



42

ANNUAL

NATIONAL  
JEWISH  
HEALTH  
PULMONARY  
& ALLERGY

*Update*

**February 5-8, 2020**

Keystone Conference Center | Keystone, Colorado

This program was supported by educational grants from AstraZeneca Pharmaceuticals, GlaxoSmithKline LLC, Inmed, Inc., Pfizer, Inc., Sanofi Genzyme and Regeneron Pharmaceuticals, and Vertex Pharmaceuticals, Inc.

# Executive Summary: Activity Details

February 5-8, 2020 Keystone, Colorado

The National Jewish Health 42<sup>nd</sup> Annual ***The Pulmonary and Allergy Update*** highlighted insights and recent advances in immunology, pulmonary medicine, asthma, and allergy presented by faculty from the leading respiratory hospital in the nation. Participants had the opportunity to network with colleagues and nationally recognized experts, and learn the latest updates on management and treatment options for patients.

## Features included:

- ✓ Workshops that complimented lectures provided great opportunities to discuss key issues and apply learning with case reviews by National Jewish Health expert faculty
- ✓ Interactive didactic presentations
- ✓ Case-based learning
- ✓ Automated Response System (ARS)



# National Jewish Health Presenting Faculty

## **Arash Babaei, MD**

Associate Professor of Medicine  
Division of Gastroenterology  
National Jewish Health

## **Mark Boguniewicz, MD**

Professor of Pediatrics  
Division of Pediatric Allergy and Clinical Immunology  
National Jewish Health  
University of Colorado School of Medicine

## **Russell P. Bowler, MD, PhD**

Professor of Medicine  
Division of Pulmonary and Critical Care & Sleep Medicine  
National Jewish Health

## **Kanwaljit K. Brar, MD**

Assistant Professor of Pediatrics  
Division of Pediatric Allergy & Immunology  
National Jewish Health

## **Rebecca C. Keith, MD**

Assistant Professor of Medicine  
Division of Pulmonary and Critical Care & Sleep Medicine  
Interstitial Lung Disease Program  
National Jewish Health

## **Todd T. Kingdom, MD**

Professor of Otolaryngology & Ophthalmology  
Vice Chair of Clinical Affairs  
Division of Specialty Services  
National Jewish Health  
University of Colorado School of Medicine

## **Bruce Lanser, MD**

Assistant Professor of Pediatrics  
Director, Pediatric Food Allergy Program  
Associate Director, Pediatric Allergy Fellowship Program  
Division of Allergy & Clinical Immunology

# National Jewish Health Presenting Faculty

## **Hara Levy, MD, MMSc**

Associate Professor and Head, Pulmonary Division  
Department of Pediatrics  
National Jewish Health

## **Steven E. Lommatzsch, MD**

Associate Professor of Medicine  
Division of Pulmonary, Critical Care & Sleep Medicine  
National Jewish Health

## **David A. Lynch, MB**

Professor of Radiology  
National Jewish Health

## **Laurie A. Manka, MD**

Assistant Professor of Medicine  
Division of Pulmonary, Critical Care & Sleep Medicine  
National Jewish Health

## **Brian Modena, MD, MSc**

Assistant Professor of Medicine  
Division of Allergy & Clinical Immunology  
National Jewish Health

## **Harold Nelson, MD (Program Co-Chair)**

Professor of Medicine  
Division of Allergy and Clinical Immunology  
National Jewish Health

## **Kanao Otsu, MD, MPH**

Assistant Professor of Medicine  
Division of Allergy & Clinical Immunology  
National Jewish Health

## **Carah Santos, MD**

Assistant Professor of Pediatrics  
Division of Pediatric Allergy & Clinical Immunology  
National Jewish Health

# National Jewish Health Presenting Faculty

## **Amen Sergew, MD**

Assistant Professor of Medicine  
Division of Pulmonary and Critical Care & Sleep Medicine  
Section of Critical Care Medicine  
National Jewish Health

## **Michael Wechsler, MD, PhD (Program Co-Chair)**

Director, The Cohen Family Asthma Institute  
Professor of Medicine  
Division of Pulmonary, Critical Care & Sleep Medicine  
National Jewish Health

## **Pamela Zeitlin, MD, PhD (Program Co-Chair)**

Silverstein Chair  
Professor of Pediatrics  
National Jewish Health

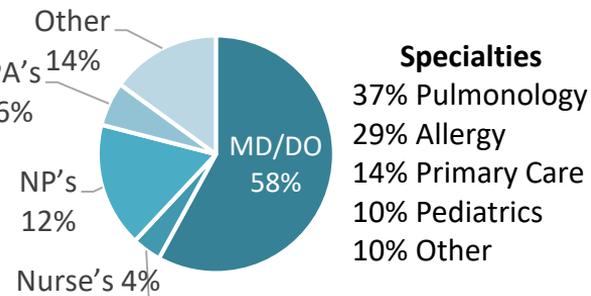
# Dashboard: Activity Impact

## Participation

**139** attendees from > 35 states

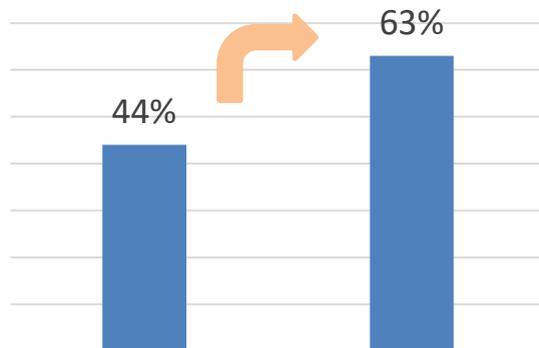


### Specialties



## Educational Impact

**43%** overall relative gain in knowledge from pre to post activity.



Pre-Test (N=87) Post-Test (N=56)

**51%** overall increase in confidence across all learning objectives

## Performance

**98%** of learners report that they are somewhat to extremely likely to make changes to their practice following the activity.

“Treating GERD can help maintain and/or improve asthma control.”

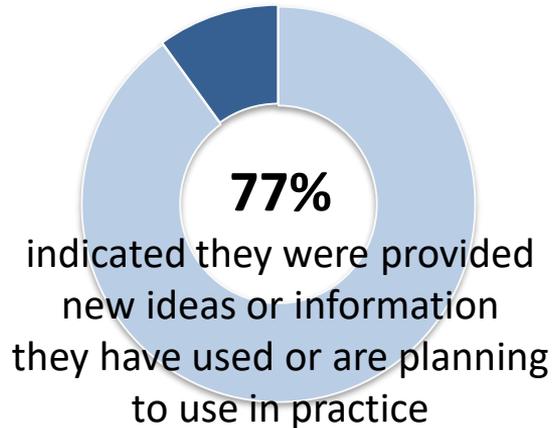
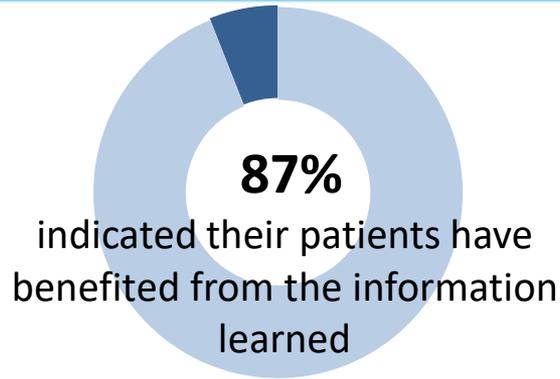
“Continue looking for co-morbidities in the patient not responding as expected.”

“Change my use of ICS in COPD and send people to pulm and allergy sooner if not improving to consider biologics.”

“Improvement in H&P, utilization of team approach for diagnostic workup.”

# Overview: Self-Reported Performance

## (45 day survey results)



The **top three changes** respondents have made or intend to make (for those that had not seen any patients in that target therapeutic area within the 45-day time period) are:

1. Modify treatment plans
2. Incorporate different diagnostic strategies into patient evaluation
3. Change my screening/prevention practice

# Evaluation Results: Attendee Feedback



## Key Lessons Learned

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- The importance of knowing exactly what you are treating so therapy can be better tailored
- Phenotyping/endotyping and direction the biologics will play not only in asthma, but other areas of medicine
- The new knowledge about the chemistry of allergy, COPD asthma



## Needs for Further Education

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- Chest Imaging
- COPD
- Lung Nodules
- OIT
- Sarcoidosis
- Sleep Apnea

## What Attendees are Saying

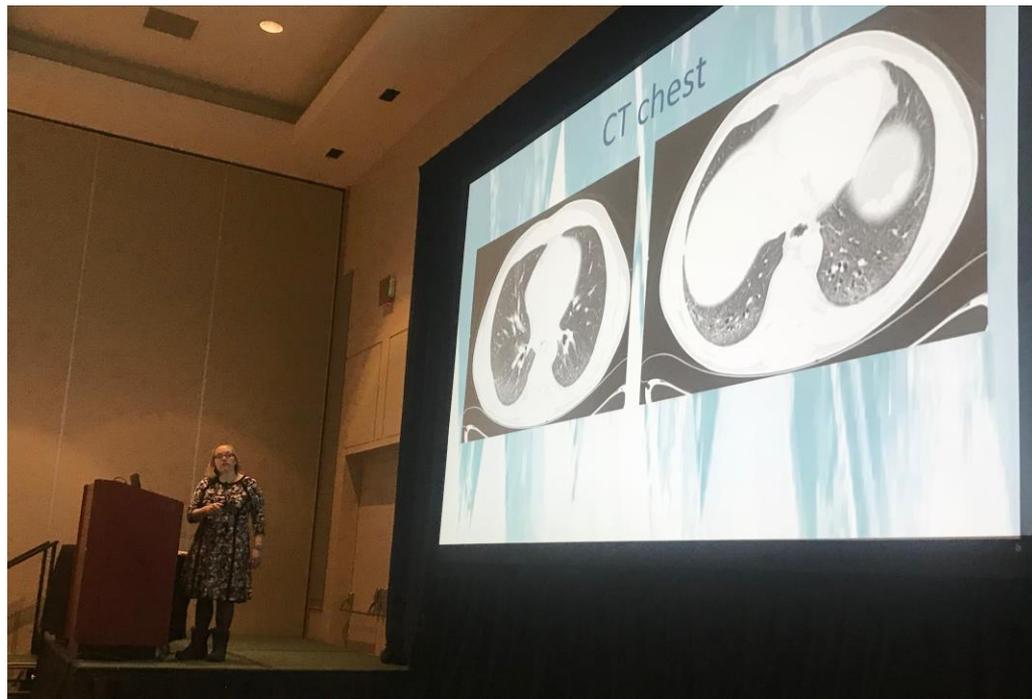
**“Enjoy the conference so much information in just 3 days. Relevant and updated subjects.”**

**“Great refresher on guidelines for diagnosing and treating COPD and asthma.”**

**“This was an exceptionally well run conference. I appreciated every presentation, the conference facilities, the communication, the food and the effort of all presenters to adhere to the schedule. I could not have asked for a better experience.”**

# Overall Conference Objectives

1. Review updates to best practices and guidelines in diagnosis and assessment of a variety of chronic diseases and conditions.
2. Discuss the latest treatments and key self-management strategies for a variety of chronic diseases and conditions.
3. Describe considerations and updates in treatment options for asthma, COPD and other respiratory and immunology-related diseases.



# Learning Objectives: Asthma

1. Describe best practice approaches to the management of severe asthma.
2. Discuss the role of phenotypes and endotypes in the diagnosis and management of severe asthma.
3. Review current and emerging therapeutics in the treatment of severe and difficult to treat asthma.

# Learning Objectives: COPD

1. Review current and emerging therapeutics in the treatment of COPD
2. Discuss best practice approaches for initial assessment and management of COPD to improve symptoms and prevent exacerbations.
3. Describe patient-centered strategies for creating personalized treatment plans for COPD

# Learning Objectives: Nasal Polyps

1. Describe the underlying mechanisms of nasal polyp formation and connection with Type 2 inflammation
2. Discuss best practices for managing nasal polyps in clinical practice
3. Describe current and emerging medical treatments for nasal polyp

# Learning Objectives: Atopic Dermatitis

1. Describe best practices for managing patients with atopic dermatitis in accordance with clinical guidelines and expert recommendations.
2. Identify barriers to the optimal treatment of patients with AD.
3. Review current and emerging therapies for the treatment of AD.

# Learning Objectives: Cystic Fibrosis

1. Review current clinical guidelines for the diagnosis and treatment of patients with CF.
2. Evaluate current and emerging therapies and pharmacodynamics and their impact on patients with CF.

# Learning Objectives: Bronchiectasis and NTM

1. Summarize the etiology and evaluation of non-CF bronchiectasis
2. Discuss management of bronchiectasis and infections including *Pseudomonas* and NTM
3. Review current and emerging therapies for the treatment of bronchiectasis

# Outcomes Strategies

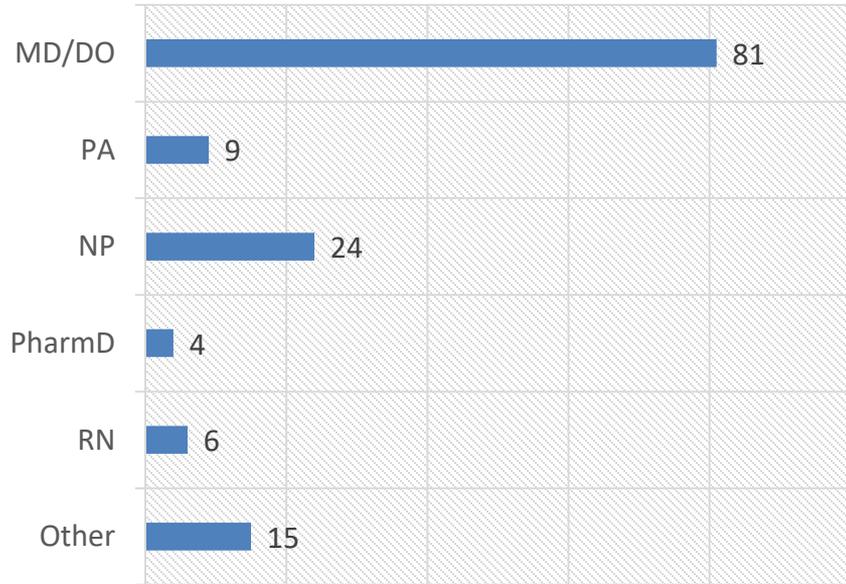
Strategies to measure participants' knowledge and competence:

- ✓ Pre-tests, post-tests
- ✓ ARS questions throughout the activity
- ✓ Evaluations
- ✓ 45-day follow up surveys



# Level 1 Outcomes: Participation

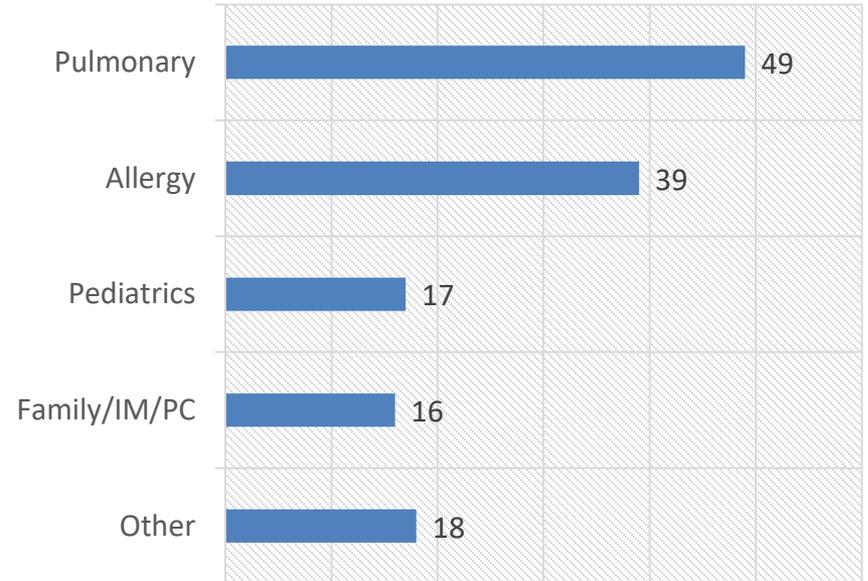
## Attendee Designation



*Other: BA, BSC, PhD, RT*

N = 139

## Specialty Breakdown

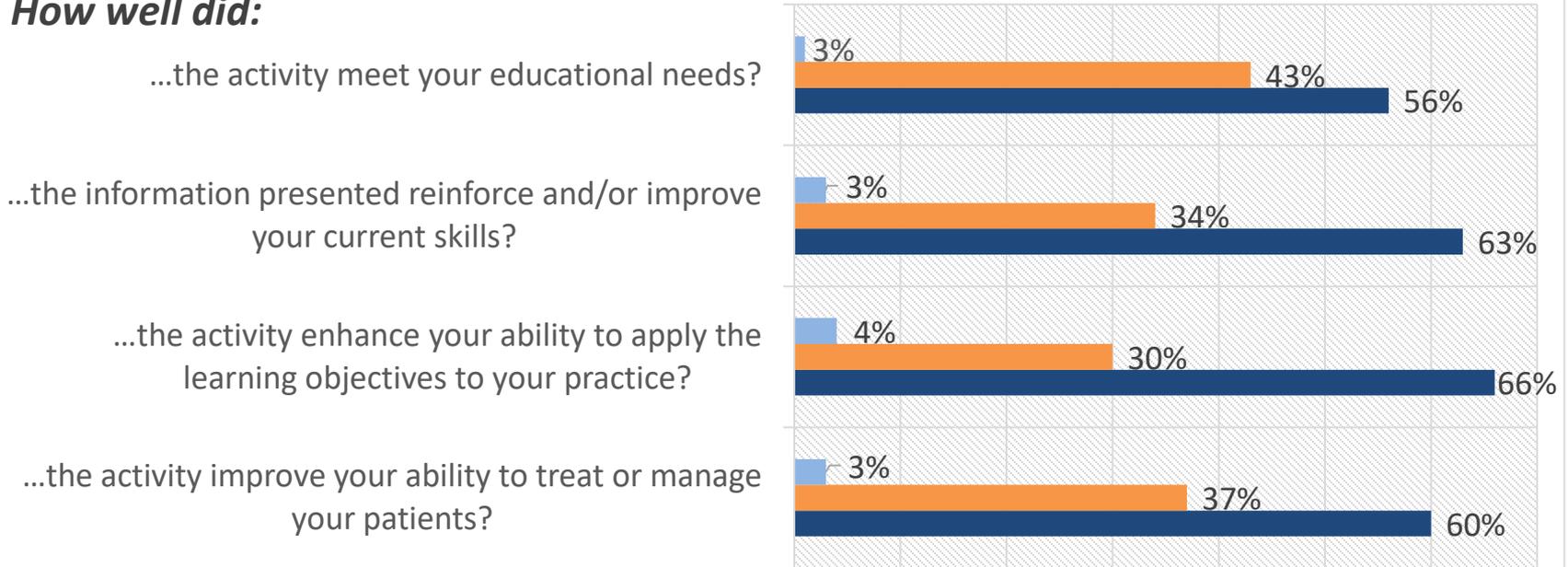


*Other: Cardiorespiratory, Hospitalist, Medical Affairs, Research, Sleep*

# Level 2/3 Outcomes: Satisfaction/Learning

## *Analysis of participants responses related to educational needs*

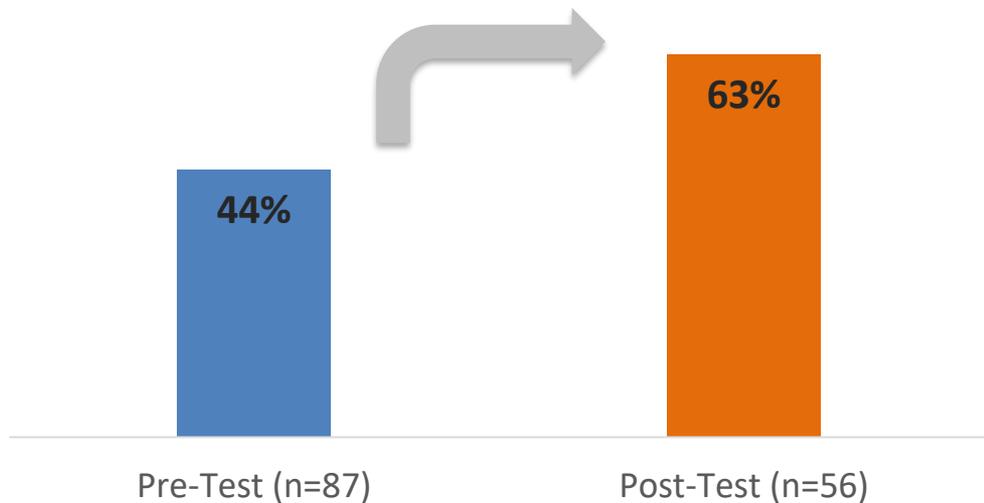
### **How well did:**



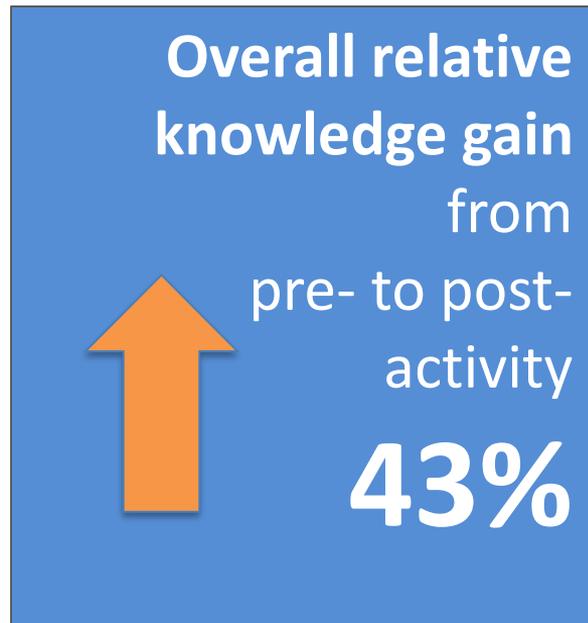
N=68

■ Fair ■ Good ■ Excellent

# Level 2/3 Outcomes: Learning (Knowledge and Competence)

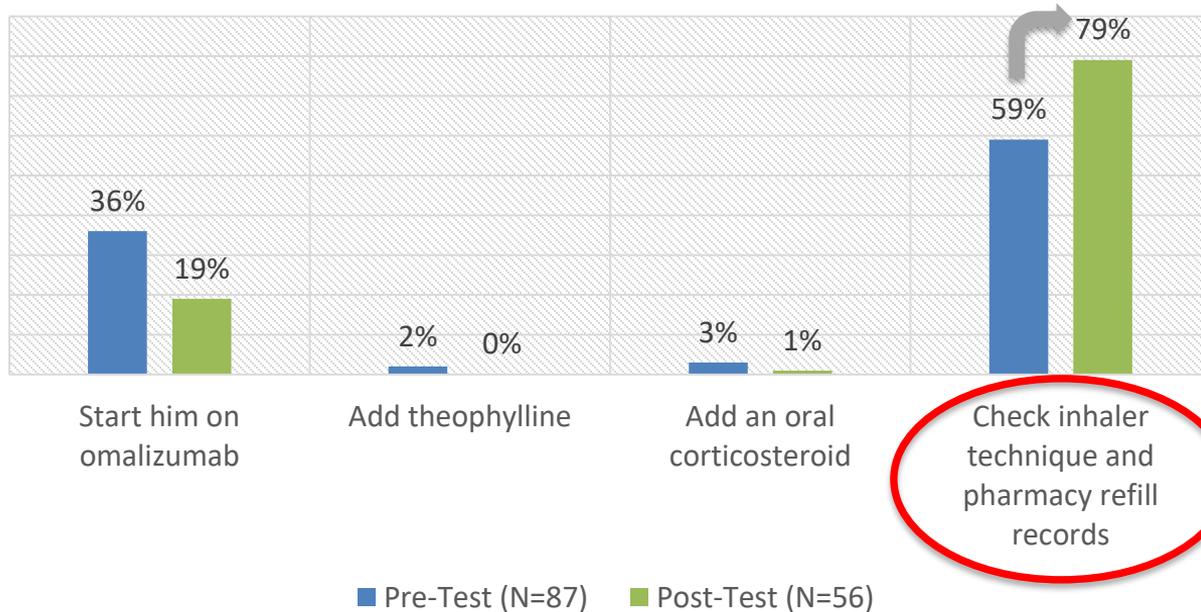


Level 3 and 4 outcomes were measured by comparing participants' pre- and post-test answers. The attendees' responses to these questions demonstrated that **participants gained knowledge as a result of the activity.**



# Pre/Post Test Comparison: Addresses Severe Asthma Learning Objective #1

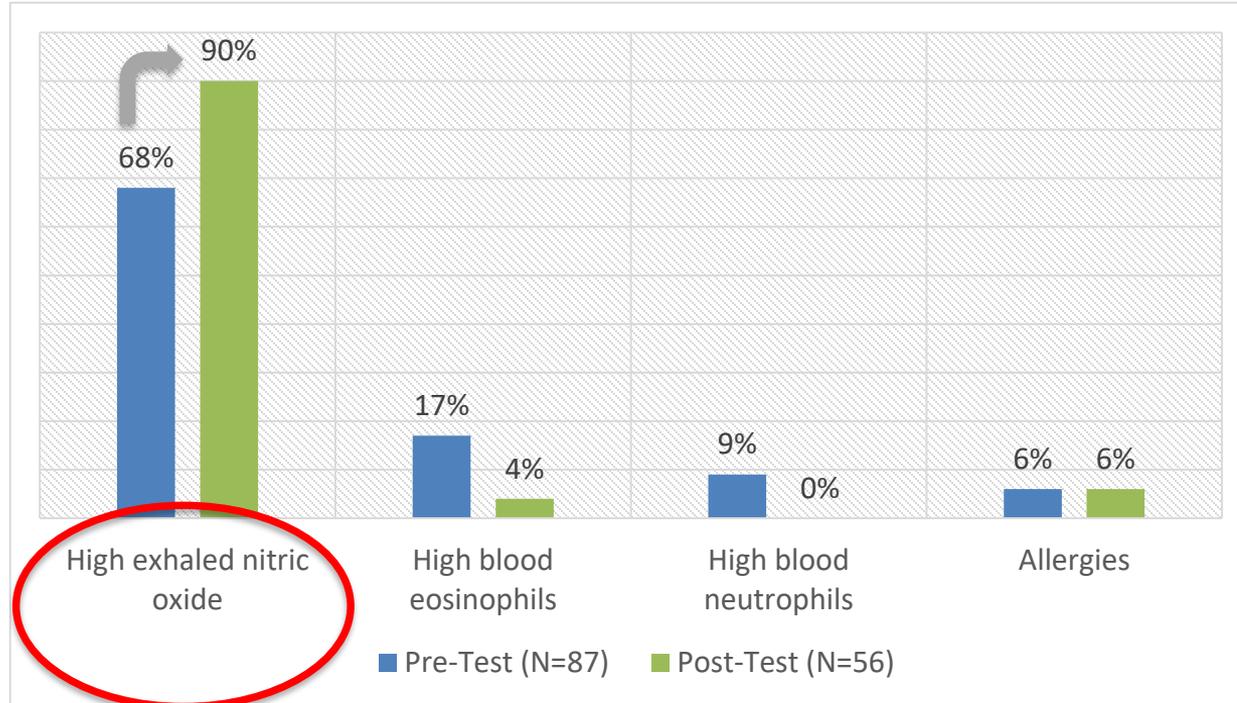
A 74-year-old male with lifelong severe allergic asthma presents to you with uncontrolled asthma despite prescribed high dose ICS/LABA, leukotriene modifiers and tiotropium. He is hospitalized twice per year and requiring oral prednisone rescue courses 4x per year. The next step in his management is the following:



Average relative  
knowledge  
gain  
pre- to post-activity:  
**34%**

# Pre/Post Test Comparison: Addresses Severe Asthma Learning Objective #1

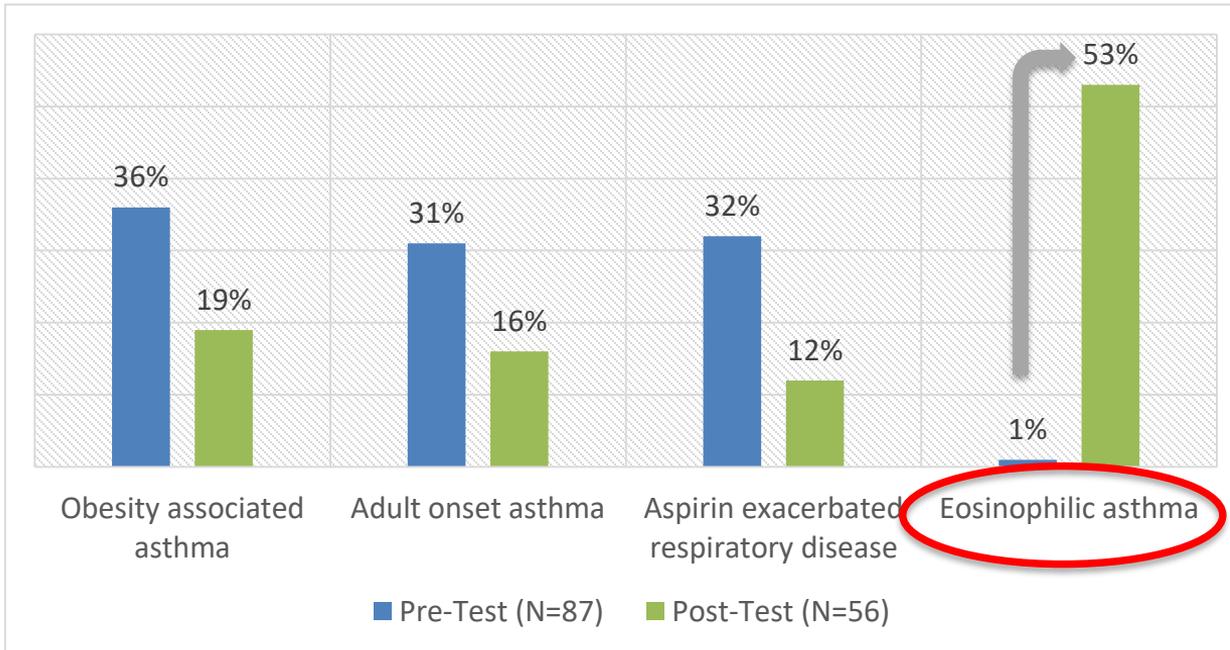
Type 2 inflammation is associated with all of the following except:



Average relative  
knowledge  
gain  
pre- to post-activity:  
**32%**

# Pre/Post Test Comparison: Addresses Severe Asthma Learning Objective #2

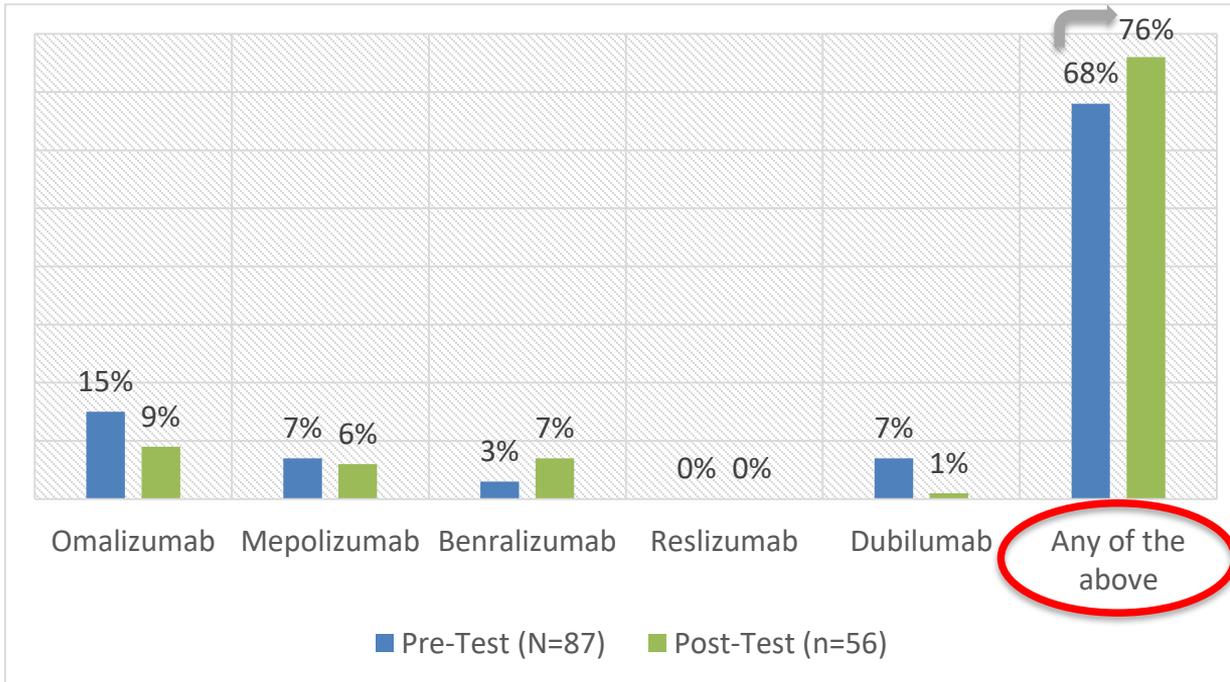
Which of the following is not an asthma phenotype?



Average relative  
knowledge  
gain  
pre- to post-activity:  
**98%**

# Pre/Post Test Comparison: Addresses Severe Asthma Learning Objective #3

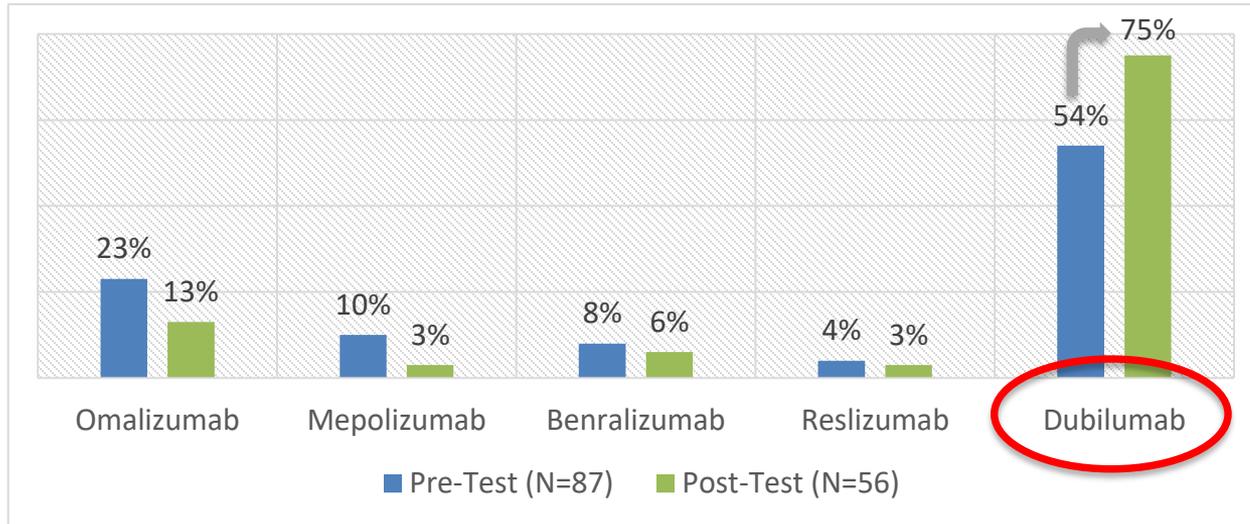
For a severe asthma patient on ICS/LABA and tiotropium who is adherent to inhaler therapy and has eosinophil count of 300, IgE of 300, and exhaled nitric oxide level of 50, which is the most appropriate biologic therapy?



Average relative  
knowledge  
gain  
pre- to post-activity:  
**12%**

# Pre/Post Test Comparison: Addresses Severe Asthma Learning Objective #3

You have a patient with severe asthma with underlying chronic rhinosinusitis and nasal polyposis. Which add-on biologic therapy would be most appropriate?

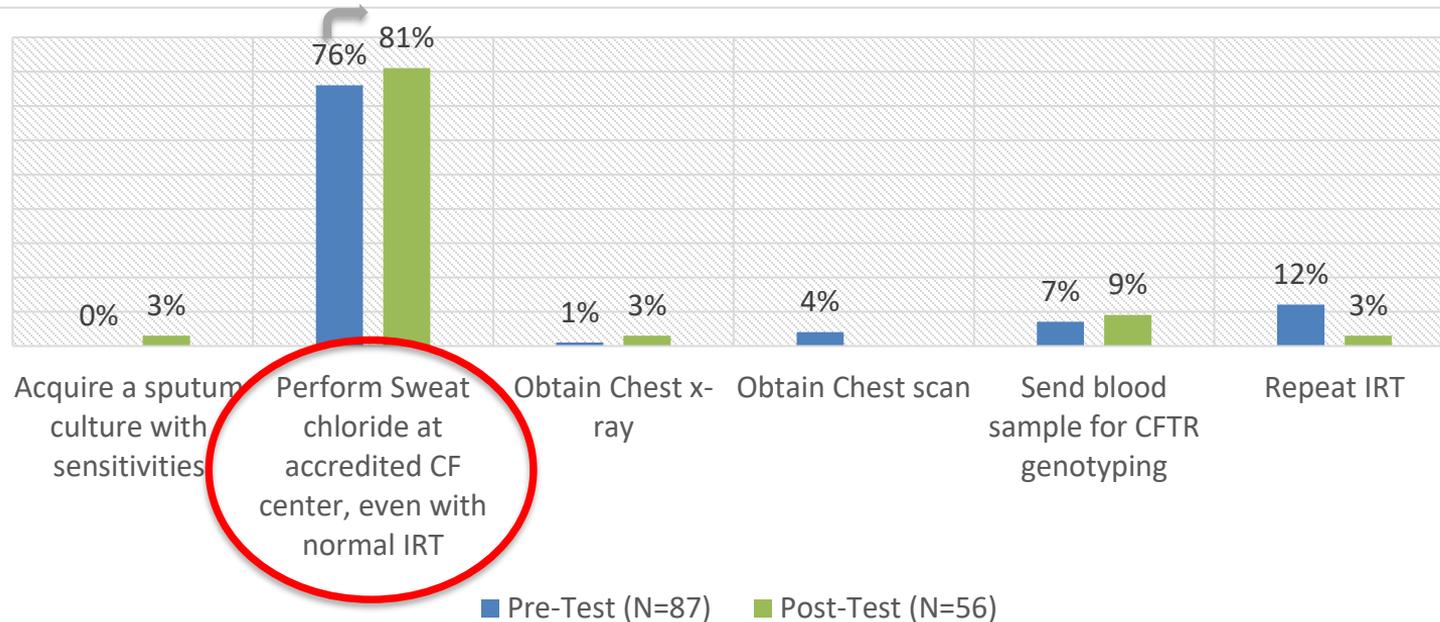


Average relative  
knowledge  
gain  
pre- to post-activity:  
**39%**

# Pre/Post Test Comparison: Addresses Cystic Fibrosis Learning Objective #1

An 11 month old born in the United States in state that does IRT, DNA screening and reported had a normal newborn screen presents to pulmonary clinic with a several month history of cough, loose stools and weight loss falling off their growth chart.

IRT from NBS reportedly normal. The first next immediate diagnostic step for evaluation of this patient would be:

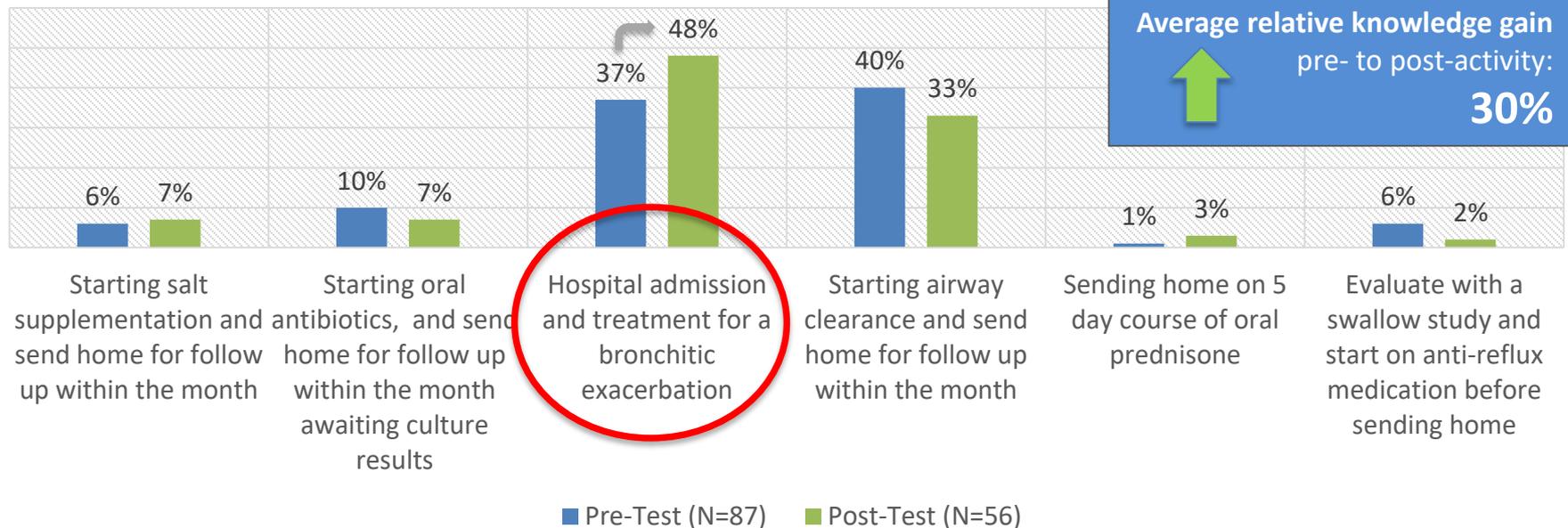


Average relative  
knowledge  
gain  
pre- to post-  
activity:

7%

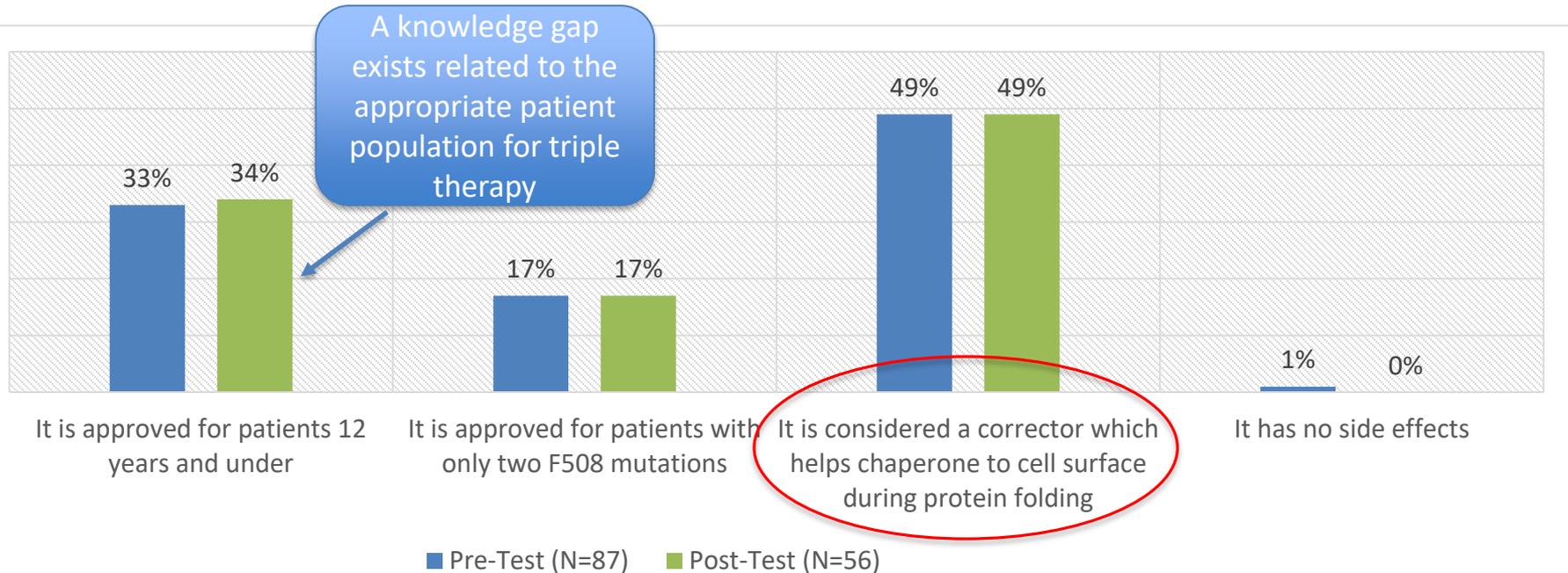
# Pre/Post Test Comparison: Addresses Cystic Fibrosis Learning Objective #1

An 11 month old born in the United States in state that does IRT, DNA screening and reported had a normal newborn screen presents to pulmonary clinic with a several month history of cough, loose stools and weight loss falling off their growth chart. For patient described above, IRT was just below the cut off for that day, sweat chloride was 110 mEq/L and CFTR genotype delta F508, what would you next recommend:



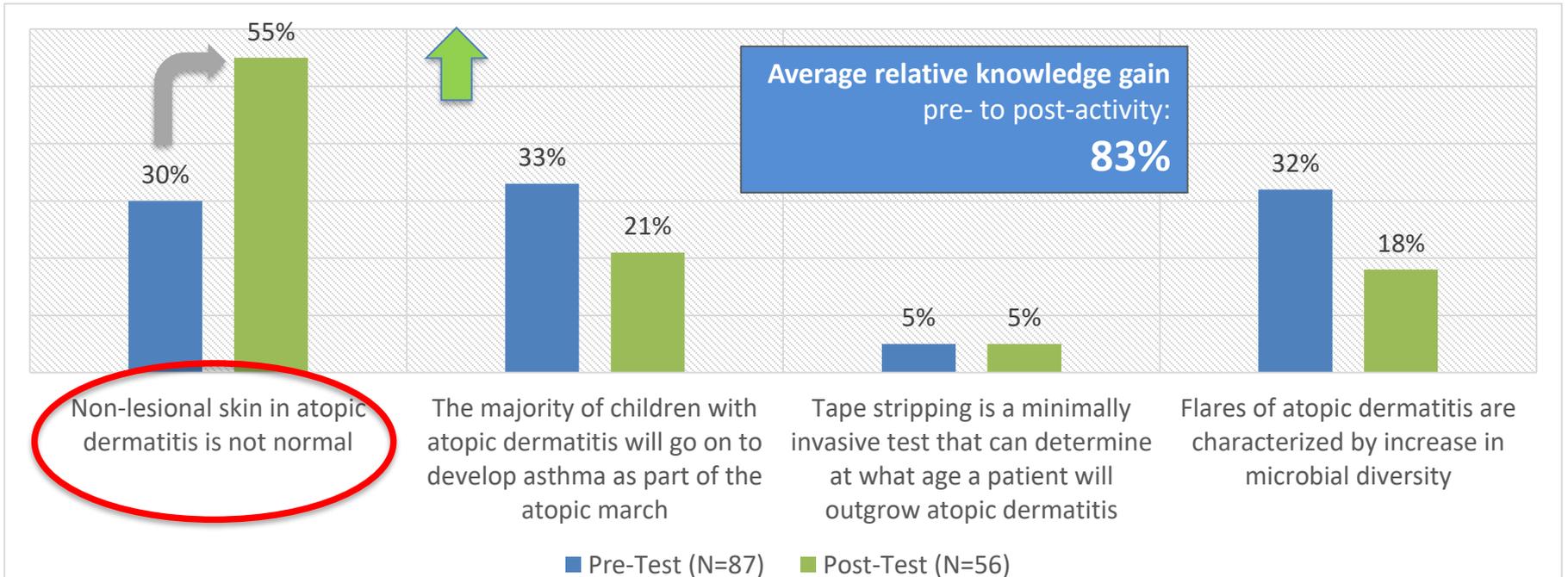
# Pre/Post Test Comparison: Addresses Cystic Fibrosis Learning Objective #2

Which of the following is true related to recently approved (2019) triple combination therapy?:



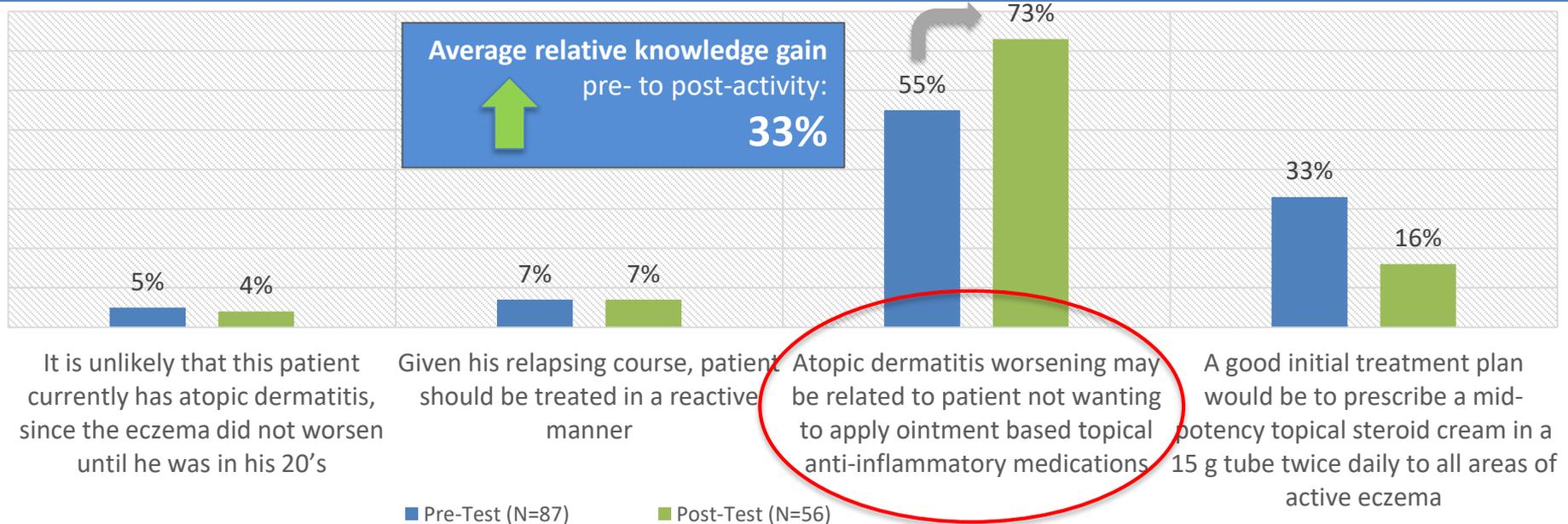
# Pre/Post Test Comparison: Addresses Atopic Dermatitis Learning Objective #1

You are explaining Atopic Dermatitis to the parents of a 2 year old child. Which of the following is a true statement?



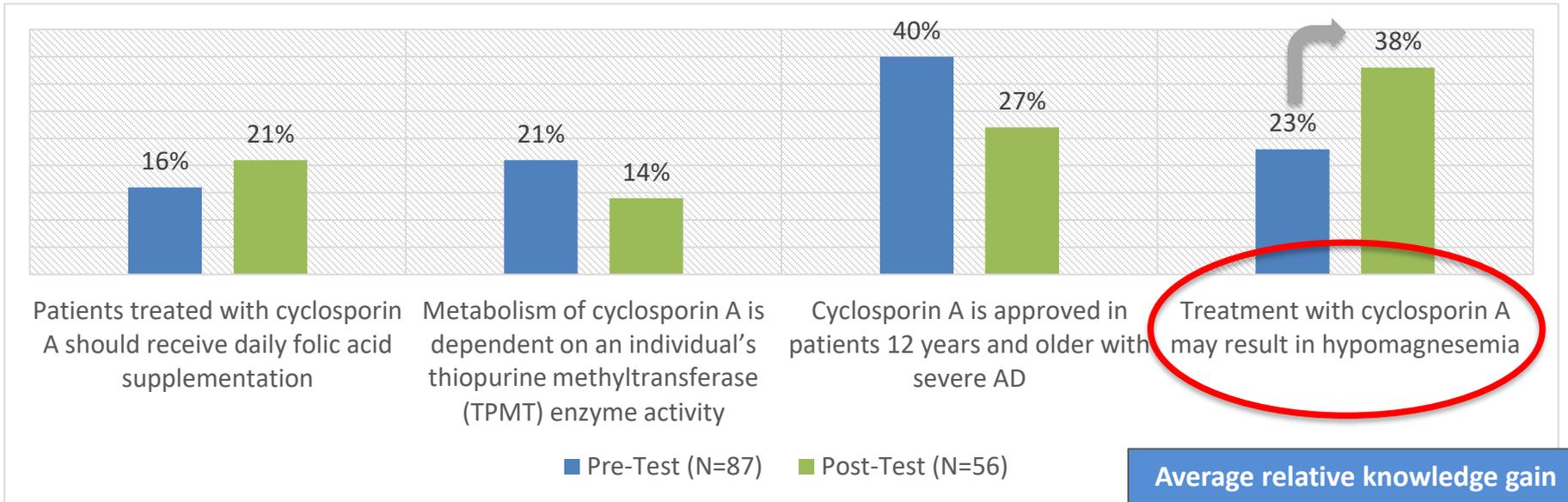
# Pre/Post Test Comparison: Addresses Atopic Dermatitis Learning Objective #2

A 23 year old male patient presents with a history of chronic relapsing atopic dermatitis that had been mild through childhood and teenage years, but has gotten significantly worse since he went away to college. Eczema now involves face, neck, lower back and all 4 extremities. In discussing burden of illness and barriers to treatment, the true statement is:



# Pre/Post Test Comparison: Addresses Atopic Dermatitis Learning Objective #3

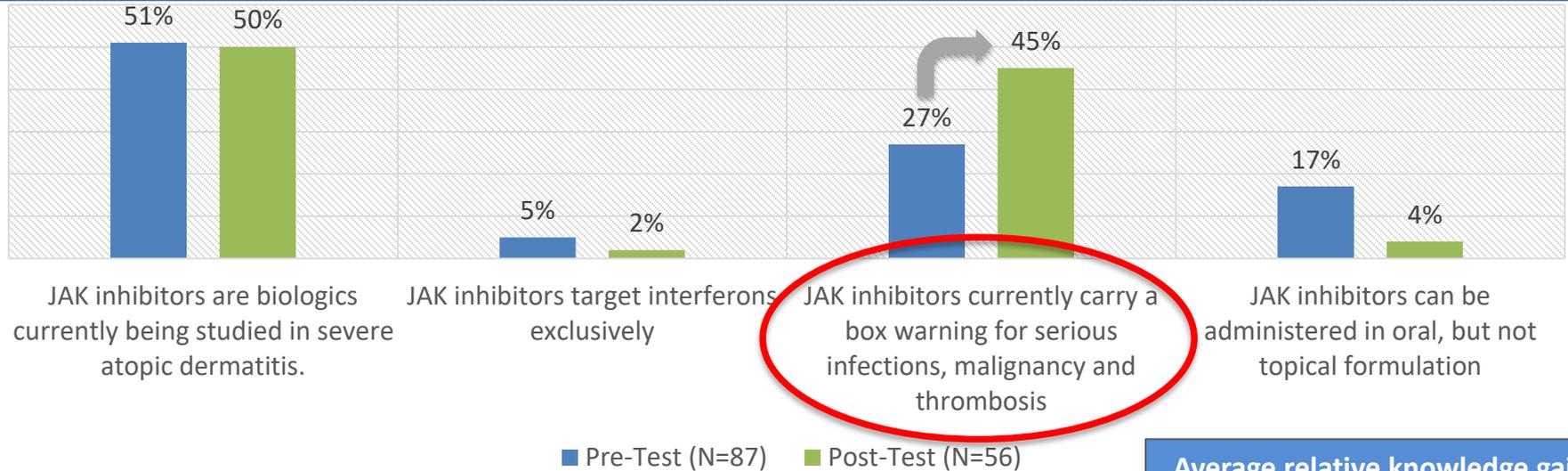
In discussing systemic immunosuppressive drugs with a medical writer preparing an article on managing severe atopic dermatitis in the United States, which would be the correct statement?



Average relative knowledge gain pre- to post-activity:  
**65%**

# Pre/Post Test Comparison: Addresses Atopic Dermatitis Learning Objective #3

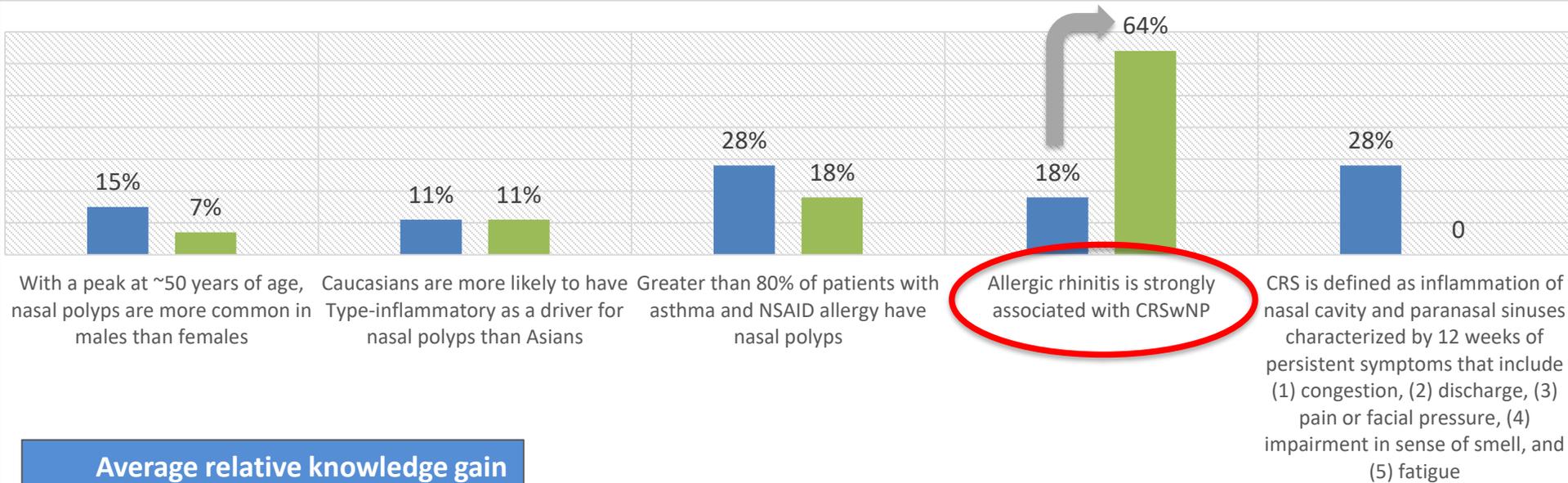
A 43 year old male with severe atopic dermatitis has seen commercials for a JAK inhibitor for rheumatoid arthritis and would like to get more information regarding possible use in atopic dermatitis. Which of the following is a true statement?



Average relative knowledge gain pre- to post-activity: **67%**

# Pre/Post Test Comparison: Addresses Nasal Polyps Learning Objective #1

Which of the following is false?



Average relative knowledge gain  
pre- to post-activity:



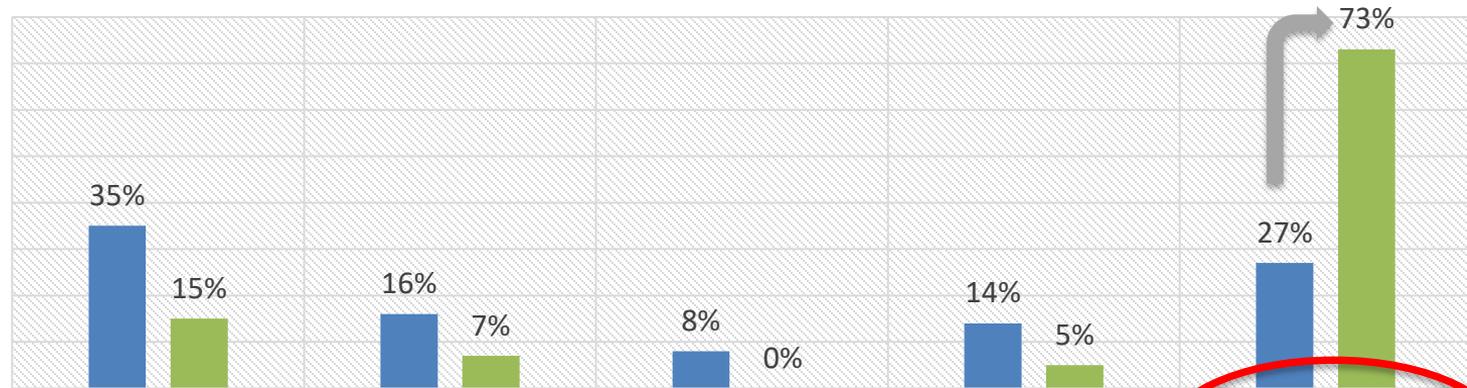
255%

■ Pre-Test (N=87)

■ Post-Test (N=56)

# Pre/Post Test Comparison: Addresses Nasal Polyps Learning Objective #1

Which of the following is false?



Polyps can be described as 'fluid filled sacs'

Polyps are characterized by a thickened basement membrane surrounding edematous and fibrotic stroma

Eosinophils can make up over 60% of nasal polyps

There are increased numbers of degranulated mast cells present

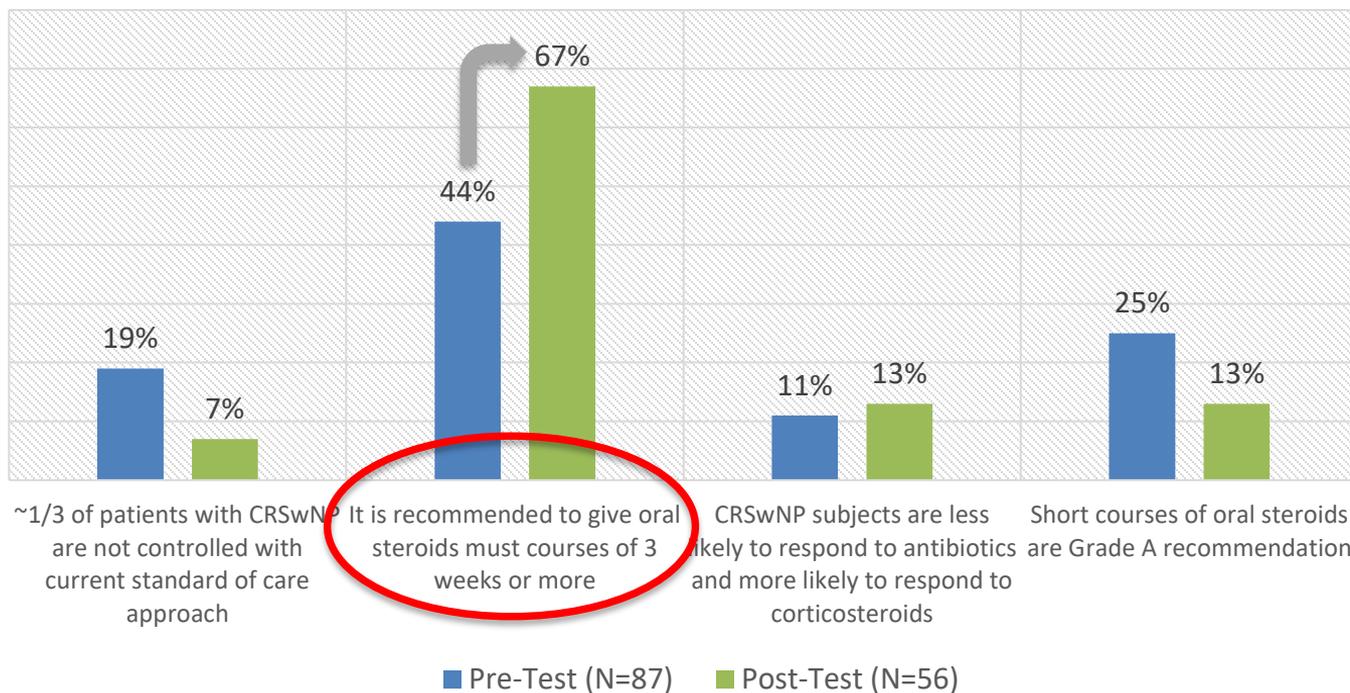
Polyps typically originate in nasal cavity outside of the sinuses

■ Pre-Test (N=87) ■ Post-Test (N=56)

Average relative knowledge gain pre- to post-activity:  
**170%**

# Pre/Post Test Comparison: Addresses Nasal Polyps Learning Objective #2

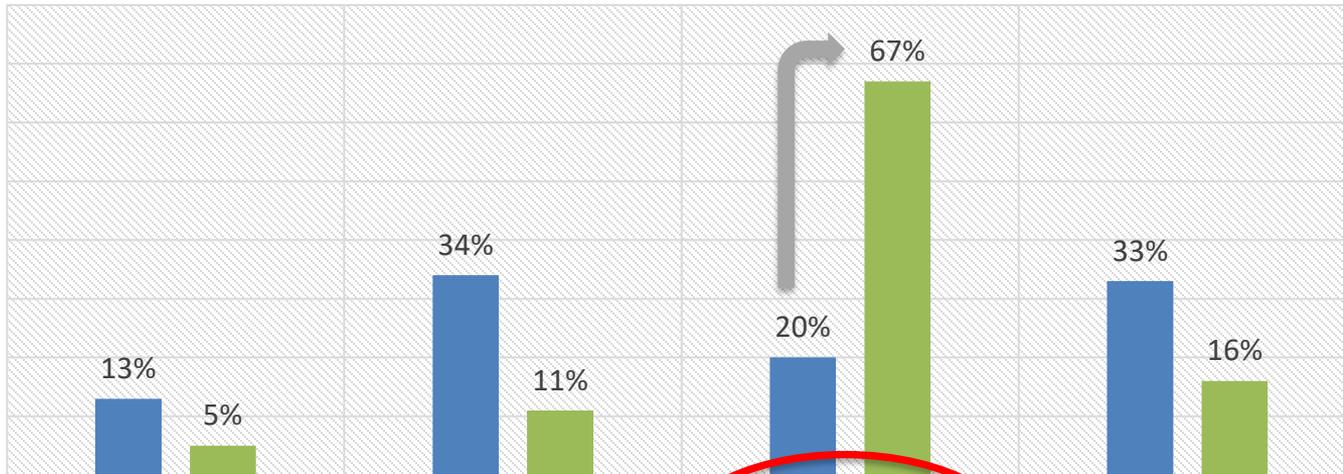
Which of the following is false?



Average relative knowledge gain pre- to post-activity: **52%**

# Pre/Post Test Comparison: Addresses Nasal Polyps Learning Objective #3

Which of the following is false?



In general, a blood eosinophil count > 150 cell/microLiter and FeNO > 25 ppb are associated with elevated Type 2 inflammation in the airway

Short courses of nasal steroids are generally recommended for the initial treatment of CRSwNP

For most patients, newer biologics are preferable to sinus surgery for the initial treatment of polyps

In Caucasians, AERD is most often a 'Type 2 high' condition

■ Pre-Test (N=87)

■ Post-Test (N=56)

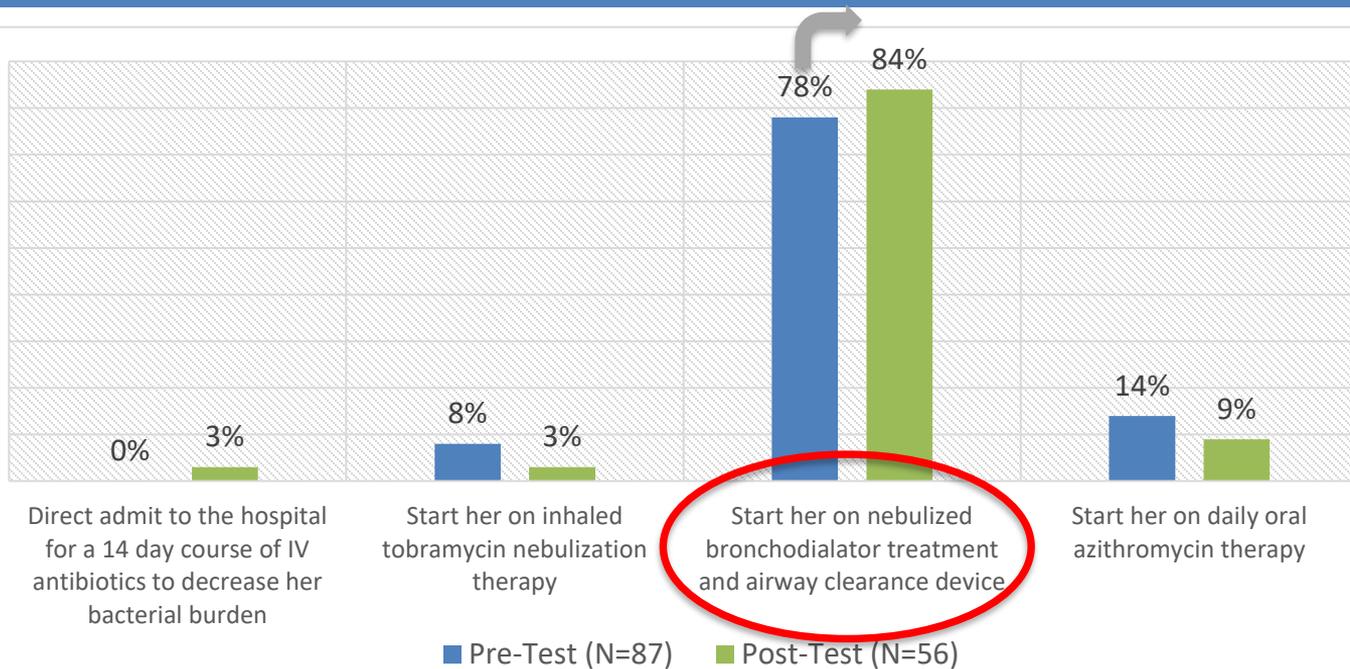


Average relative knowledge gain pre- to post-activity:

**235%**

# Pre/Post Test Comparison: Addresses Bronchiectasis & NTM Learning Objective #3

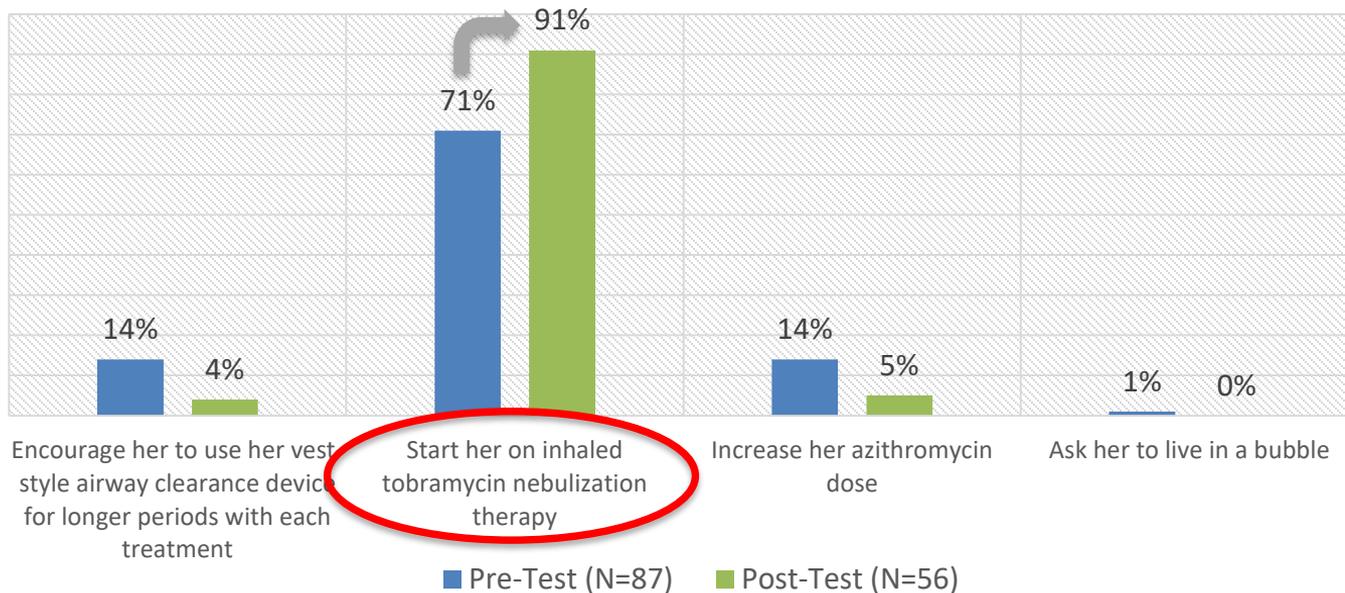
A 45yo female coming for an initial visit is diagnosed with multilobe bronchiectasis and is bothered by daily cough and mucus, but she has not been hospitalized and denies going on antibiotics for illnesses. What is the best first step of management?



Average relative knowledge gain pre- to post-activity: **7%**

# Pre/Post Test Comparison: Addresses Bronchiectasis & NTM Learning Objective #3

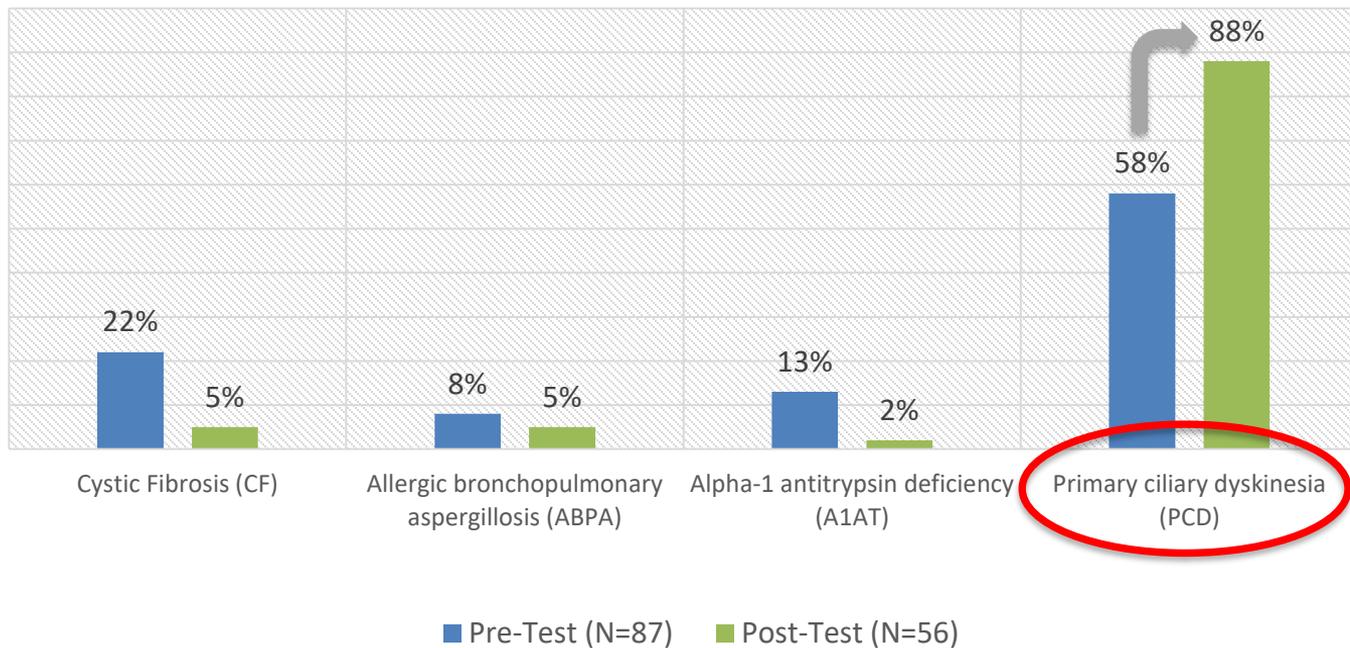
A 45yo female with multilobe bronchiectasis who diligently engages in her airway clearance of albuterol neb, 7% hypertonic saline neb with airway clearance device, and wears her vest-type airway mobilization device 30min twice a day is continuing to have exacerbations. She was started on 250mg of daily azithromycin three months ago. What is the best next step of management?



Average relative knowledge gain pre- to post-activity: **28%**

# Pre/Post Test Comparison: Addresses Bronchiectasis & NTM Learning Objective #3

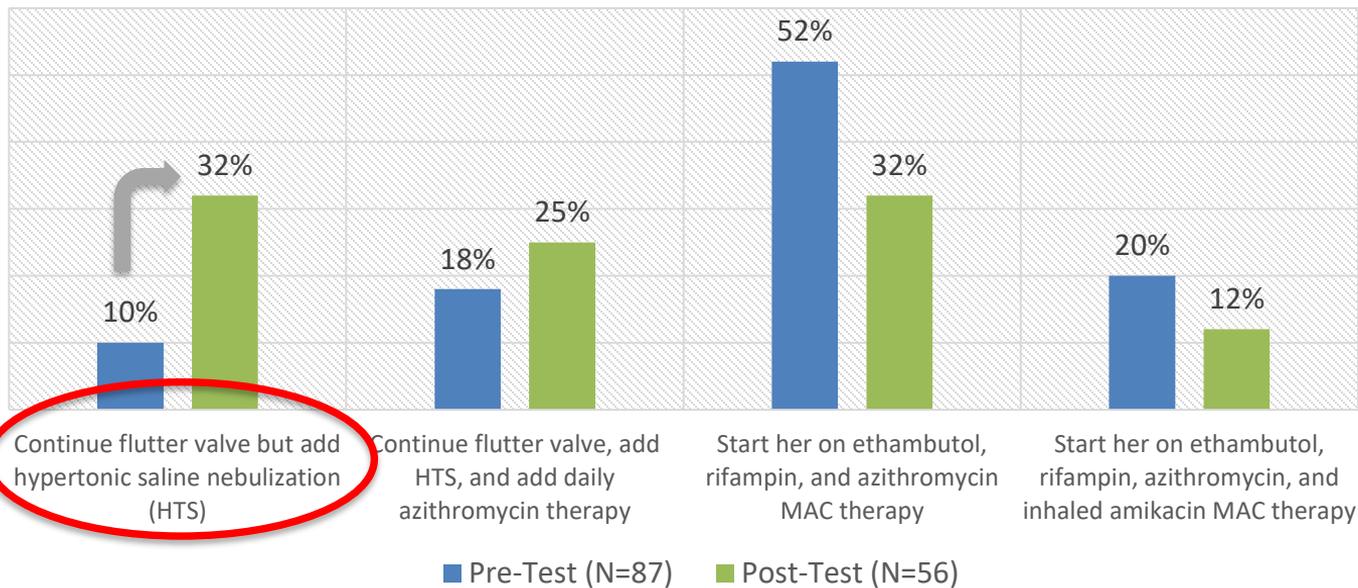
A 25yo female diagnosed with lower lobe bronchiectasis who had pneumonia during her first month of life and has been plagued with recurrent ear and sinus infections is likely to possibly have?



Average  
relative  
knowledge  
gain  
pre- to post-  
activity:  
**52%**

# Pre/Post Test Comparison: Addresses Bronchiectasis & NTM Learning Objective #2

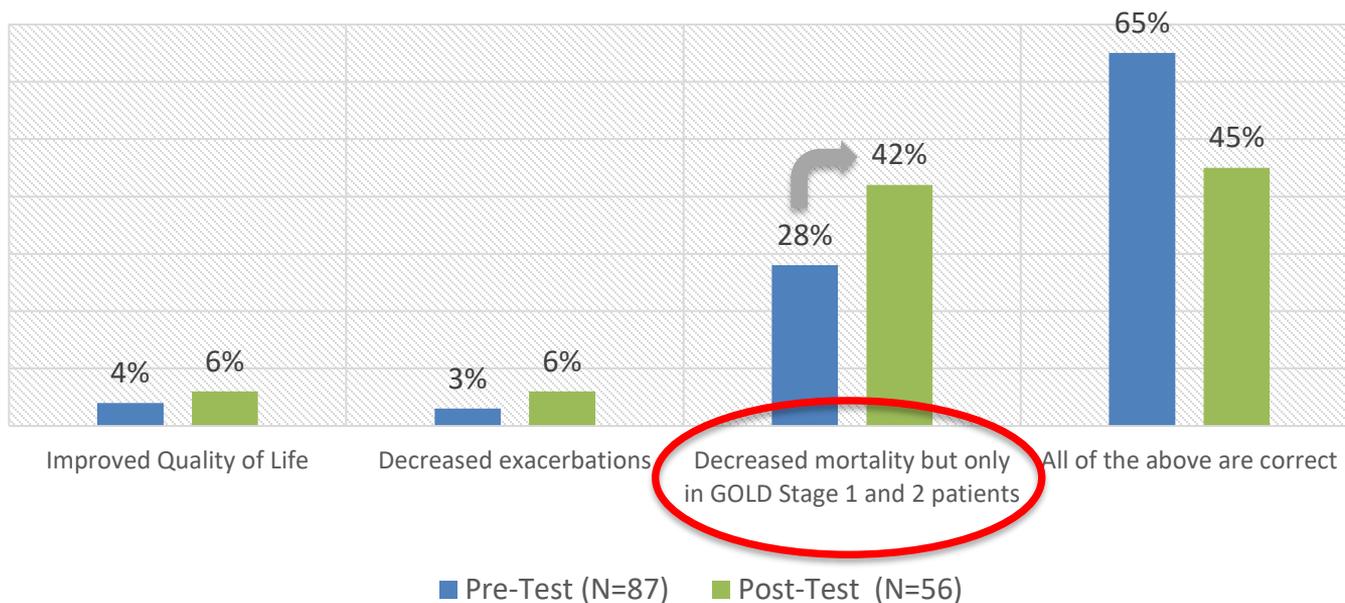
A 75yo female with multilobe bronchiectasis who has been using her flutter valve twice a day presents with worse bronchial thickening and mucus plugging on CT scan, lower lung function, and has had recurrent exacerbations the past year. She has a sputum culture now growing Mycobacterium avium complex (MAC) for first time. The next best step of management of the options below is?



Average relative knowledge gain pre- to post-activity: **220%**

# Pre/Post Test Comparison: Addresses COPD Learning Objective #1

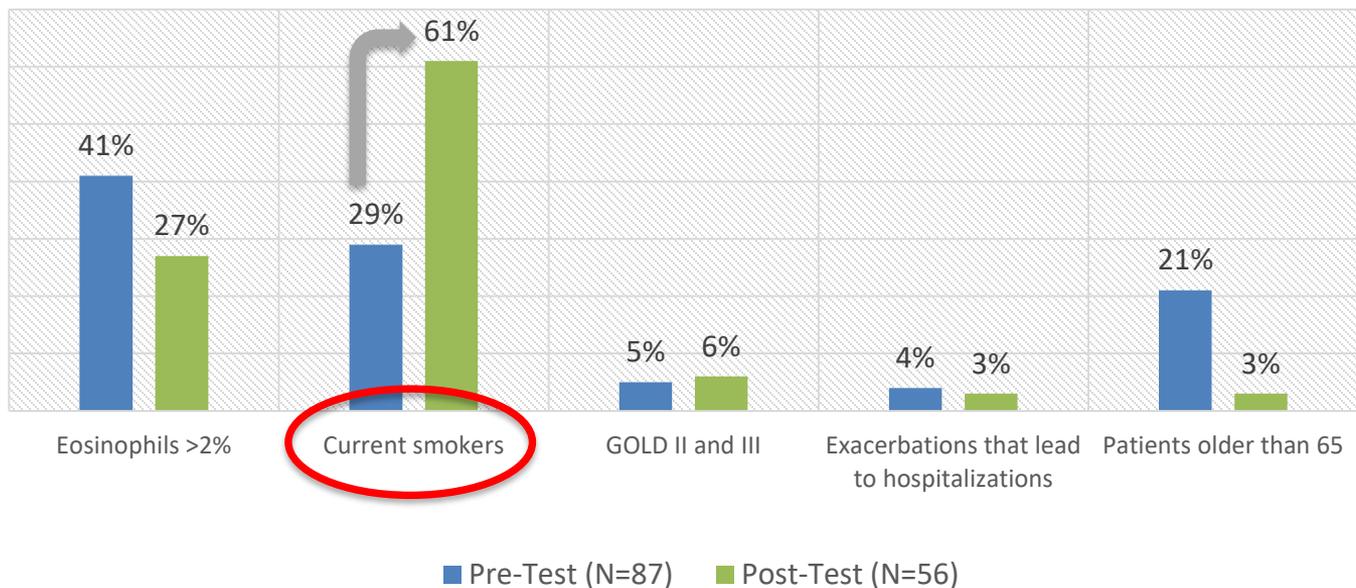
A patient asks you the following question, "this tiotropium is expensive, why should I take it?"  
LAMAs in COPD will do all of the above EXCEPT:



Average relative knowledge gain pre- to post-activity: **50%**

# Pre/Post Test Comparison: Addresses COPD Learning Objective #1

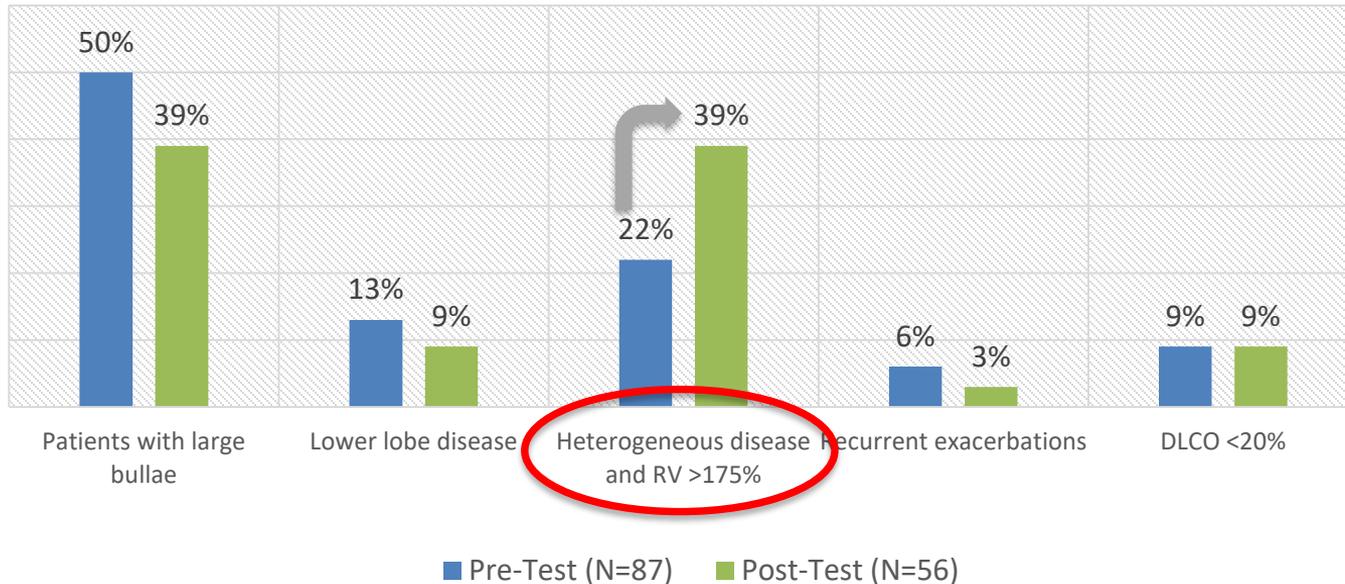
Consider chronic azithromycin in those with recurrent exacerbations and all of the following EXCEPT:



Average relative knowledge gain pre- to post-activity: **110%**

# Pre/Post Test Comparison: Addresses COPD Learning Objective #2

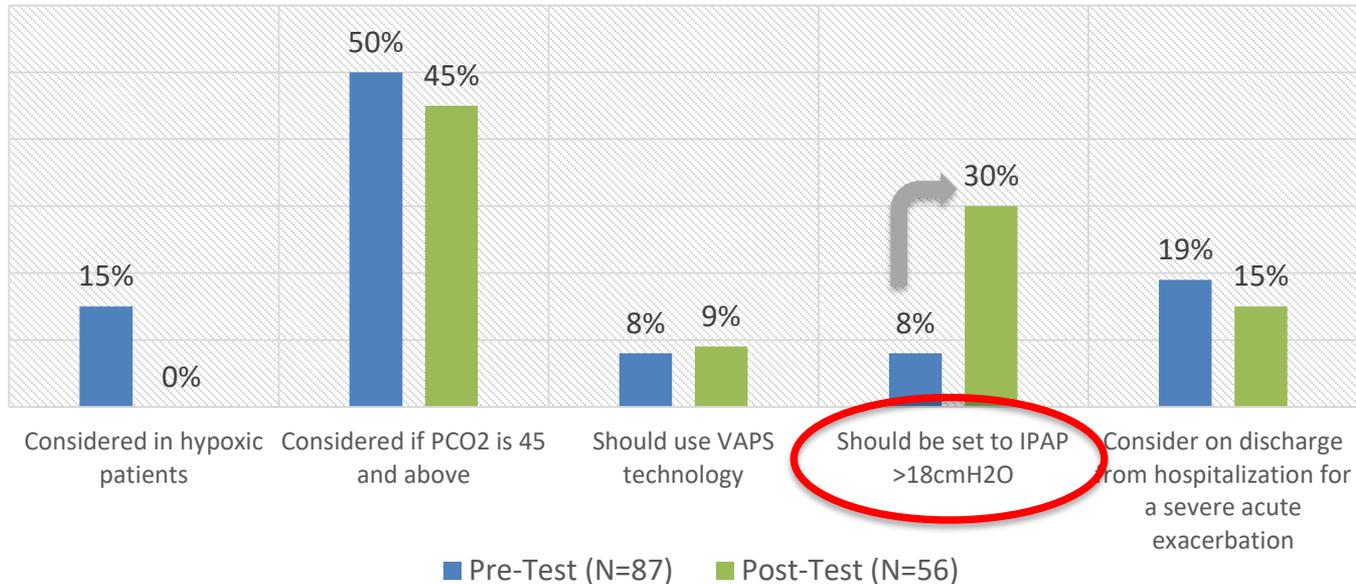
Bronchoscopic lung volume reduction can be considered in:



Average relative knowledge gain pre- to post-activity: **77%**

# Pre/Post Test Comparison: Addresses COPD Learning Objective #2

## Non Invasive ventilation in COPD:

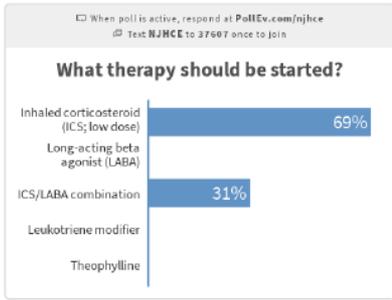


Average relative knowledge gain pre- to post-activity: **275%**

# Audience Response Engagement Data: Severe Asthma

Audience Response System (ARS) was implemented strategically throughout the conference to engage participants in the learning process, create an interactive method of learning and responding to questions, and encourage audience participation to elucidate problems and solutions.

## What therapy should be started?



Response options	Count	Percentage
<b>Inhaled corticosteroid (ICS; low dose)</b>	24	69%
Long-acting beta agonist (LABA)	0	0%
ICS/LABA combination	11	31%
Leukotriene modifier	0	0%
Theophylline	0	0%

90%  
Engagement

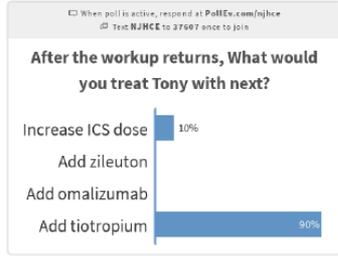
35  
Responses

*\*The bolded response indicates the answer that was selected by the most participants.*

# Audience Response Engagement Data: Severe Asthma

Audience Response System (ARS) was implemented strategically throughout the conference to engage participants in the learning process, create an interactive method of learning and responding to questions, and encourage audience participation to elucidate problems and solutions.

## After the workup returns, What would you treat Tony with next?



Response options	Count	Percentage
Increase ICS dose	3	10%
Add zileuton	0	0%
Add omalizumab	0	0%
<b>Add tiotropium</b>	<b>26</b>	<b>90%</b>

74% Engagement

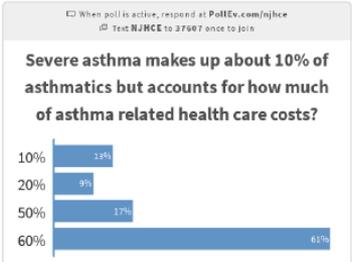
29 Responses

*\*The bolded response indicates the answer that was selected by the most participants.*

# Audience Response Engagement Data: Severe Asthma

Audience Response System (ARS) was implemented strategically throughout the conference to engage participants in the learning process, create an interactive method of learning and responding to questions, and encourage audience participation to elucidate problems and solutions.

## Severe asthma makes up about 10% of asthmatics but accounts for how much of asthma related health care costs?



Response options	Count	Percentage
10%	3	13%
20%	2	9%
50%	4	17%
60%	14	61%

77% Engagement

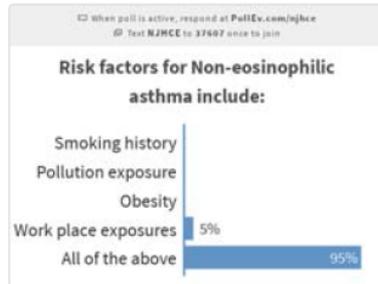
23 Responses

*\*The bolded response indicates the answer that was selected by the most participants.*

# Audience Response Engagement Data: Severe Asthma

Audience Response System (ARS) was implemented strategically throughout the conference to engage participants in the learning process, create an interactive method of learning and responding to questions, and encourage audience participation to elucidate problems and solutions.

## Risk factors for Non-eosinophilic asthma include:



Response options

Smoking history

Pollution exposure

Obesity

Work place exposures

**All of the above**

Count Percentage

0 0%

0 0%

0 0%

1 5%

**19 95%**



Engagement

20

Responses

*\*The bolded response indicates the answer that was selected by the most participants.*

# Audience Response Engagement Data: Severe Asthma

Audience Response System (ARS) was implemented strategically throughout the conference to engage participants in the learning process, create an interactive method of learning and responding to questions, and encourage audience participation to elucidate problems and solutions.

**In patients with severe asthma, which antibiotic, when used M-W-F chronically as an add-on therapy, has been shown to reduce exacerbations and improve quality of life?**



Response options

Nitrofurantoin

Levofloxacin

**Azithromycin**

Ertapenem

Count Percentage

0 0%

0 0%

**22 88%**

3 12%



Engagement

25

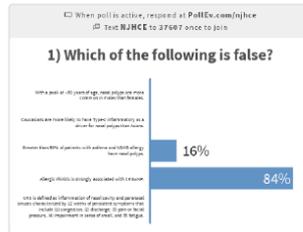
Responses

*\*The bolded response indicates the answer that was selected by the most participants.*

# Audience Response Engagement Data: Nasal Polyps

Audience Response System (ARS) was implemented strategically throughout the conference to engage participants in the learning process, create an interactive method of learning and responding to questions, and encourage audience participation to elucidate problems and solutions.

## 1) Which of the following is false?



### Response options

With a peak at ~50 years of age, nasal polyps are more common in males than females.

Count Percentage

0 0%

Caucasians are more likely to have Type-2 inflammatory as a driver for nasal polyps than Asians.

0 0%

Greater than 80% of patients with asthma and NSAID allergy have nasal polyps.

3 16%

**Allergic rhinitis is strongly associated with CRSwNP.**

**16 84%**

CRS is defined as inflammation of nasal cavity and paranasal sinuses characterized by 12 weeks of persistent symptoms that include (1) congestion, (2) discharge, (3) pain or facial pressure, (4) impairment in sense of smell, and (5) fatigue.

0 0%



Engagement

19

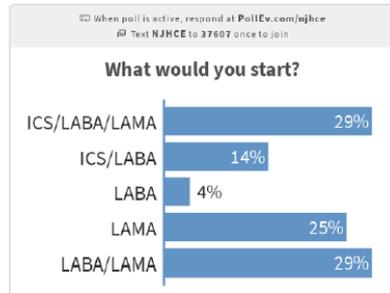
Responses

*\*The bolded response indicates the answer that was selected by the most participants.*

# Audience Response Engagement Data: COPD

Audience Response System (ARS) was implemented strategically throughout the conference to engage participants in the learning process, create an interactive method of learning and responding to questions, and encourage audience participation to elucidate problems and solutions.

## What would you start?



Response options

**ICS/LABA/LAMA**

ICS/LABA

LABA

LAMA

**LABA/LAMA**

Count Percentage

**8 29%**

4 14%

1 4%

7 25%

**8 29%**



Engagement

28

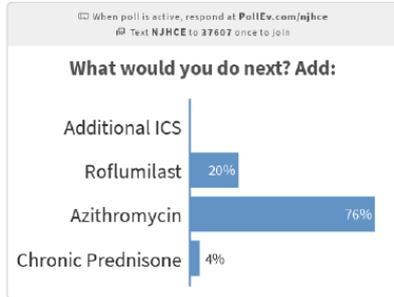
Responses

*\*The bolded response indicates the answer that was selected by the most participants.*

# Audience Response Engagement Data: COPD

Audience Response System (ARS) was implemented strategically throughout the conference to engage participants in the learning process, create an interactive method of learning and responding to questions, and encourage audience participation to elucidate problems and solutions.

## What would you do next? Add:



Response options

Additional ICS

Roflumilast

**Azithromycin**

Chronic Prednisone

Count Percentage

0 0%

5 20%

**19 76%**

1 4%



Engagement

25

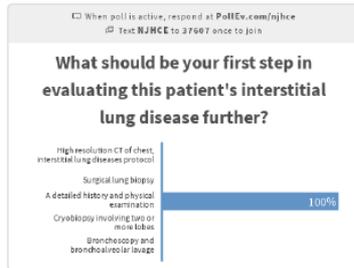
Responses

*\*The bolded response indicates the answer that was selected by the most participants.*

# Audience Response Engagement Data: Interstitial Lung Disease

Audience Response System (ARS) was implemented strategically throughout the conference to engage participants in the learning process, create an interactive method of learning and responding to questions, and encourage audience participation to elucidate problems and solutions.

## What should be your first step in evaluating this patient's interstitial lung disease further?



### Response options

High resolution CT of chest, interstitial lung diseases protocol

Surgical lung biopsy

**A detailed history and physical examination**

Cryobiopsy involving two or more lobes

Bronchoscopy and bronchoalveolar lavage

Count Percentage

0 0%

0 0%

24 100%

0 0%

0 0%



Engagement

24

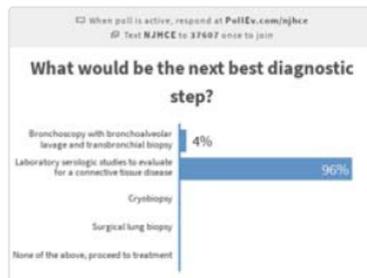
Responses

*\*The bolded response indicates the answer that was selected by the most participants.*

# Audience Response Engagement Data: Interstitial Lung Disease

Audience Response System (ARS) was implemented strategically throughout the conference to engage participants in the learning process, create an interactive method of learning and responding to questions, and encourage audience participation to elucidate problems and solutions.

## What would be the next best diagnostic step?



Response options	Count	Percentage
Bronchoscopy with bronchoalveolar lavage and transbronchial biopsy	1	4%
<b>Laboratory serologic studies to evaluate for a connective tissue disease</b>	<b>25</b>	<b>96%</b>
Cryobiopsy	0	0%
Surgical lung biopsy	0	0%
None of the above, proceed to treatment	0	0%

84%

Engagement

26

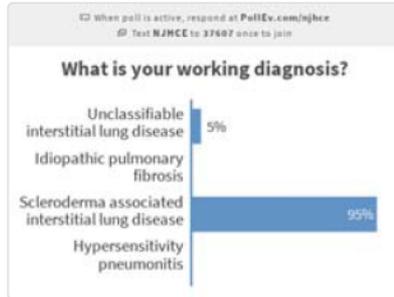
Responses

*\*The bolded response indicates the answer that was selected by the most participants.*

# Audience Response Engagement Data: Interstitial Lung Disease

Audience Response System (ARS) was implemented strategically throughout the conference to engage participants in the learning process, create an interactive method of learning and responding to questions, and encourage audience participation to elucidate problems and solutions.

## What is your working diagnosis?



### Response options

Unclassifiable interstitial lung disease

Idiopathic pulmonary fibrosis

**Scleroderma associated interstitial lung disease**

Hypersensitivity pneumonitis

Count Percentage

1 5%

0 0%

**19 95%**

0 0%



Engagement

20

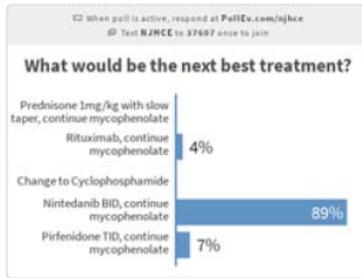
Responses

*\*The bolded response indicates the answer that was selected by the most participants.*

# Audience Response Engagement Data: Interstitial Lung Disease

Audience Response System (ARS) was implemented strategically throughout the conference to engage participants in the learning process, create an interactive method of learning and responding to questions, and encourage audience participation to elucidate problems and solutions.

## What would be the next best treatment?



Response options	Count	Percentage
Prednisone 1mg/kg with slow taper, continue mycophenolate	0	0%
Rituximab, continue mycophenolate	1	4%
Change to Cyclophosphamide	0	0%
<b>Nintedanib BID, continue mycophenolate</b>	<b>25</b>	<b>89%</b>
Pirfenidone TID, continue mycophenolate	2	7%

90%

Engagement

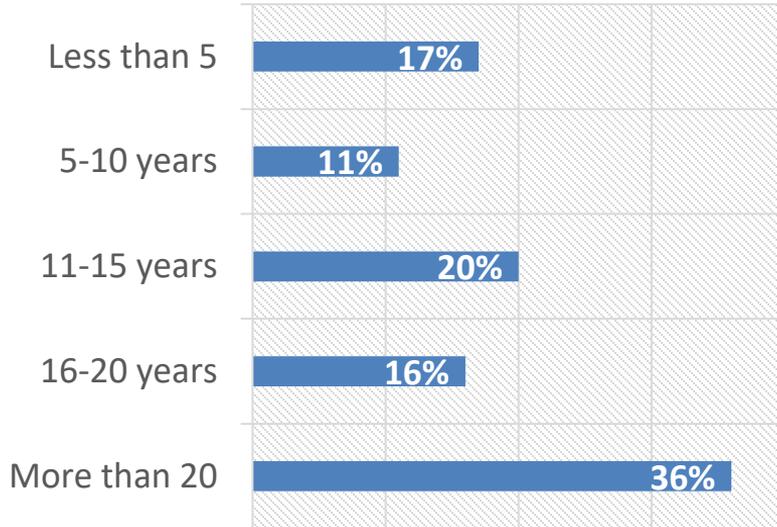
28

Responses

*\*The bolded response indicates the answer that was selected by the most participants.*

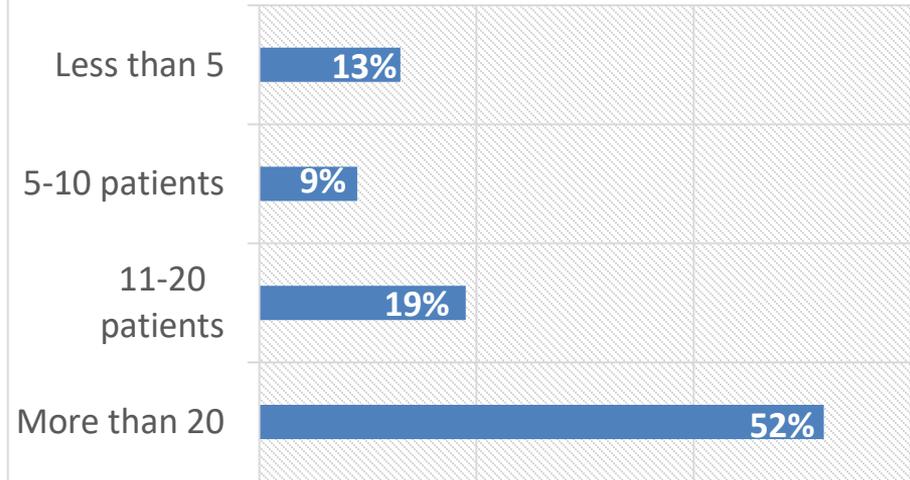
# Level 4 Outcomes: Competence

## Learners' Average Years in practice



Average number of years in practice: **13**

## Average # of patients learner treats per week with conditions discussed in this activity



Estimated number of patients impacted per month: **3700+**

# Level 4 Outcomes: Competence

**98%** of respondents report they **intend to make changes to practice** as a result of the activity. The changes **I intend to make** in my practice include:

- Starting inhaled tobramycin earlier; patient education on vaping; importance of supraesophageal GERD and referral to GI for EGD
- Inhaled tobramycin, importance of biologic agents in asthma
- Work on de-escalating inhaler therapy when appropriate
- I work in Pediatrics, so some of the practices are not relevant but I certainly will be able to better discuss vaping/marijuana with my adolescents.
- Reconsider some patients in our clinic previously diagnosed with COPD as possible non-eosinophilic asthma patients and better-control comorbidities
- I will incorporate the knowledge I've learned to help educate patients on what to possibly expect when being referred to a specialist for their condition

# Evaluation Results

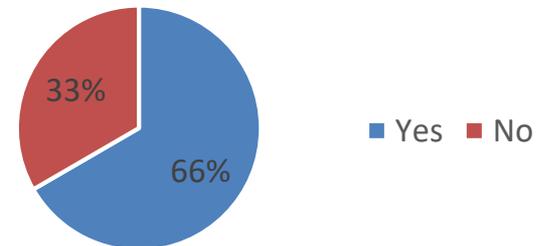
- **100%** of respondents report the content was **evidence based and clinically relevant**
- **98%** of respondents report they **intend to make changes to practice** as a result of the activity
- **52%** of respondents report the activity **addressed strategies for overcoming barriers** to optimal patient care
- **97%** of respondents report that the information presented **reinforced and/or improved their current skills**
- **97%** of respondents report that the educational activity **improved their ability to treat or manage patients**
- **96%** of respondents report that the activity enhanced their ability to **apply the learning objectives to their practice.**
- **99%** of respondents report that the activity **meet their educational needs.**

# Overall Activity Impact

Based on the educational content delivered at the *Pulmonary and Allergy Update*, participants demonstrated a **43% increase in knowledge and competence**. Additionally, participants report that they have **changed their screening and prevention practices (23%)**, have **incorporated different diagnostic strategies into patient evaluation (46%)**, have **modified treatment plans (69%)** and are **using alternative communication methods (7%)** with their pulmonary, allergy, and immunology patients as a result of the activity.

The *Pulmonary and Allergy Update* fulfills National Quality Strategy Priorities in making care safer for patients with asthma, COPD and other pulmonary and allergy conditions, as well as promoting the most effective treatment and prevention practices for these disease states.

Did the activity provide information, education, tools or resources to be able to address barriers?



 **National Jewish Health** @NJHealth · Feb 7  
@njhealth #atopicdermatitis has a huge impact on the quality of #life for patients. Expert Dr. Boguniewicz explains emerging treatments and best care practices for AD patients at the Pulmonary & #Allergy Update. #njhealthedu #njhkeystone2020 #eczema fal.cn/36q5i



 **National Jewish Health** @NJHealth · Feb 5  
@NJHealth quantitative #lung imaging may guide treatment for patients w/ #asthma & small airways diseases. Dr. Lynch explains why, & the diagnostic role #imaging plays for clinicians. Pulmonary & #Allergy Update opens today. #njhealthedu #njhkeystone2020 fal.cn/36ot8



# Accreditation

National Jewish Health is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians and by the California Board of Registered Nursing to provide nursing contact hours for nurses.



National Jewish Health designated this live activity for a maximum of 14.75 *AMA PRA Category 1 Credits™* and a maximum of 14.75 nursing contact hours.

# About National Jewish Health

- ✓ The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) ranks National Jewish Health in the top 1 percent of hospitals in the nation.
- ✓ National Jewish Health has been ranked by U.S. News & World Report as the #1 or #2 Respiratory Hospital for 23 years.
- ✓ U.S. News & World Report rated National Jewish Health COPD (chronic obstructive pulmonary disease) care and Lung Cancer Surgery program as “high performing,” the highest rating available.
- ✓ National Jewish Health is in the top 8 percent of institutions in the country funded by the National Institutes of Health.
- ✓ National Jewish Health has the largest pulmonary division in the nation and is the only hospital whose principal focus is pulmonary disease.



**#1** in Respiratory Care