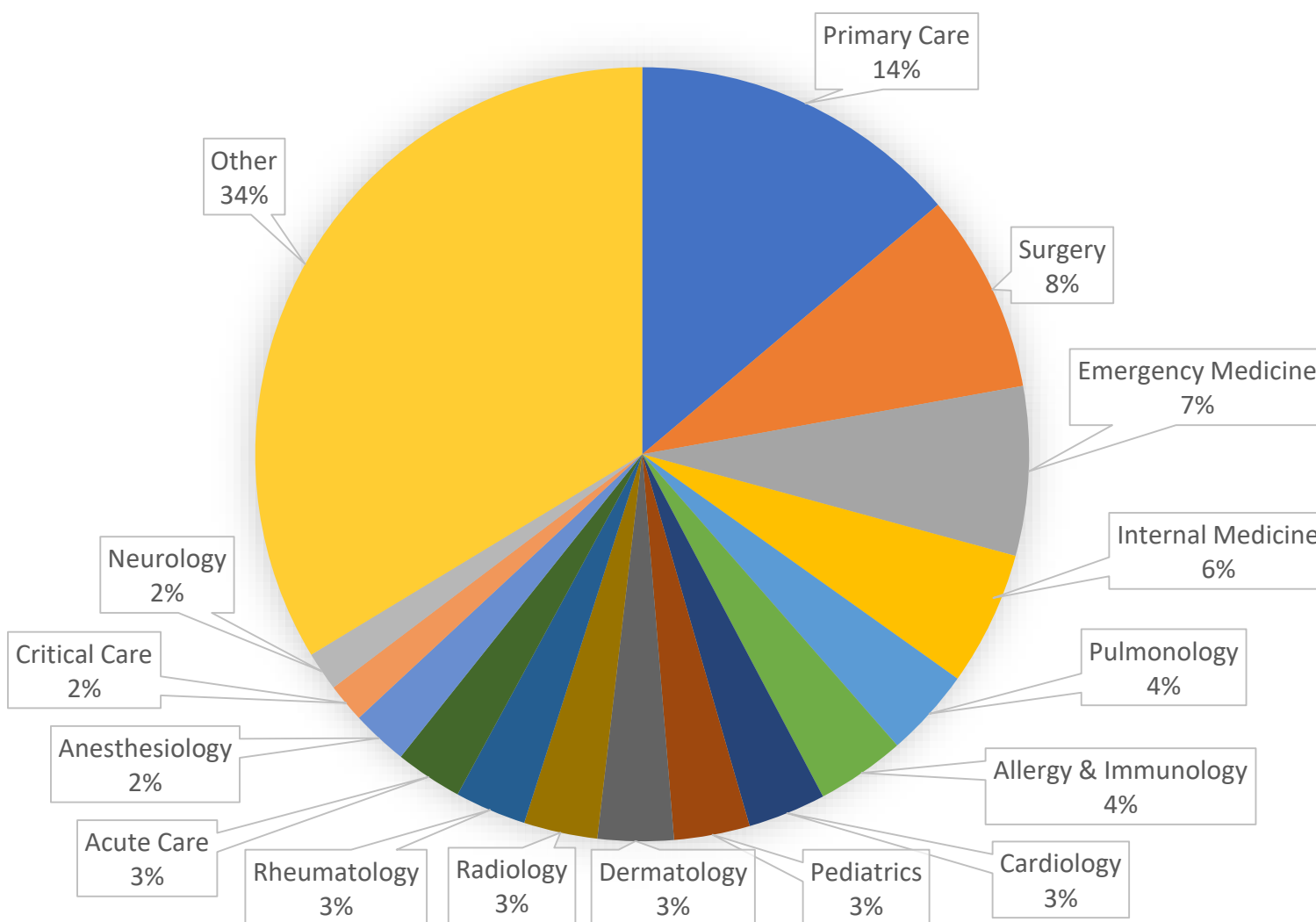
68% Physicians and Advanced Practice Providers

Target Audience

This activity is designed to meet the needs of pulmonologists, allergists and rheumatologists with an interest in better diagnosing and treating patients with EGPA and other eosinophilic diseases.

Differential Diagnosis and Treatment selection for Eosinophilic Granulomatosis with Polyangiitis (EGPA)

Level 1 Outcome: Participation (Online Enduring Completers)



Specialty	# of Completers
Primary Care	153
Surgery	92
Emergency Medicine	78
Internal Medicine	62
Pulmonology	41
Allergy and Immunology	41
Cardiology	36
Pediatrics	35
Dermatology	35
Radiology	34
Rheumatology	33
Acute Care	31
Anesthesiology	26
Critical Care	18
Neurology	18
Other*	372
Total	1105

*Top specialties represented in "other" include orthopedics, physical medicine/rehabilitation, nephrology, oncology, endocrinology, gastroenterology, psychiatry, pain medicine, pharmacy

Level 2 Outcome: Satisfaction

Online Enduring

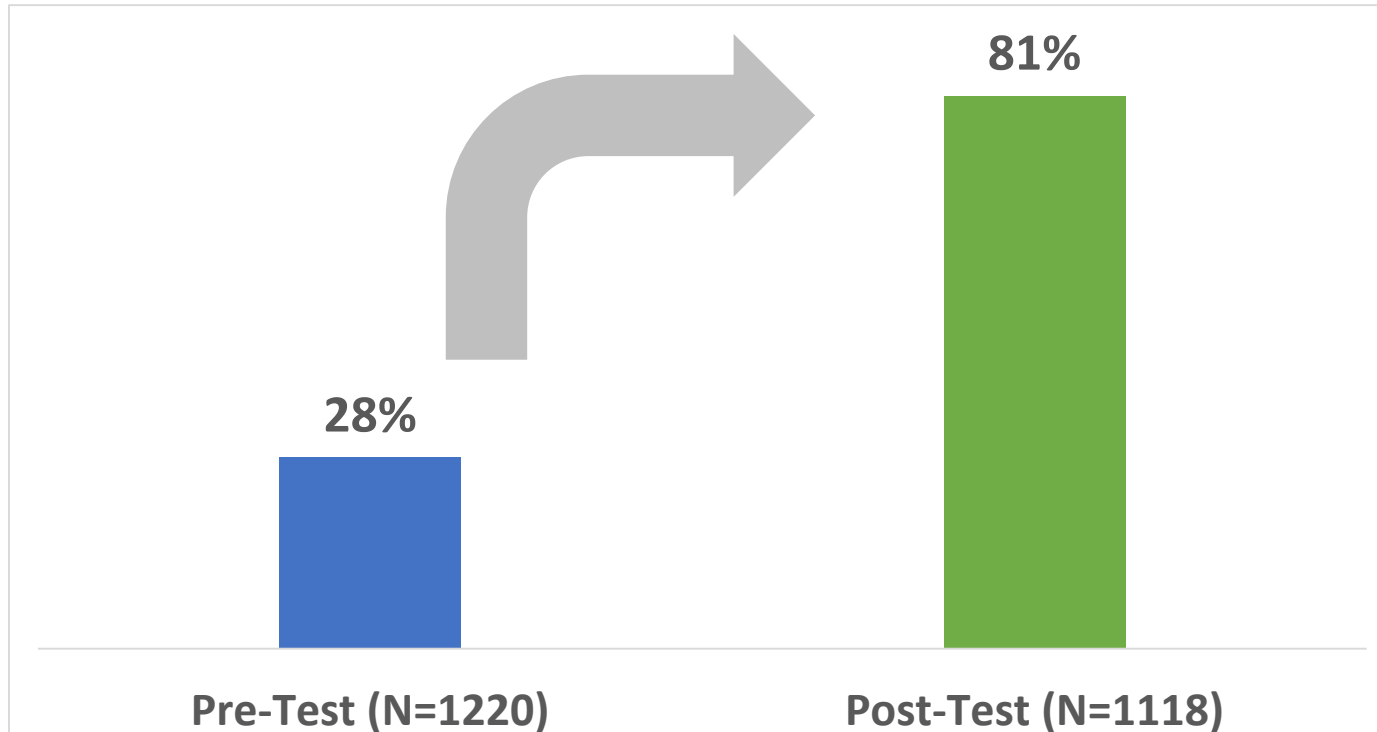
Analysis of participants' responses related to educational needs

When asked how well the activity met the following needs, an average of **94%** of participants reported the activity was “Excellent” to “Good” at:

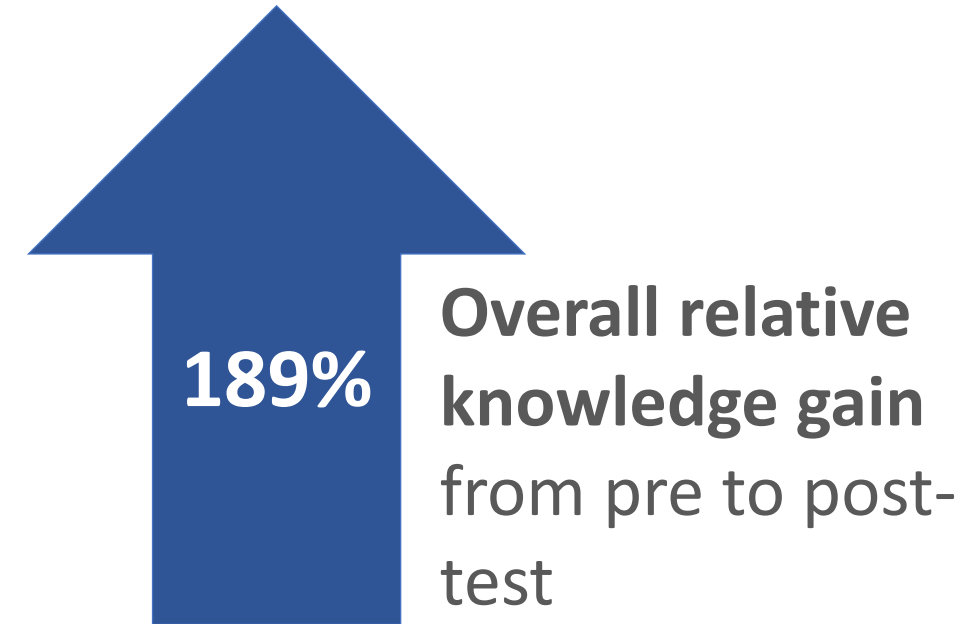


Level 3&4 Outcomes: Knowledge/Competence

Online Enduring



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



92% of evaluation respondents say the activity addressed strategies for overcoming barriers to optimal patient care

N = 1101

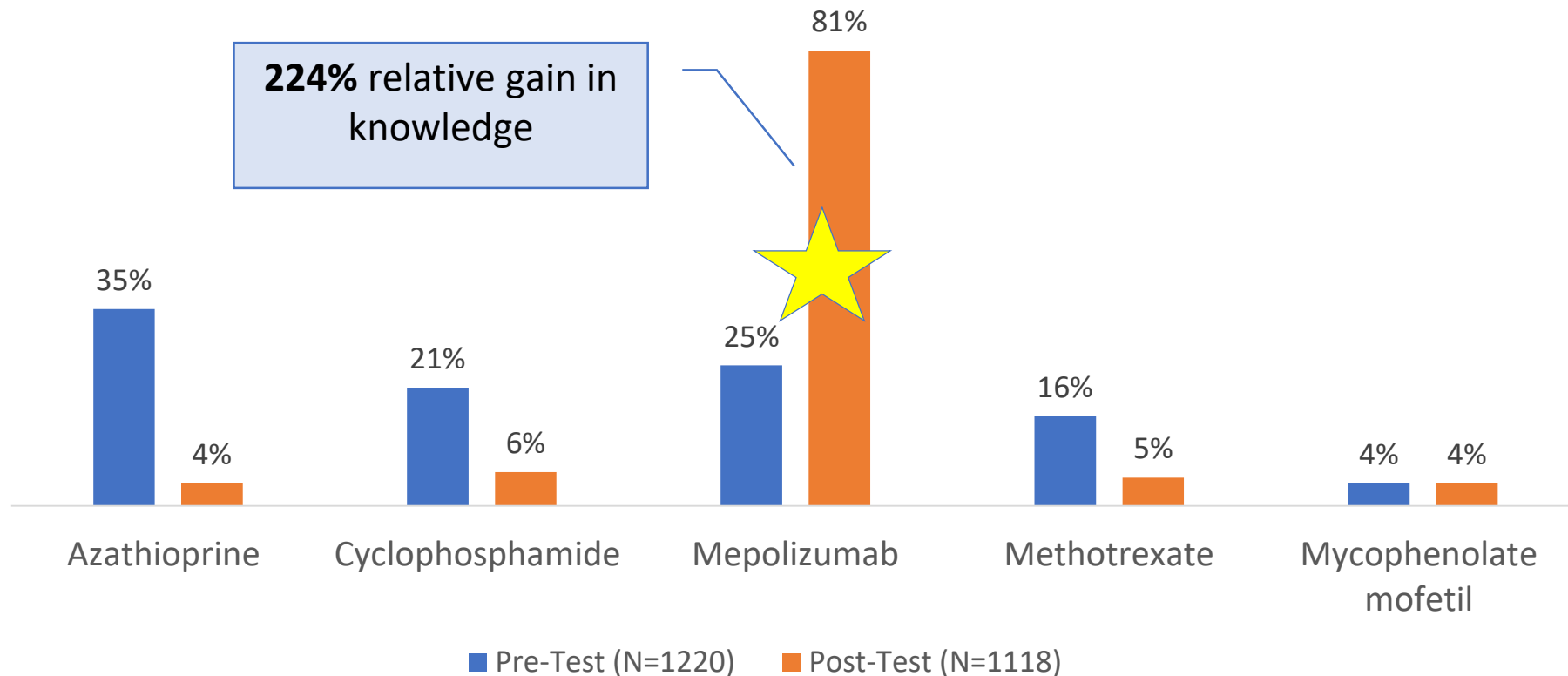
Assessment: Pre-Test/Post-Test

Online Enduring

Learning Objective:

Select appropriate treatments for patients with EGPA

Q1: Which of the following treatments for EGPA has been shown to demonstrate improvements in remission, oral corticosteroid dose reductions and/or remaining free of EGPA relapse?



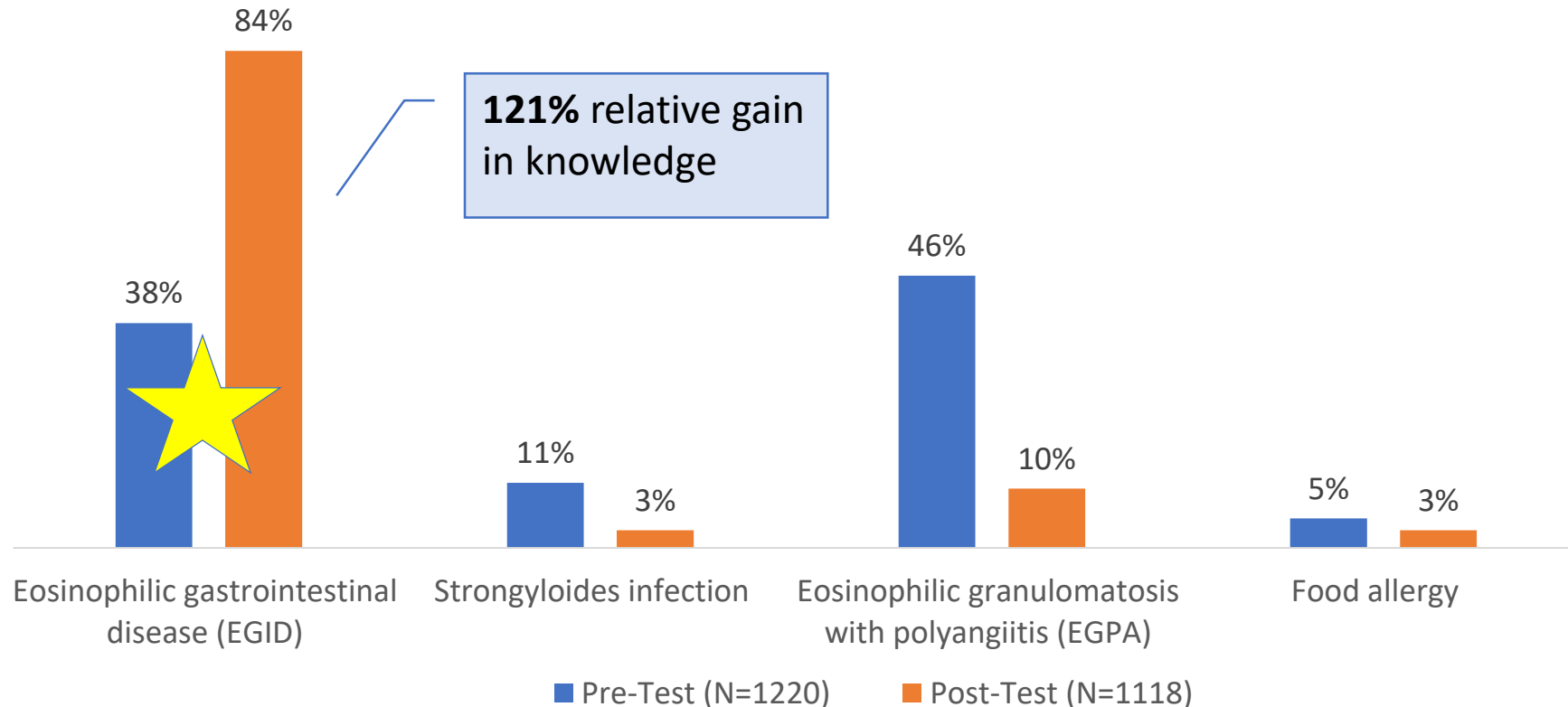
Assessment: Pre-Test/Post-Test

Online Enduring

Learning Objective:

Identify clinical features that distinguish EGPA from other eosinophilic lung diseases

Q2: A patient presents with atopy, eczema, sinusitis, asthma, and eosinophilic gastroenteritis with duodenal eosinophilia. The most likely diagnosis is:



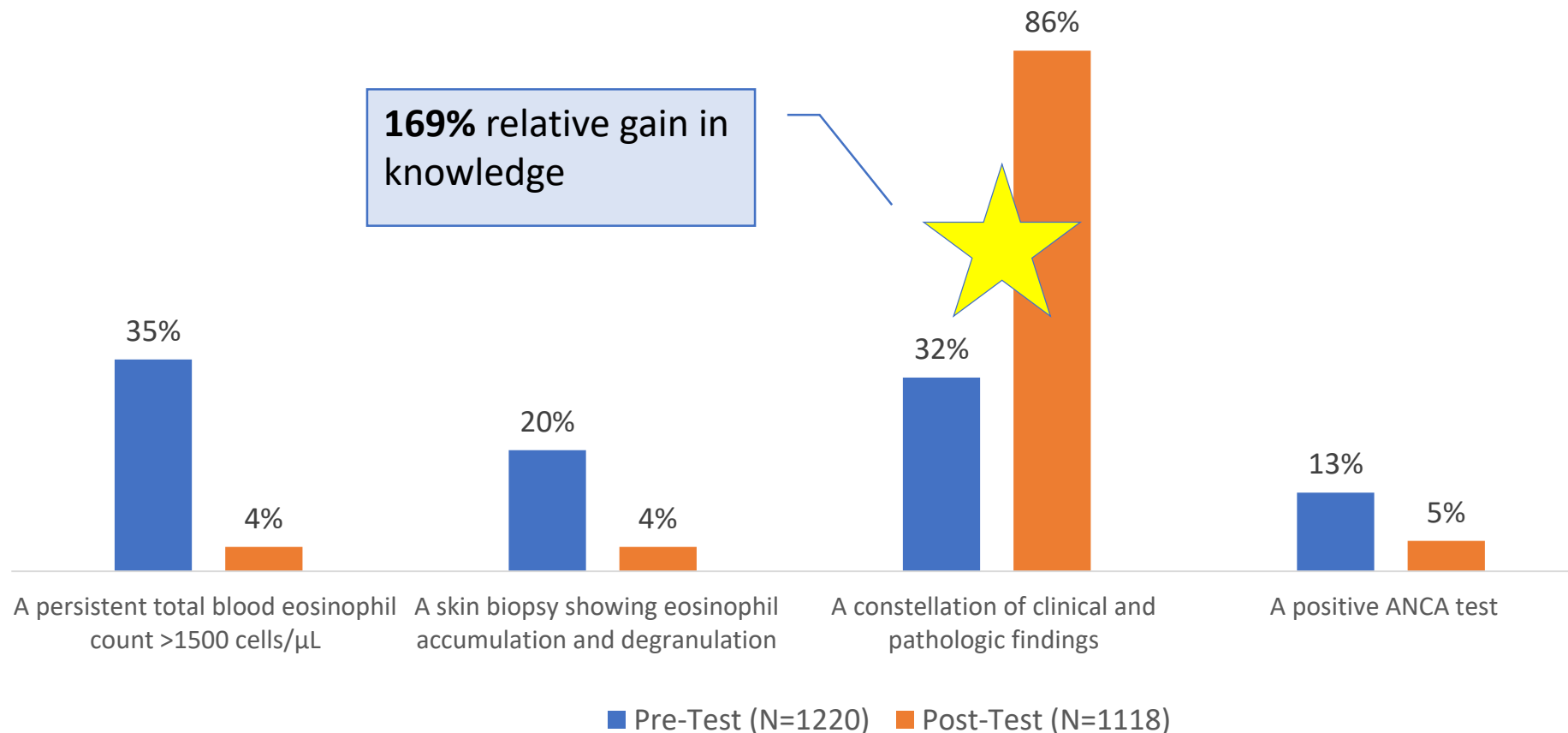
Assessment: Pre-Test/Post-Test

Online Enduring

Learning Objective:

Review best practices for early evaluation and differential diagnosis of EGPA

Q3: Which of the following features is most important for making a diagnosis of EGPA?



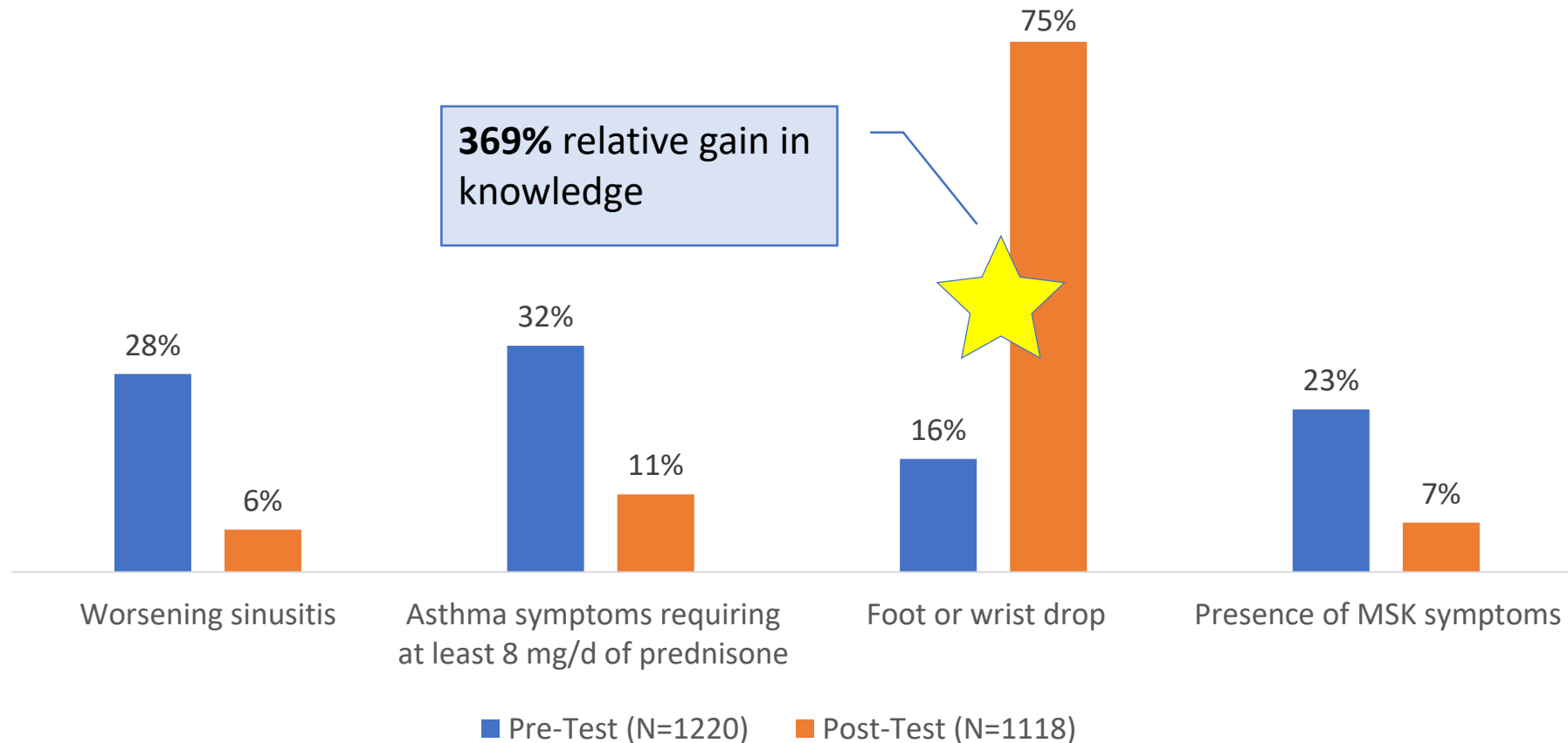
Assessment: Pre-Test/Post-Test

Online Enduring

Learning Objective:

Select appropriate treatments for patients with EGPA

Q4: In which clinical scenario should cyclophosphamide be considered?

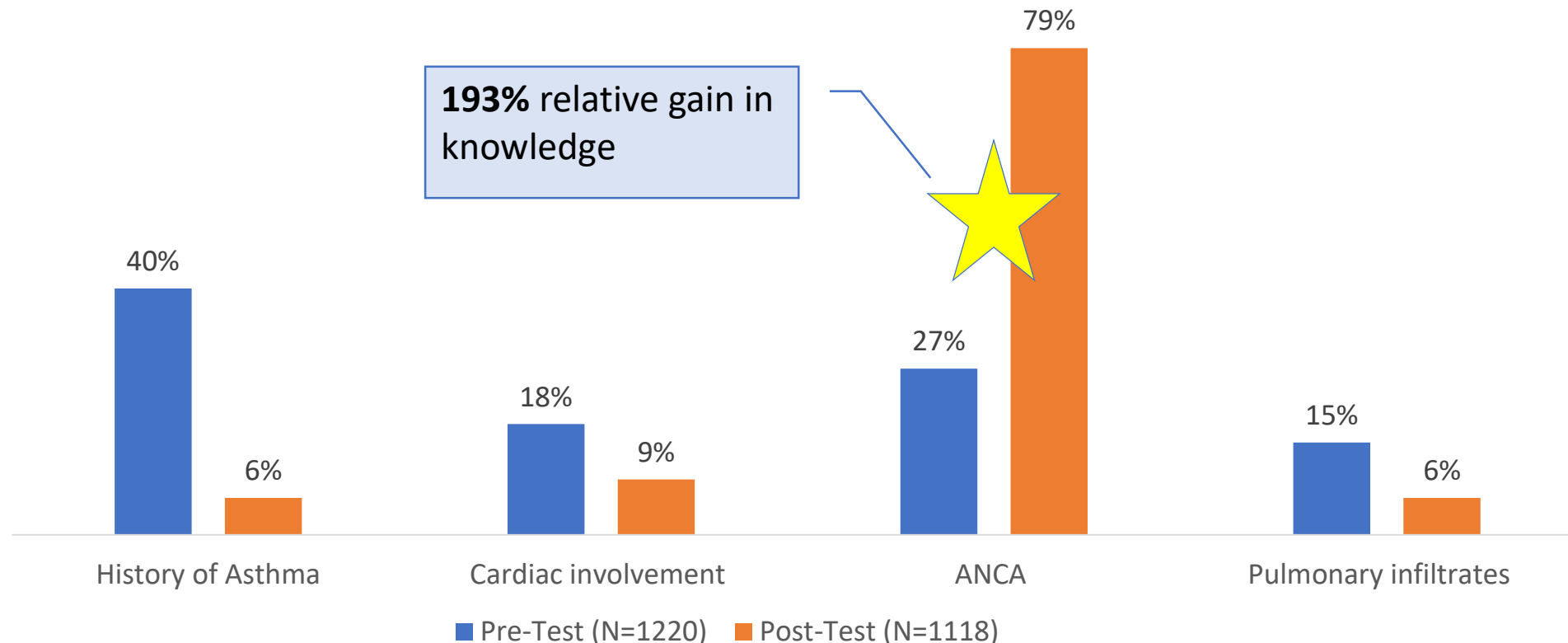


Assessment: Pre-Test/Post-Test *Online Enduring*

Learning Objective:

Identify clinical features that distinguish EGPA from other eosinophilic lung diseases

Q5: Which of the following is most helpful in distinguishing EGPA from chronic eosinophilic pneumonia and hypereosinophilic syndrome?

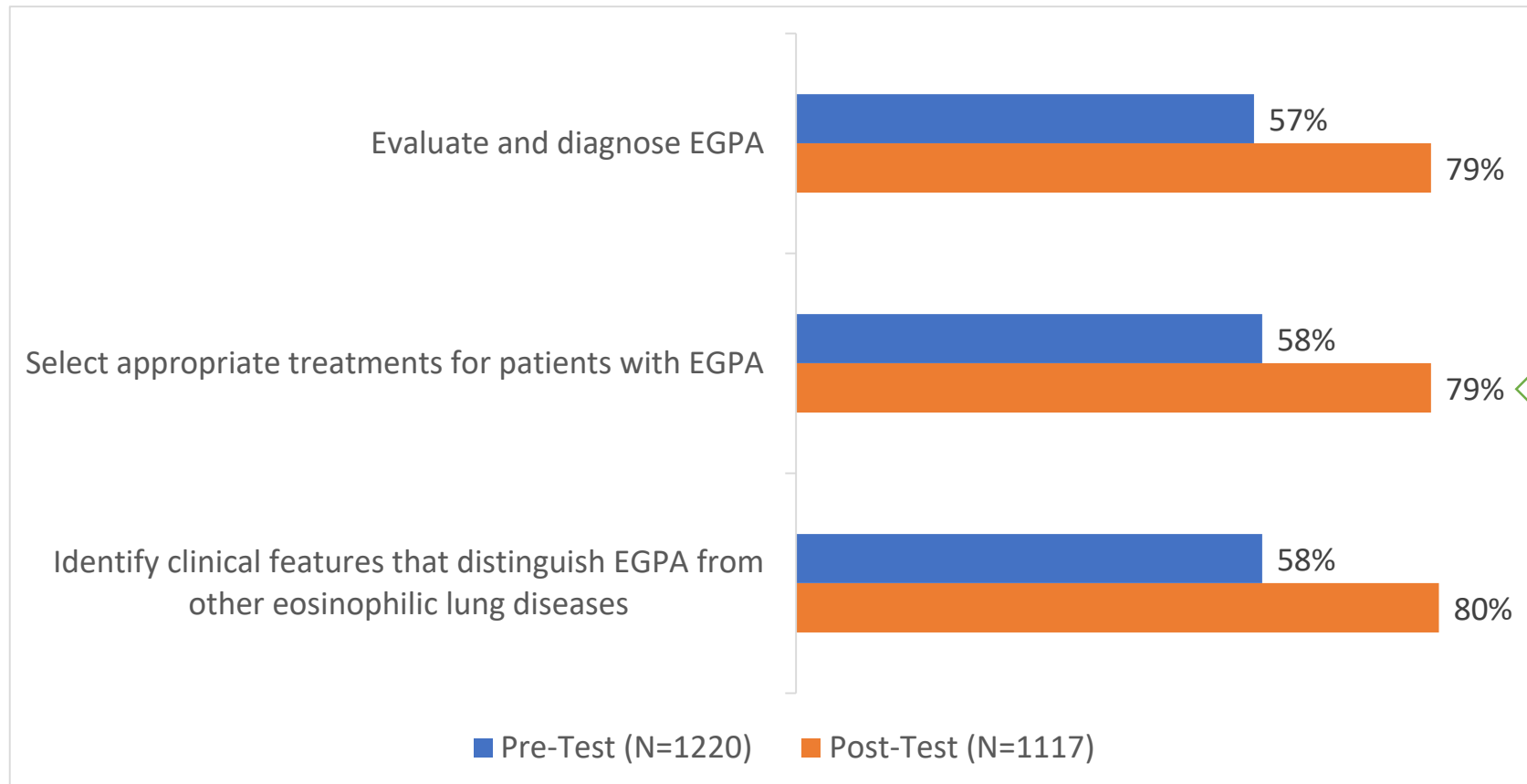


Audience Confidence Questions

Online Enduring

We asked online learners to rate their confidence in their ability to perform the key tasks as outlined in the learning objectives, and compared their confidence before and after participating in the activity.

Learners reported they were **Somewhat Confident** to **Very Confident** in their ability to:

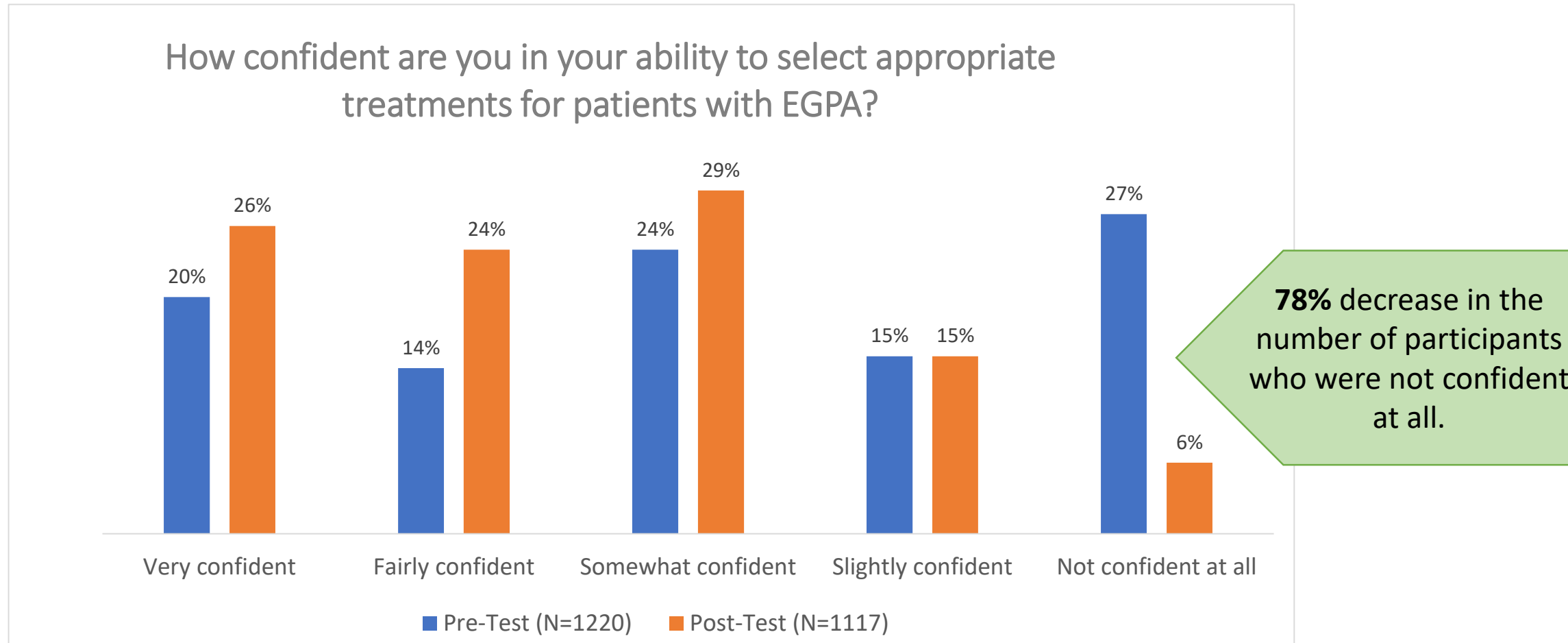


36% relative gain in confidence across all learning objectives from pre to post activity.

Audience Confidence Questions: Highlights

Online Enduring

We asked online learners to rate their confidence in their ability to perform the key tasks as outlined in the learning objectives, and compared their confidence before and after participating in the activity.



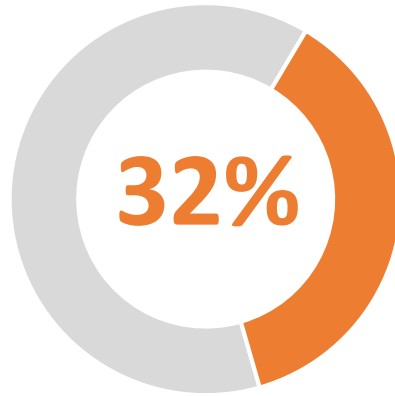
Level 3 & 4 Outcomes: Magnitude of Effect

Online Enduring

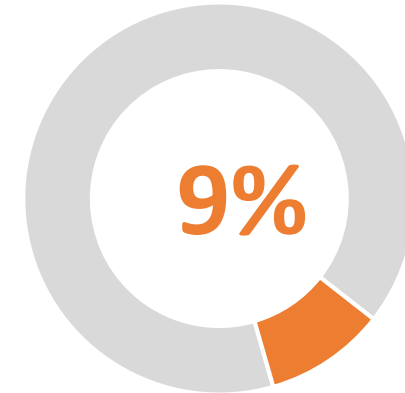
87%

N=1101

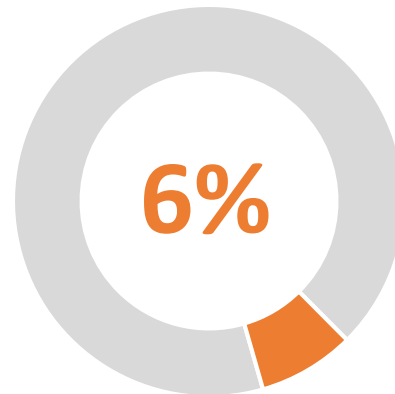
Evaluation respondents intend to make changes in practice as a result of the activity



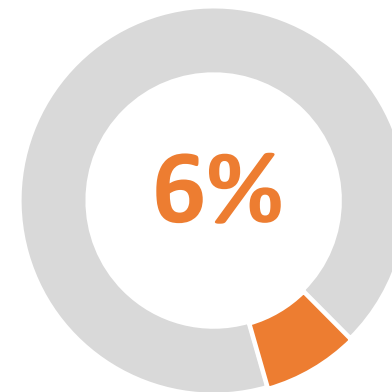
Improve testing and evaluation to diagnose EGPA



Implement new treatment strategies



Collaborate and consult with other specialists to provide multidisciplinary patient care



Initiate new medications for EGPA treatment

N=203



Needs for Further Education

- Updates on therapies for EGPA
- Pre-operative evaluation for patients with EGPA
- Eosinophilic syndromes
- COPD
- Sarcoidosis
- Asthma
- Pulmonary fibrosis
- Pulmonary hypertension
- Cardiac
- Dermatology

Differential Diagnosis and Treatment selection for Eosinophilic Granulomatosis with Polyangiitis (EGPA)

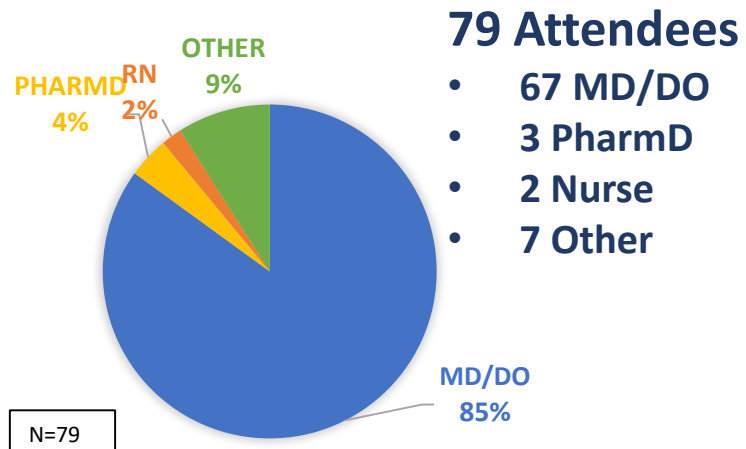
Live Activity Outcomes

Satellite Symposium at CHEST Annual Meeting 2019
October 21, 2019



Educational Impact: Live Dashboard

Participation

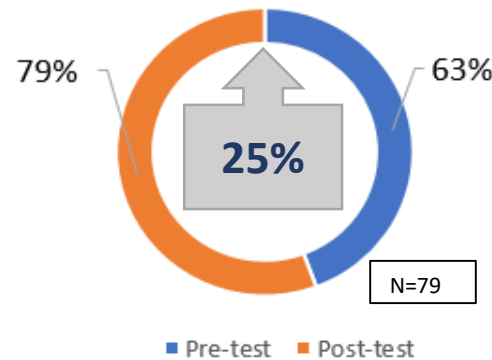


Satisfaction

“It was eye opening. I always thought I did not see these cases, now I wonder and will look harder.”-MD attendee in New Orleans, LA

“Nice to have different sub specialties represented. Synopsis handout is great. Very concise.”-MD attendee in New Orleans, LA

Learner Impact



25% overall relative gain in knowledge from pre-activity to post-activity

NARROWING THE GAPS

Distinguish EGPA from other eosinophilic lung diseases

600% increase in knowledge from pre to post test

Best practices for early evaluation and differential diagnosis of EGPA

27% increase in knowledge from pre to post test

Select appropriate treatments for patients with EGPA

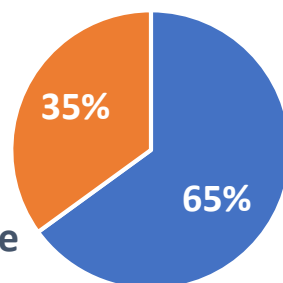
9% increase in knowledge from pre to post test

Performance

- **97%** of learners report that they are somewhat to extremely likely to make changes to their practice based on what they learned
- **100%** of learners report that the activity enhanced their ability to apply the learning objectives to their practice

Persistent Gaps/Needs

Only 65% of learners were able to recognize that ANCA is most helpful in distinguishing EGPA from chronic eosinophilic pneumonia and hypereosinophilic syndrome




Learner Evaluation – Clinical Reference Aid

EOSINOPHILIC GRANULOMATOSIS WITH POLYANGIITIS (EGPA):

Diagnosis & Treatment Approaches

Characteristics

- Moderate to severe asthma
- Peripheral blood eosinophilia (> 10% eosinophils)
- Pulmonary infiltrates
- Paranasal sinus abnormalities
- Mononeuropathy or polyneuropathy
- Extravascular eosinophil/eosinophilic vasculitis of small- to medium-sized blood vessels
- Positive ANCA



STEP 1 Basic evaluation

- EXTENDED HISTORY AND PHYSICAL EXAM
- ASK ABOUT EXPOSURES: Medications, dietary supplements, recreational drugs, toxins, workplace, travel
- SEARCH FOR CENTRAL/NONMAY DISEASE: Nasal/sinus, ocular, skin, cardiac, gastrointestinal, neurologic, renal, vascular
- Take according to history and physical
- IMMUNOASSAYS: CRP, chest CT scan, sinus CT scan, ESR/ANCA, echocardiogram or cardiac MRI
- LABORATORIES: CBC with differential, ESR, CRP, ANCA, MP/OP/CP, vitamin B12, electrolytes, LFTs, total protein, urinalysis
Serum tryptase level, serum IgE (total & IgG), TropoB
Bone marrow aspirate and biopsy with reticulin and tryptase stains

STEP 2 Exclude major secondary causes of pulmonary eosinophilia

DISORDERS TO EXCLUDE	DIAGNOSTIC AND TESTS TO CONSIDER
Drug or toxin reactions	Drug and dietary supplements history Discontinue of potential causative agents
Parasitic/Infectious infection	Travel history Stool for occult parasites Serologies for parasitic infections (based on travel history)
Nonparasitic infections (TB, Cocci)	TB skin test, RFL M, tuberculin culture Coccidioides serologies, fungal culture
Myeloid neoplasms (MDS, MPD, PLD)	Bone marrow aspirate/biopsy and molecular phenotyping (eg, TP53, FLT3) Bone marrow aspirate/biopsy with cytogenetics, immunophenotyping
Primary allergic rhinitis	RIE serology
Allergic rhinitis	Allergen testing (skin testing and specific IgE testing, respiratory specific Ig's and provocation)
Autoimmune disorders	Anti-cardiolipin (ACL) antibody testing for autoimmune thrombotic thrombocytopenic syndrome, paraneoplastic antibody testing
Systemic vasculitis	ANCA serology, serum tryptase level
Solid tumors	CEM scan

STEP 3 Exclude other diseases associated with eosinophilia

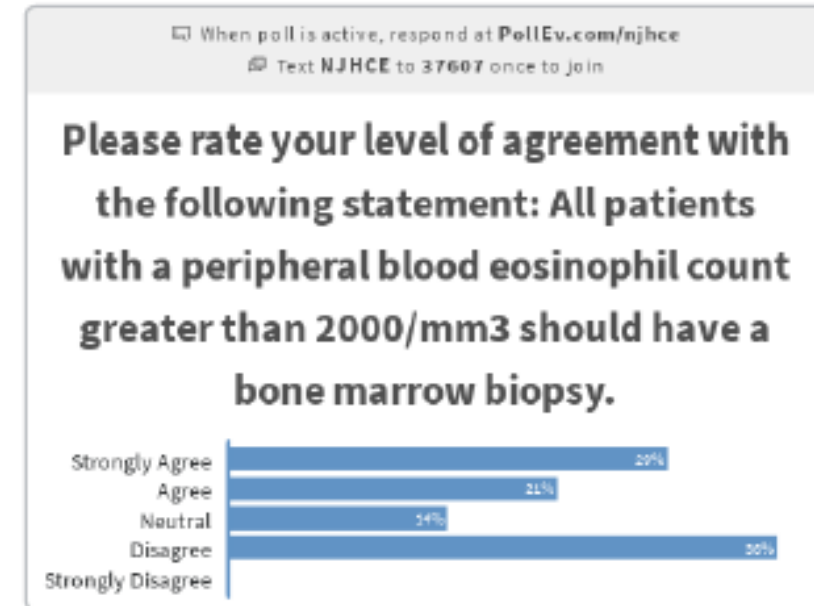
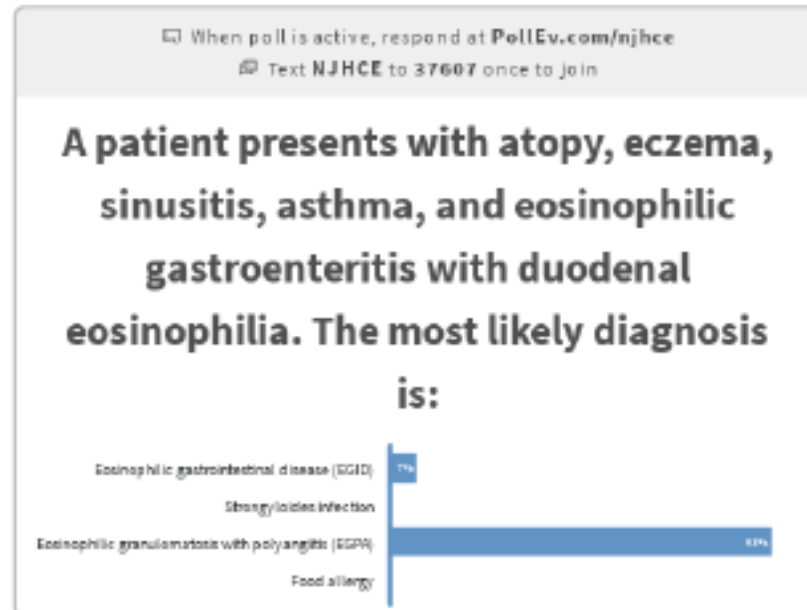
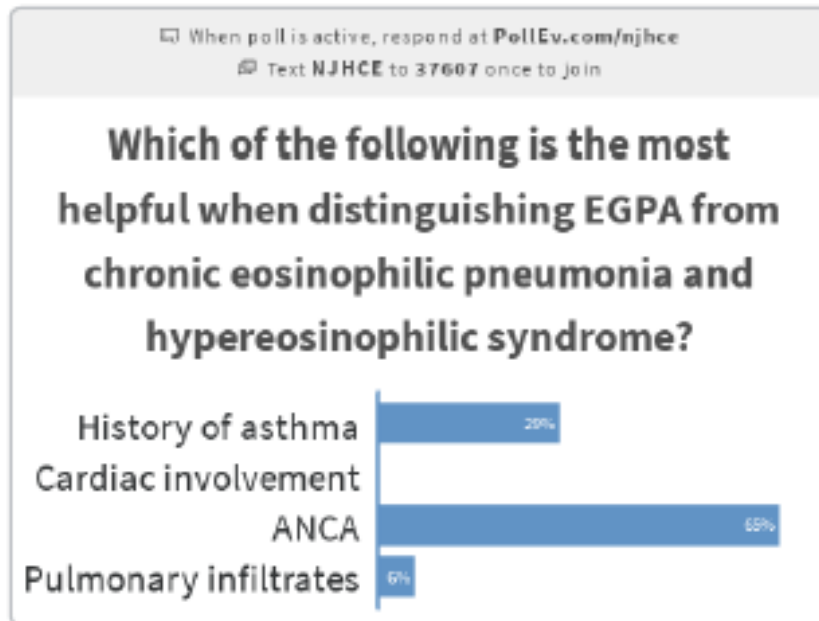
LUNG DISEASES	SYSTEMIC DISEASES
<ul style="list-style-type: none">Asthma/eosinophilic bronchitisAllergic bronchopulmonary aspergillosisBronchocentric granulomatosisCryptogenic organizing pneumoniaHypersensitivity pneumonitisIdiopathic pulmonary fibrosisPulmonary Langerhans cell histiocytosisPostinfectious pneumonitisChronic eosinophilic pneumonia	<ul style="list-style-type: none">Rheumatoid arthritisSarcoidosisSjogren syndromeHypereosinophilic Syndrome

94% of learners report that they are somewhat to extremely likely to use the clinical reference aid infographic in practice

Audience Response Questions: Highlights

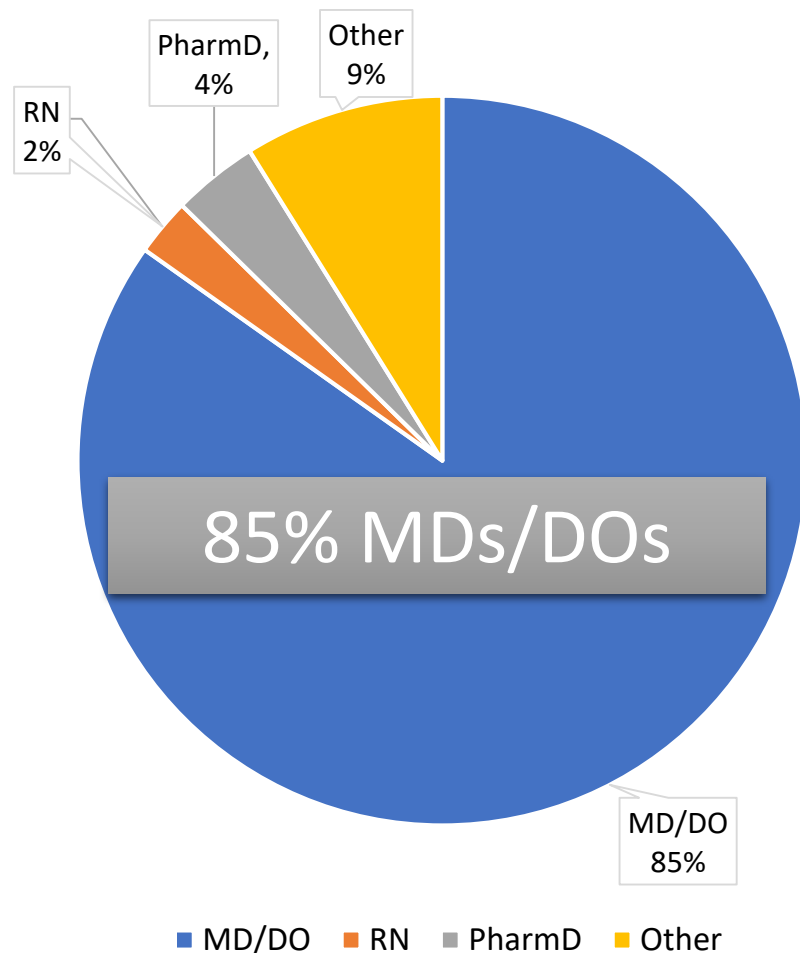
Live Activity

A test-and-teach approach was used to engage learners during the live meeting by testing their existing knowledge and using the gaps to teach them the new material presented in the live activity. Questions were tailored to the different faculty presenter's material to test learner's understanding of the proper steps in diagnosing and treating EGPA.



Differential Diagnosis and Treatment selection for Eosinophilic Granulomatosis with Polyangiitis (EGPA)

Level 1 Outcome: Participation (Live Activity)



Designation	# of Participants
MD/DO	67
RN	2
PharmD	3
Other	7
Total	79

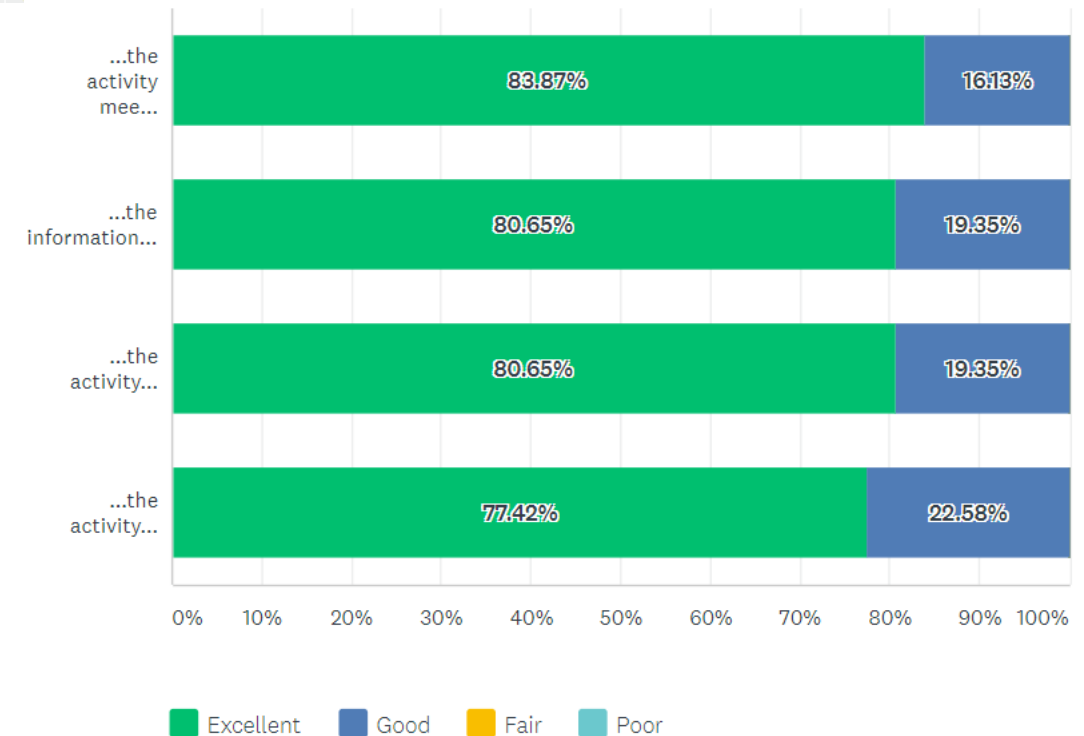
Level 2 Outcome: Satisfaction

Live Activity

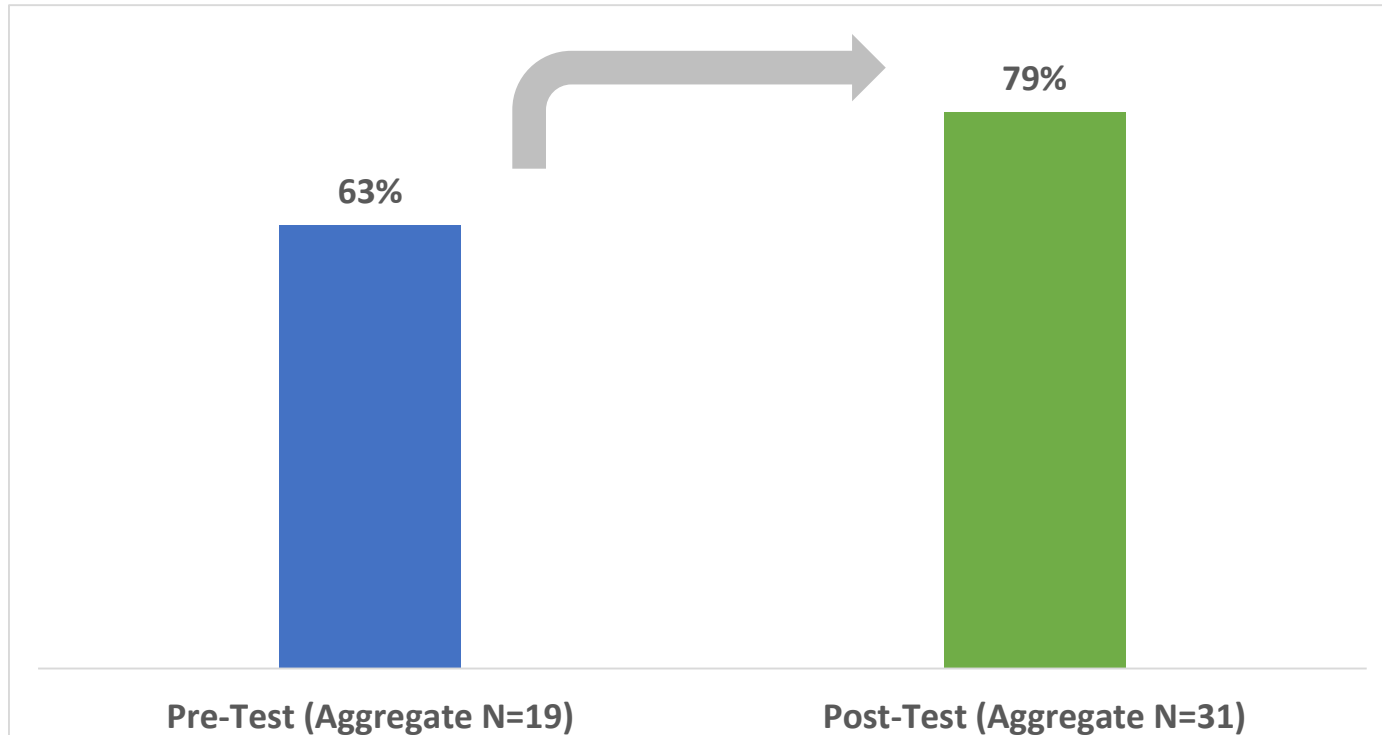
Analysis of participants responses related to educational needs

When asked how well the activity met the following needs, **100%** of participants reported the activity was “Excellent” to “Good” at:

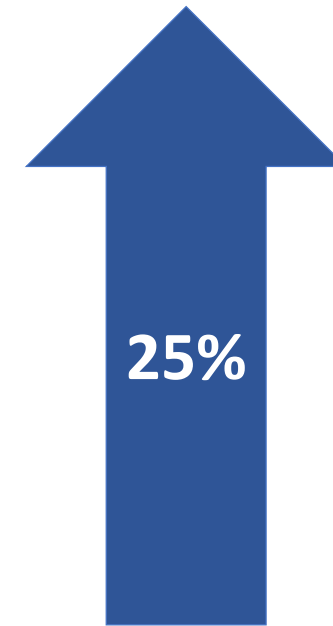
	EXCELLENT	GOOD	FAIR	POOR	TOTAL
...the activity meet your educational needs?	83.87% 26	16.13% 5	0.00% 0	0.00% 0	31
...the information presented reinforce and/or improve your current skills?	80.65% 25	19.35% 6	0.00% 0	0.00% 0	31
...the activity enhance your ability to apply the learning objectives to your practice?	80.65% 25	19.35% 6	0.00% 0	0.00% 0	31
...the activity improve your ability to treat or manage your patients?	77.42% 24	22.58% 7	0.00% 0	0.00% 0	31



Level 2 Outcomes: Pre-Test/Post-Test *Live Activity*



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



**Overall relative
knowledge gain
from pre to post-test**

**100% of participants say
the activity improved their
ability to treat or manage
their patients**

Assessment: Pre-Test/Post-Test

Live Activity

Learning Objective:

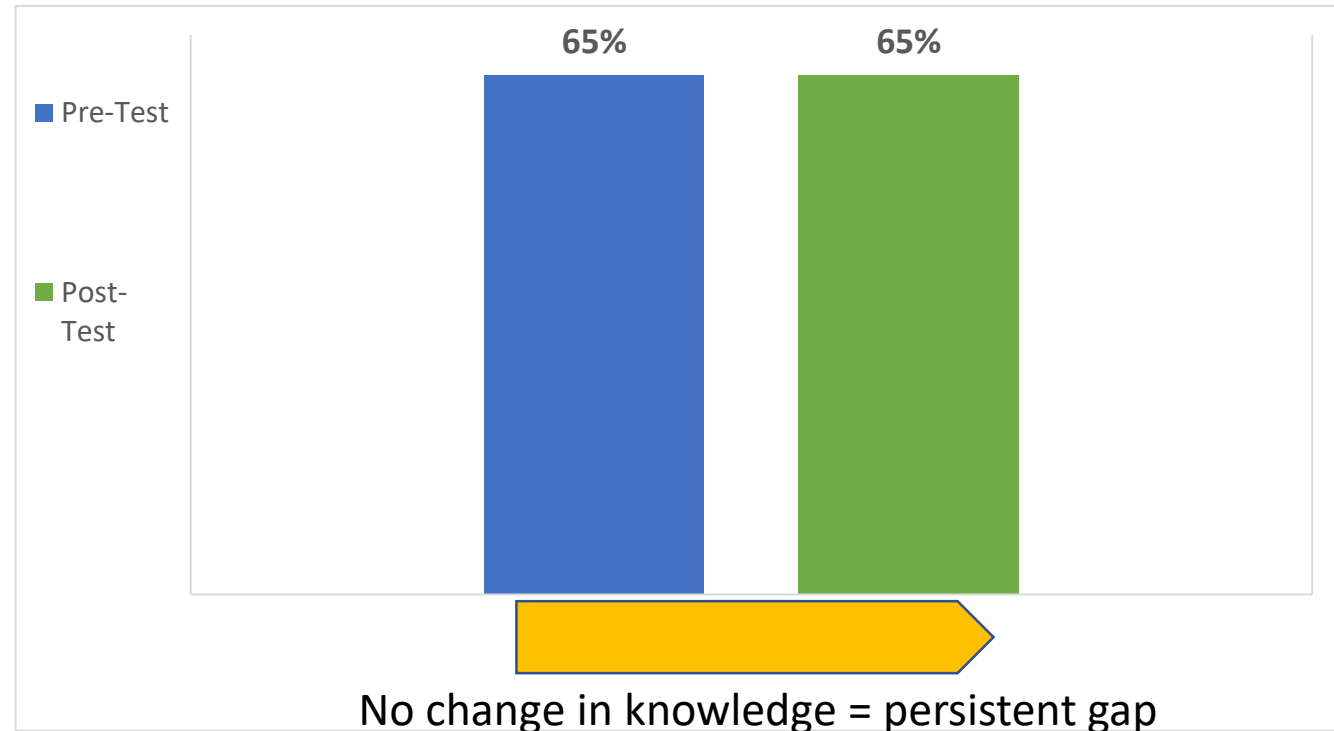
Identify clinical features that distinguish EGPA from other eosinophilic lung diseases

Q1: Which of the following is most helpful in distinguishing EGPA from chronic eosinophilic pneumonia and hypereosinophilic syndrome?

- A. History of Asthma
- B. Cardiac involvement
- C. ANCA ✓**
- D. Pulmonary infiltrates

Average Pre N= 19
Average Post N= 31

0% Knowledge Gain



Assessment: Pre-Test/Post-Test

Live Activity

Learning Objective:

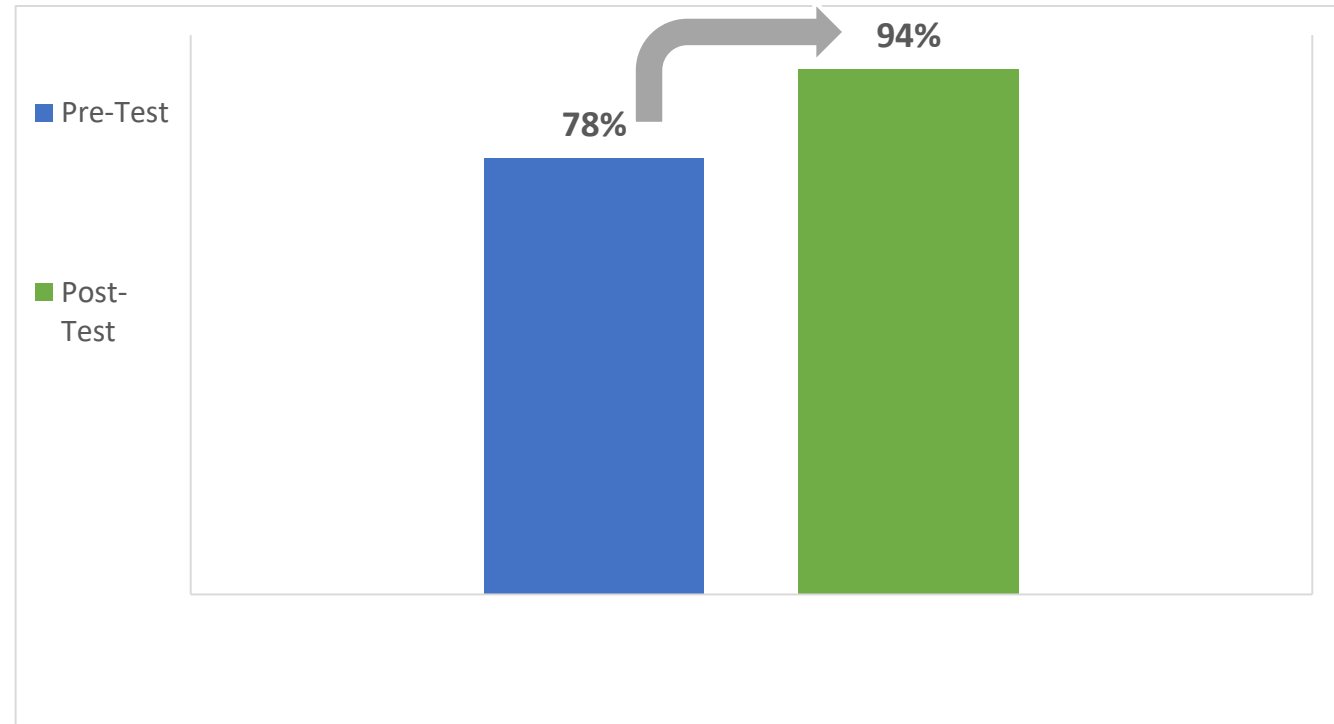
Select appropriate treatments for patients with EGPA

Q2: Which of the following treatments for EGPA has been shown to demonstrate improvements in remission, oral corticosteroid dose reductions and/or remaining free of EGPA relapse?

- A. Azathioprine
- B. Cyclophosphamide
- C. Mepolizumab ✓**
- D. Methotrexate
- E. Mycophenolate mofetil

Average Pre N= 19
Average Post N= 31

21% Knowledge Gain



Assessment: Pre-Test/Post-Test

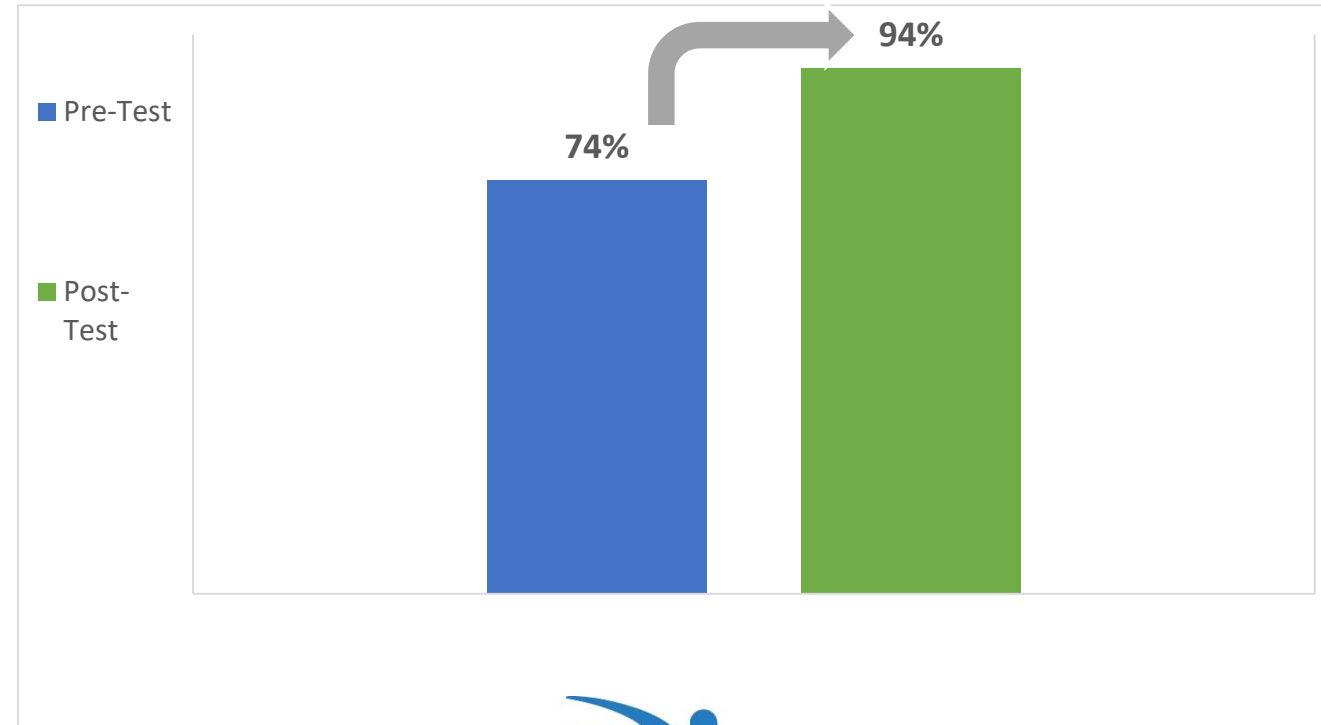
Live Activity

Learning Objective:

Review best practices for early evaluation and differential diagnosis of EGPA

Q3: Which of the following features is most important for making a diagnosis of EGPA?

- A. A persistent total blood eosinophil count >1500 cells/ μL
- B. A skin biopsy showing eosinophil accumulation and degranulation
- C. A constellation of clinical and pathologic findings ✓**
- D. A positive ANCA test



Average Pre N= 19
Average Post N= 31

27% Knowledge Gain

Assessment: Pre-Test/Post-Test *Live Activity*

Learning Objective:

Identify clinical features that distinguish EGPA from other eosinophilic lung diseases

Q4: A patient presents with atopy, eczema, sinusitis, asthma, and eosinophilic gastroenteritis with duodenal eosinophilia. The most likely diagnosis is:

A. Eosinophilic gastrointestinal disease (EGID) ✓

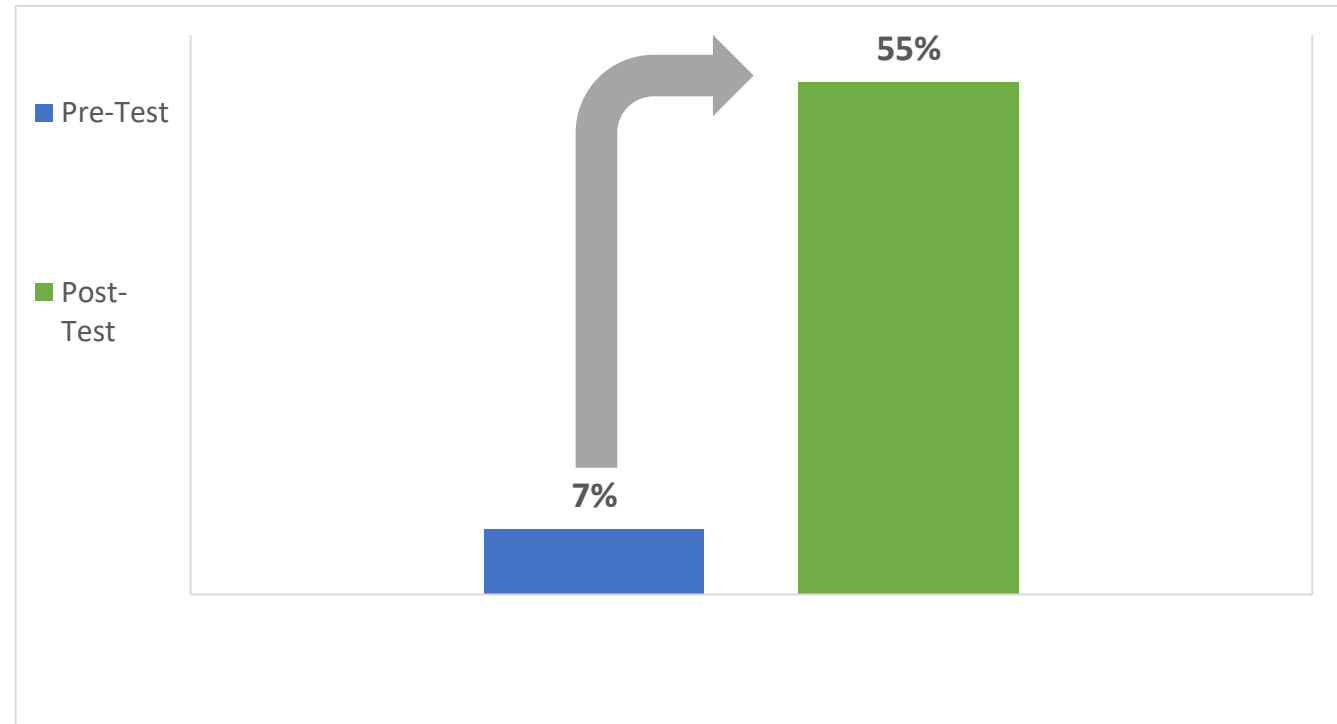
B. Strongyloides infection

C. Eosinophilic granulomatosis with polyangiitis (EGPA)

D. Food allergy

Average Pre N= 19
Average Post N= 31

685% Knowledge Gain



Assessment: Pre-Test/Post-Test

Live Activity

Learning Objective:

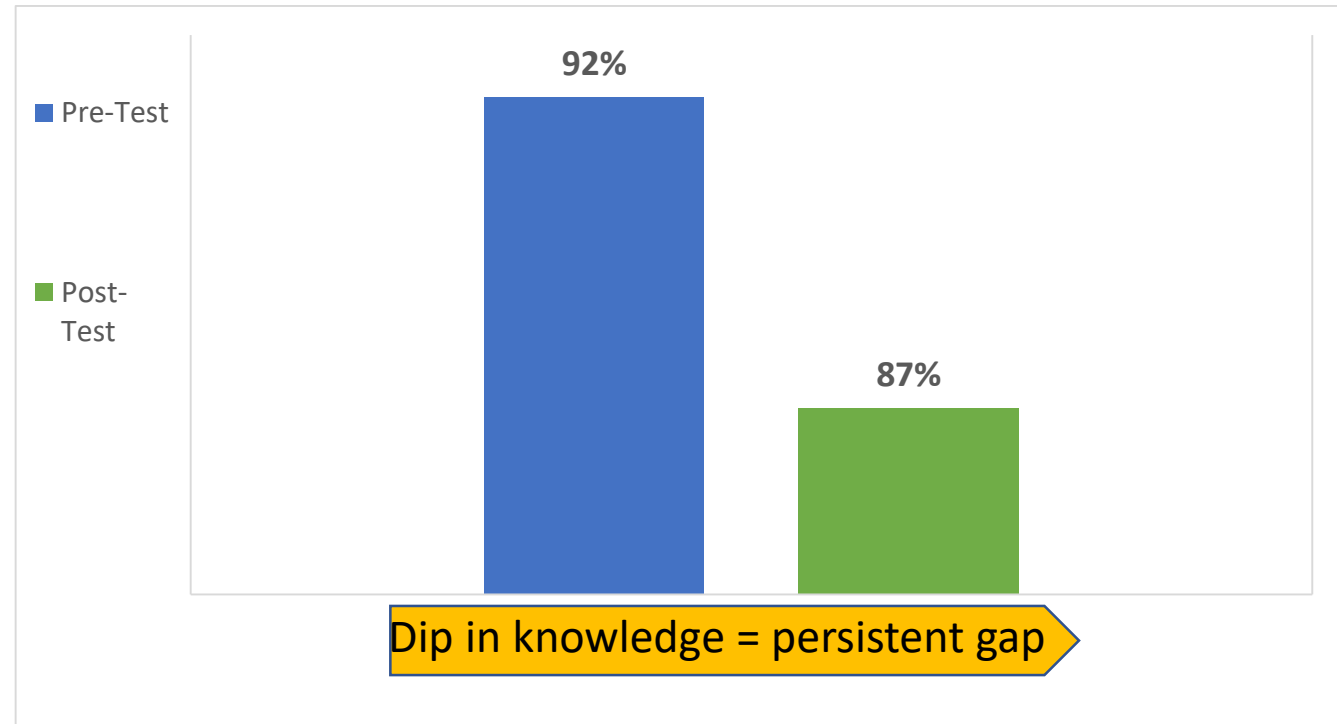
Select appropriate treatments for patients with EGPA

Q5: In which clinical scenario should cyclophosphamide be considered?

- A. Worsening sinusitis
- B. Asthma symptoms requiring at least 8 mg/d of prednisone
- C. Foot or wrist drop ✓**
- D. Presence of MSK symptoms

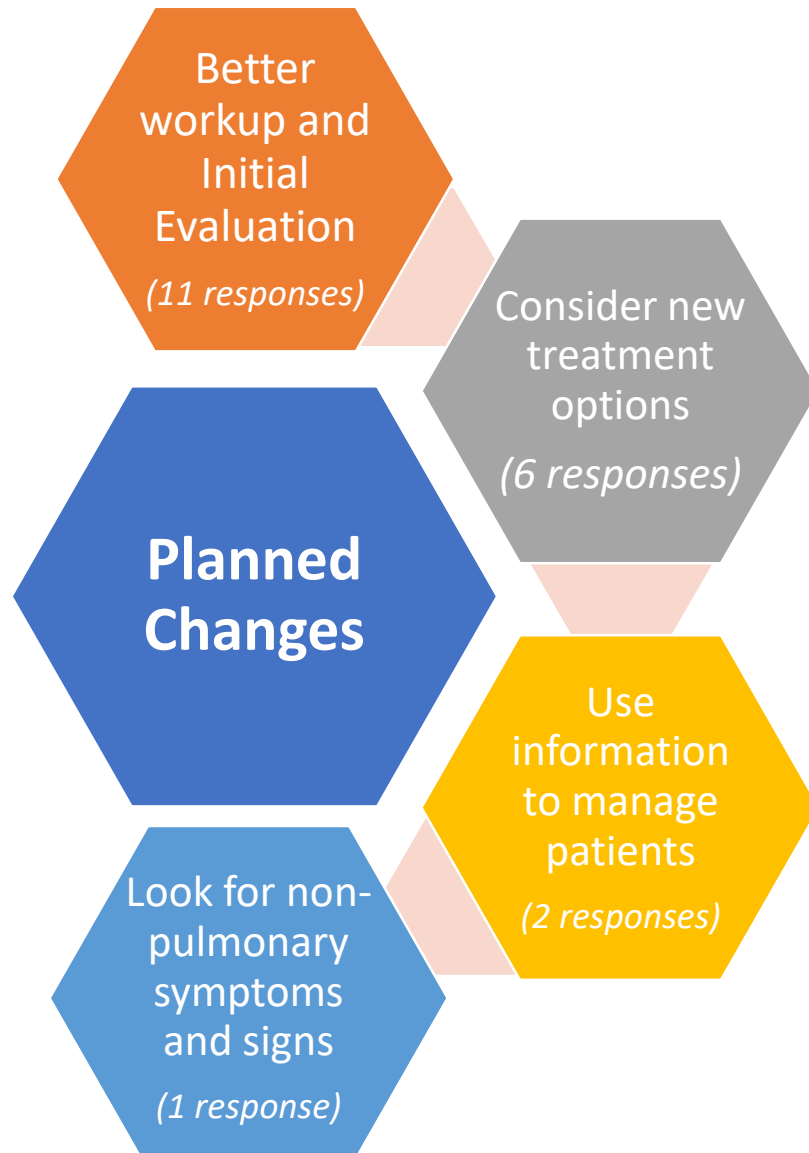
Average Pre N= 19
Average Post N= 31

-5% Knowledge Gain



Open-ended Feedback

Live Activity



Open-ended Feedback

Live Activity



Key Lessons Learned

- How to arrive at differential and actual diagnosis
- Workup and awareness
- Multi-system involvement, think about bone marrow if needed
- Differentiating eosinophilic disorders important
- Multidisciplinary approach important



Needs for Further Education

- Other pulmonary eosinophilia syndromes
- Bronchiectasis, pleural lung disease
- ILD
- COPD
- Asthma
- IPF

Accreditation

Live Activity

- NJH is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The NJH Office of Professional Education produced and accredited this program and adhered to the updated ACCME guidelines.
- NJH designates the live symposia for a maximum of 1.0 *AMA PRA Category 1 Credits™*.
- NJH designates the enduring material for a maximum of 1.0 *AMA PRA Category 1 Credits™*.



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Differential Diagnosis and Treatment Selection for Eosinophilic Granulomatosis with Polyangiitis (EGPA)

Thank you for your support of this educational program!