



Conversations in Pulmonology 2019

Final Live Outcomes Report



Dawn of the Era of Phenotyping and Goal Oriented Therapy in Sarcoidosis

Mallinckrodt Pharmaceuticals
MED-PUL-1066

February 3, 2020

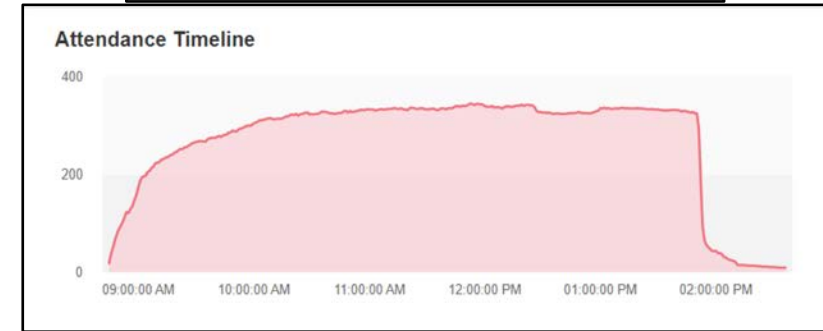
Executive Summary



National online simulcast: **436** attendees

- ❖ This activity focused on improving the diagnosis and treatment of sarcoidosis with recognition of the impact of patient phenotype in management.
- ❖ 436 attendees in multiple professional specialties were reached in this program.
- ❖ Improvement across several learning domains was noted ranging from -2% to 80%, with improved confidence and changes in practice patterns. Despite some improvements, learners remained challenged at post test in several areas.
- ❖ Overall, the program improved learner knowledge on the current pathophysiology of sarcoidosis, and how to manage the condition.

Live Performance		
8.6	1049	436
<small>Engagement Score</small>	<small>Total Registrants</small>	<small>Total Attendees</small>
42%		233
<small>Attendee Conversion Rate</small>		<small>Avg. Minutes Viewed</small>



Persistent Educational Gaps

- ❖ Though improvements were observed, learners demonstrated persistent gaps in the several areas including:
 - ❖ Awareness of the pathophysiologic mechanisms of sarcoidosis
 - ❖ Systemic impact of sarcoidosis
 - ❖ Requirements for confirming diagnosing sarcoidosis
 - ❖ Phenotype guided treatment strategies

The post-test scores, and self reported confidence regarding the diagnosis and management of patients with sarcoidosis, signifies a clear gap in knowledge and an unmet need among clinicians. It continues to be an important area for future educational programs.

*These numbers represent the total number of attendees, irrespective of assessment participation

Learning Objectives

- 1 Describe the pathophysiology and the epidemiology of sarcoidosis.
- 2 Describe the up-to-date methodology for diagnosis of sarcoidosis.
- 3 Describe the concept of phenotypes in sarcoidosis.
- 4 Review our current understanding of the treatments considered, including steroids, mineralocorticoid receptor agonists/RCI and treatments for advanced sarcoidosis.

Course Director

Fernando J. Martinez, MD, MS

Chief, Division of Pulmonary and Critical Care Medicine
Bruce Webster Professor of Medicine
Joan and Sanford I. Weill Department of Medicine
Weill Cornell Medical College
New York-Presbyterian Hospital/Weill Cornell Medical Center
New York, NY

Faculty

Franck Rahaghi, MD, MHS, FCCP

Chairman, Department of Pulmonary Medicine
Director, Pulmonary Hypertension Clinic
Head, Pulmonary Education and Rehabilitation
Department of Pulmonary and Critical Care
Cleveland Clinic Florida
Weston, FL

Activity Planning Committee

Gregg Sherman, MD

Michelle Frisch, MPH, CCMEP

Sandy Bihlmeyer M.Ed

Daniela Hiedra

Joshua F. Kilbridge

Deborah Paschal, CRNP



Conversations in Pulmonology 2019

Commercial Support

The Conversations in Pulmonology: 2019 CME activity was supported through educational grants or donations from the following companies:

- ❖ Mallinckrodt Pharmaceuticals, LLC
- ❖ Boehringer Ingelheim Pharmaceutical
- ❖ Shire
- ❖ Sanofi Genzyme

Levels of Evaluation

Consistent with the policies of the ACCME, NACE evaluates the effectiveness of all CME activities using a systematic process based on Moore's model. This outcome study reaches Level 5.

Level 1: Participation

Level 2: Satisfaction

Level 3: Declarative and Procedural Knowledge

Level 4: Competence

Level 5: Performance

Level 6: Patient Health

Level 7: Community Health

Moore DE Jr, Green JS, Gallis HA. Achieving desired results and improved outcomes: integrating planning and assessment throughout learning activities. J Contin. Educ. Health Prof. 2009 Winter;29(1):1-15




One Live Virtual CME Symposium – April 27, 2019




Clinical Highlights eMonograph

eMonograph, containing key teaching points from the CME activity, was distributed 1 week after the meeting to all attendees.



CONVERSATIONS IN PULMONOLOGY

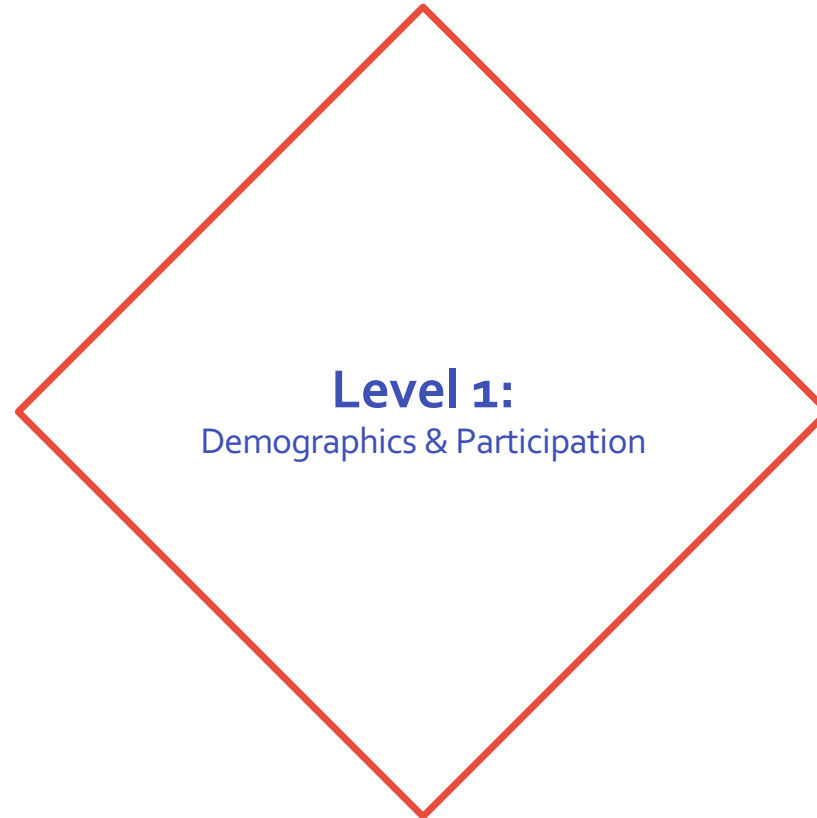
LIVE ONLINE CONFERENCE



Dawn of the Era of Phenotyping and Goal Oriented Therapy in Sarcoidosis

Faculty
Franck Rahaghi, MD, MHS, FCCP
 Director of Advanced Lung Disease Clinic
 Director, Pulmonary Hypertension Clinic
 Head of Alpha-1 Foundation Clinical Resource Center
 Chairman, Dept. of Pulmonary and Critical Care
 Cleveland Clinic Florida
 Weston, FL

- The hallmark of sarcoidosis is the granuloma: It begins with accumulation of mononuclear inflammatory cells and T helper lymphocytes.
- Formation of granulomas involves then aggregates of macrophages, epithelioid cells and multinucleated giant cells.
- The ratio of T-helper cells to T-suppressor cells is increased – CD4:CD8 >3.5.
- ACE level is elevated in 75% of untreated patients with sarcoidosis.
- However, serum ACE levels have limited diagnostic utility due to poor sensitivity (false negative results) and insufficient specificity (almost 10% false positive rate).
- Sarcoidosis is a diagnosis of exclusion.
- Diagnosis generally requires:
 - Typical non-caseating granulomata on biopsy, *PLUS*
 - Exclusion of other causes of granulomatous inflammation (eg, tuberculosis).
- Confident diagnosis only at 3-6 months follow-up, if it evolves in a typical manner.



2nd Annual Conversations in Pulmonology 2019 Participation Snapshot

Activity Date: Saturday, April 27, 2019

- ❖ 436 live attendees
- ❖ 3.0 credit live online CME/CE virtual symposium

Total

436

Dedicated Learners

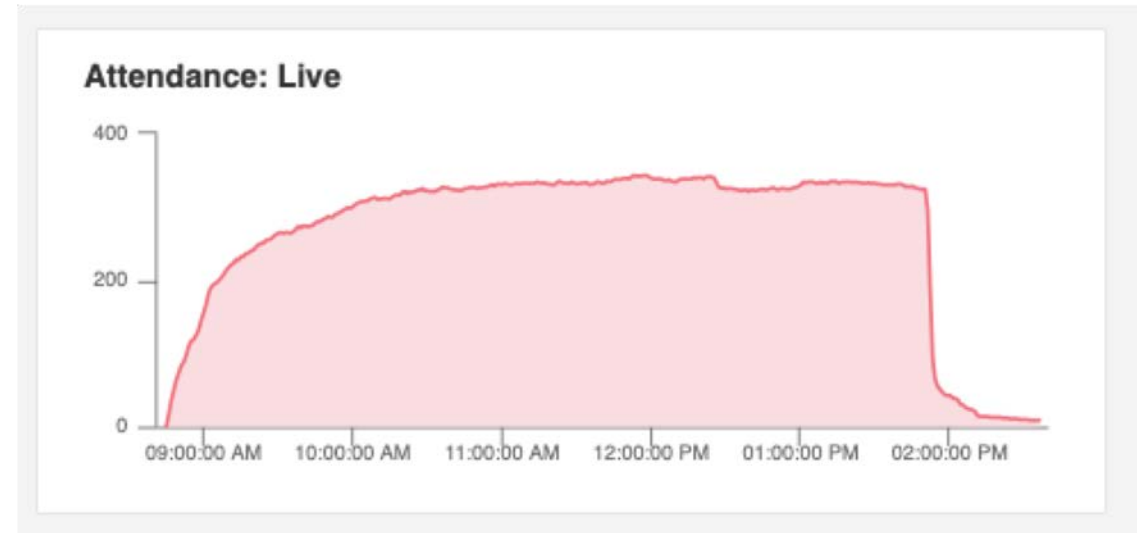
Event Summary

Event Duration: 295 min

Avg. Live Duration: 233 min

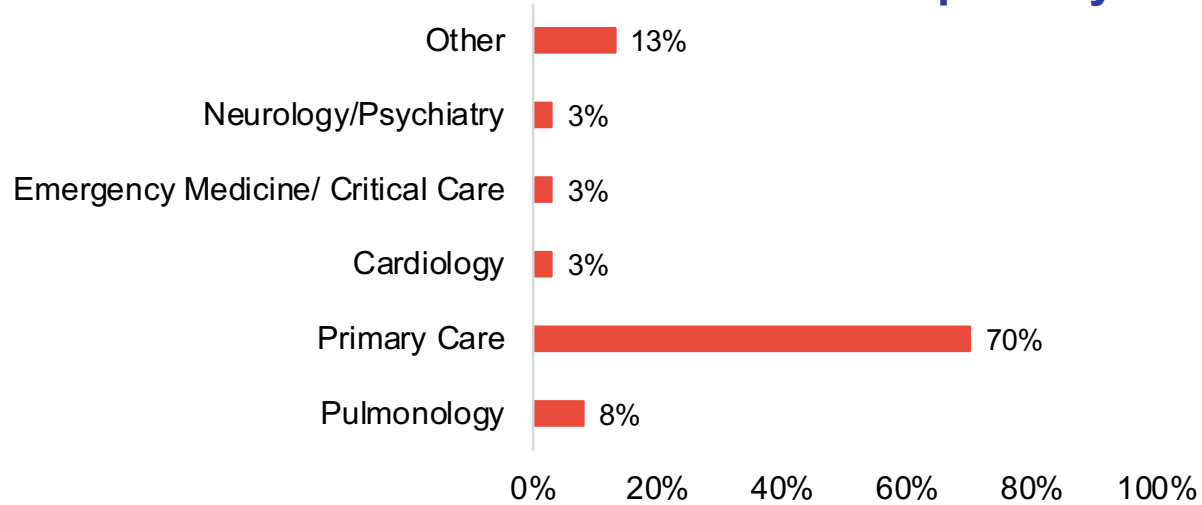
Questions Asked: 66

of Poll Responses: 6187



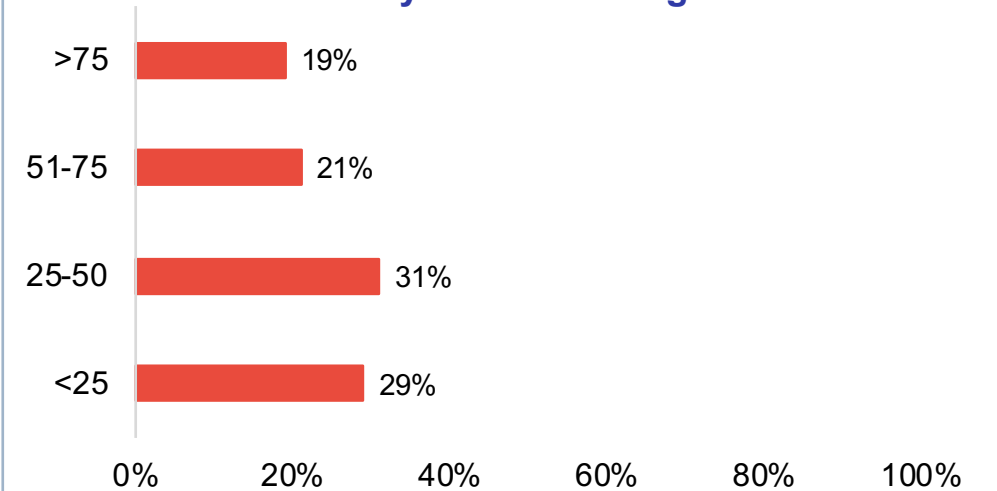
Level 1: Demographics and Patient Reach

Specialty

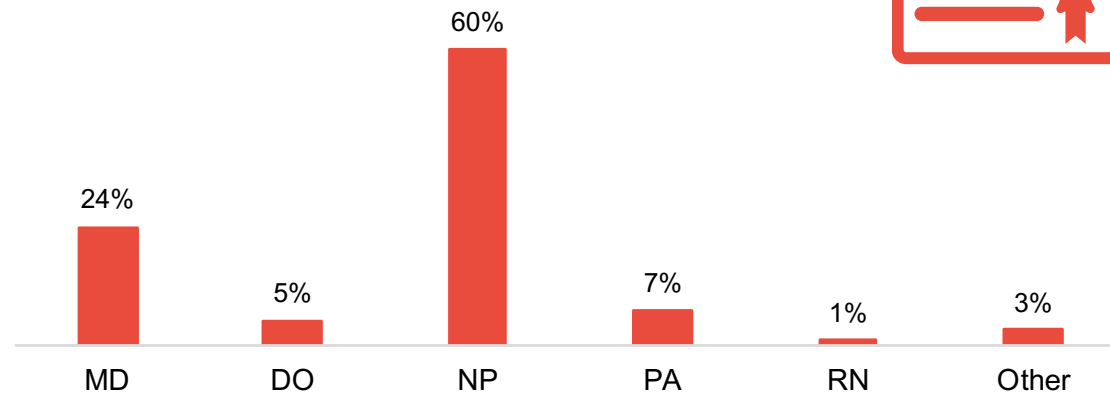


Patient Care Focus: 94%

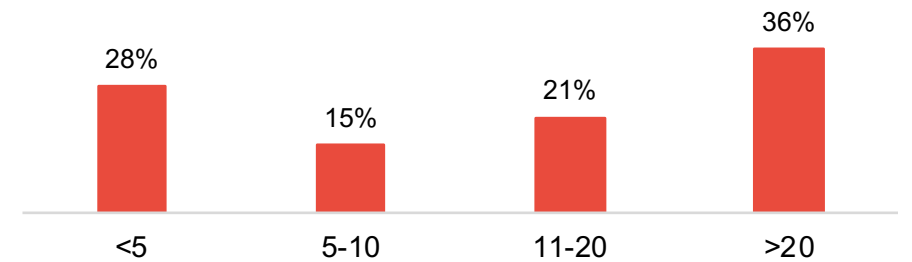
Number of patients you personally see each week, in any clinical setting?



Profession



Years in Practice





Levels 2-4:
Outcomes Metrics

Level 2 (Satisfaction)



99% rated the activity as excellent



99% indicated the activity improved their knowledge



97% stated that they learned new and useful strategies for patient care



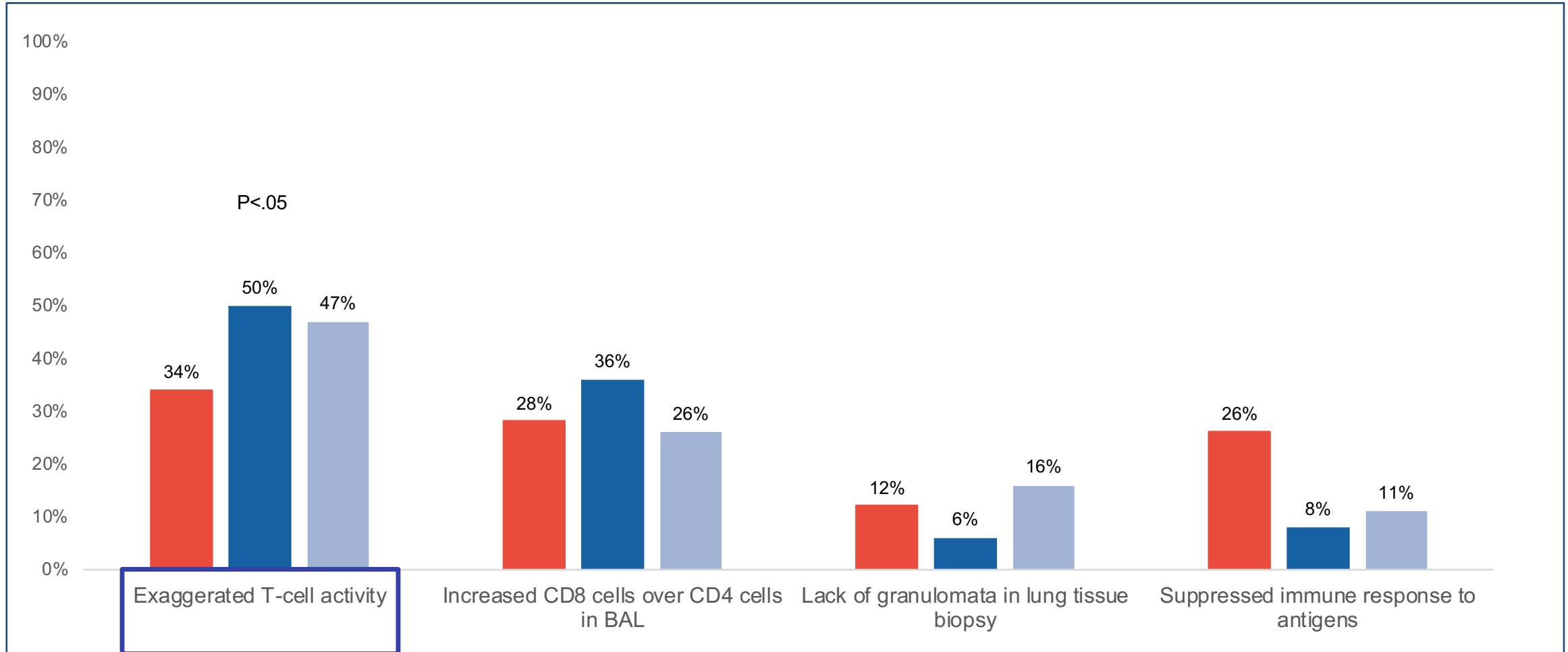
90% said they would implement new strategies that they learned



99% said the program was fair-balanced and unbiased

Which of the following is a core pathophysiologic mechanism of sarcoidosis?

(Learning Objective 1)



Exaggerated T-cell activity

Pre: 134

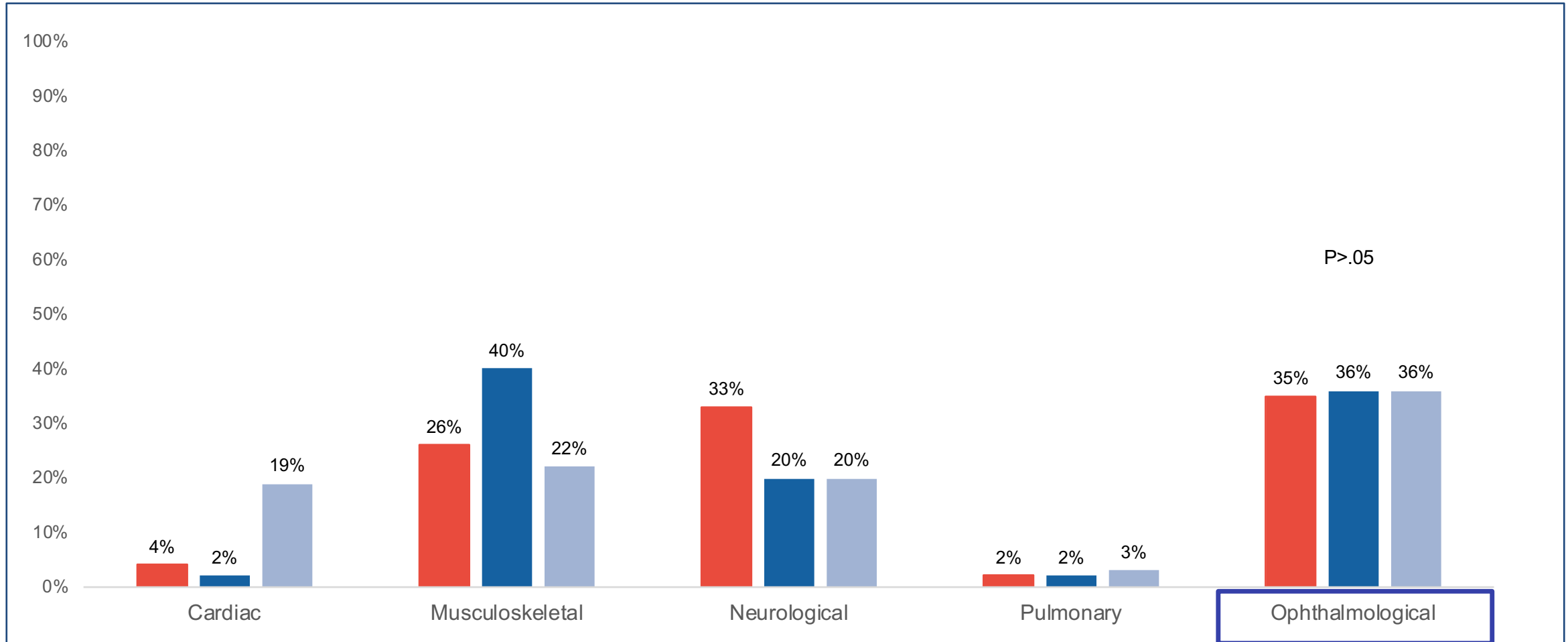
Post: 133

PCA: 116

Pre – Post	47 %
Pre – PCA	38 %

Which organ system is NOT one of the top five treated manifestations of Sarcoidosis?

(Learning Objective 2)



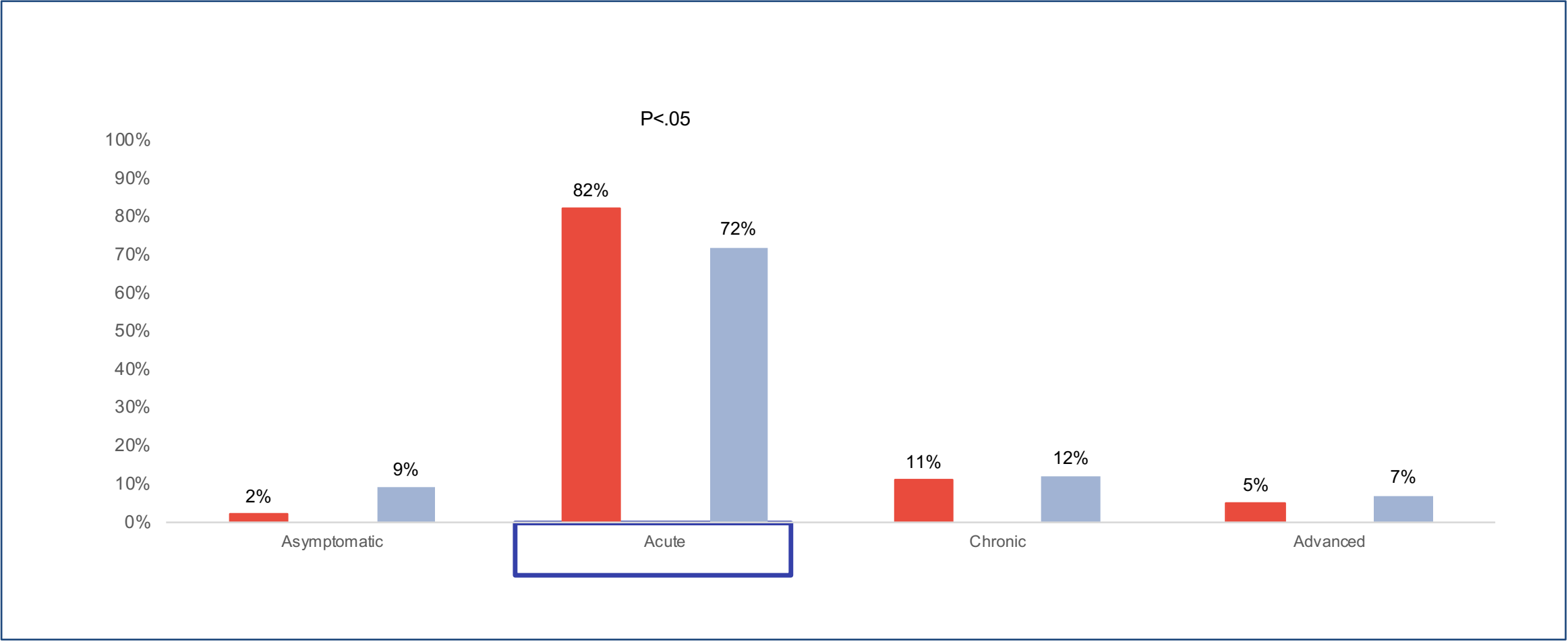
Pre: 149

Post: 167

PCA: 116

Pre – Post 3 %
Pre – PCA 3 %

Which of the following phenotypes of sarcoidosis is typically treated with an oral corticosteroid taper? (Learning Objective 3, and 4)



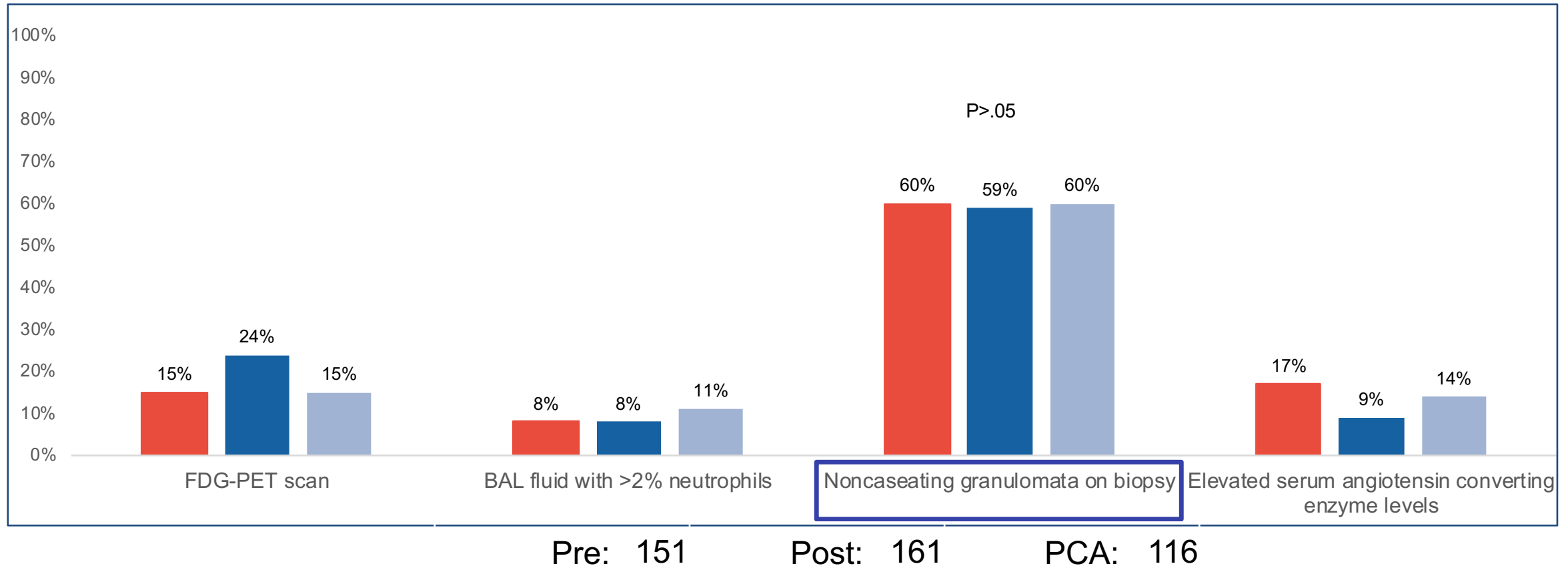
Pre: 152 PCA: 116

Pre-Post Data Loss
Pre – PCA -12 %

Competence Assessment

A 59-year-old woman presents with 3-month history of unproductive cough, widespread rash, fever, weight loss, and blurred vision. Chest X-ray shows bilateral hilar lymphadenopathy, without infiltrates. If non-sarcoid etiologies are ruled out by further testing, which of the following would likely be required to confirm a diagnosis of sarcoidosis?

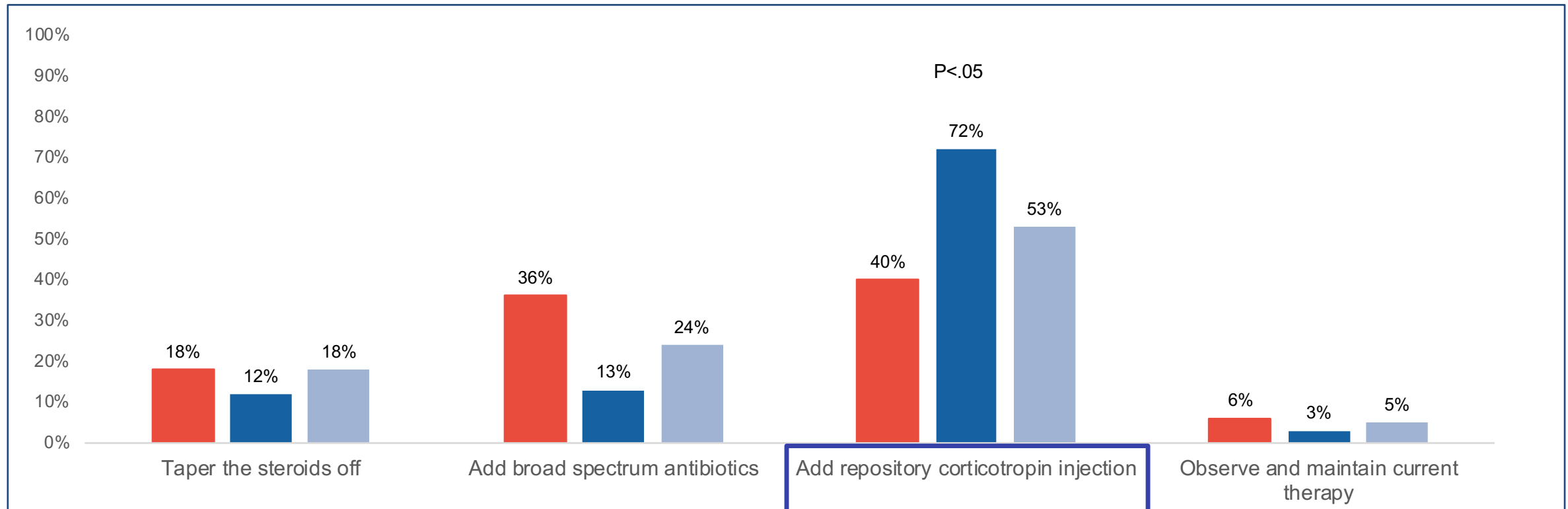
(Learning Objective 2)



Pre - Post	-2 %
Pre - PCA	0 %

A 61-year-old man presents with progressive cough, rash, pyrexia, and arthralgia in multiple joints. Workup identifies granulomatous inflammation and rules out non-sarcoid etiologies. Treatment was initiated with prednisone, and methotrexate subsequently was added. Patient continues to have worsening cough and PFTs. What might be appropriate at this time?

(Learning Objective 4)



Pre: 147

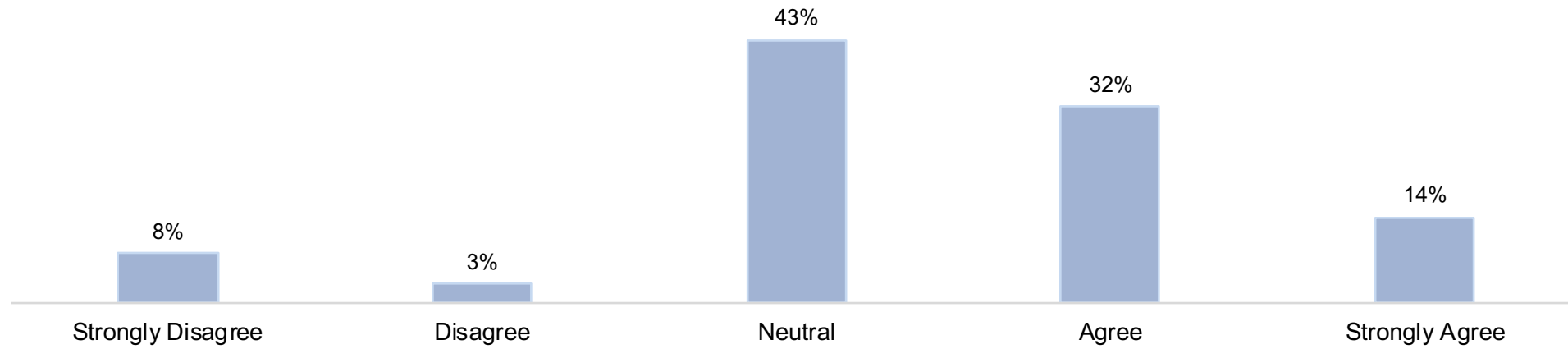
Post: 158

PCA: 116

Pre – Post	80 %
Pre – PCA	33 %

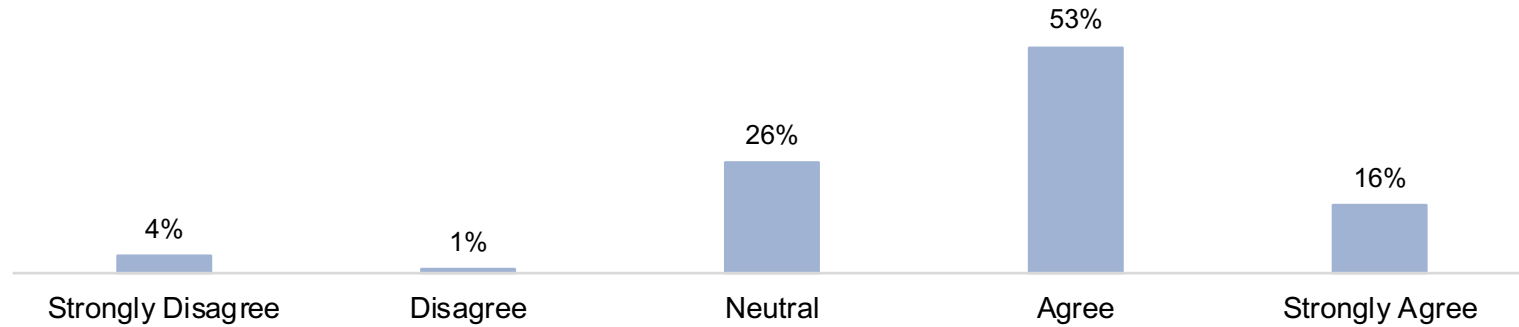
Practice Assessment (4 week post activity)

I more often use steroid sparing agents in the treatment of patients with Sarcoidosis:

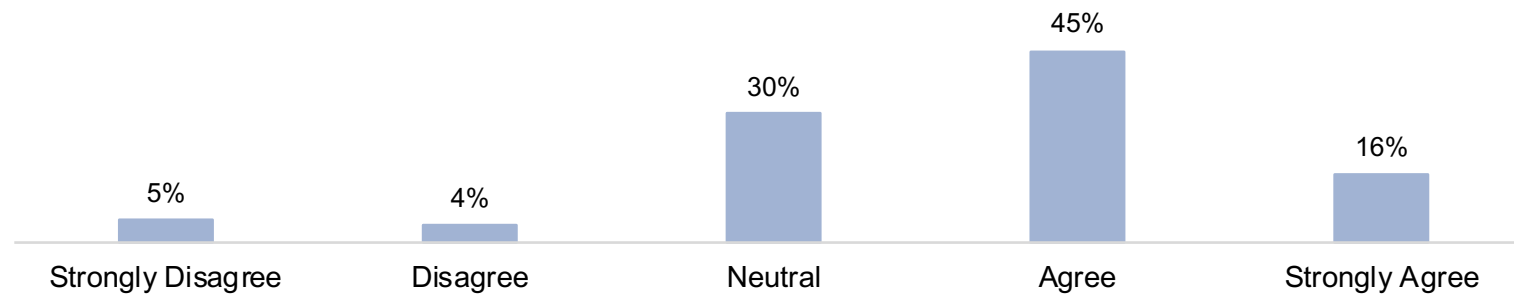


Confidence Assessment (4 week post activity)

I am much more confident in understanding the signs and symptoms of sarcoidosis:



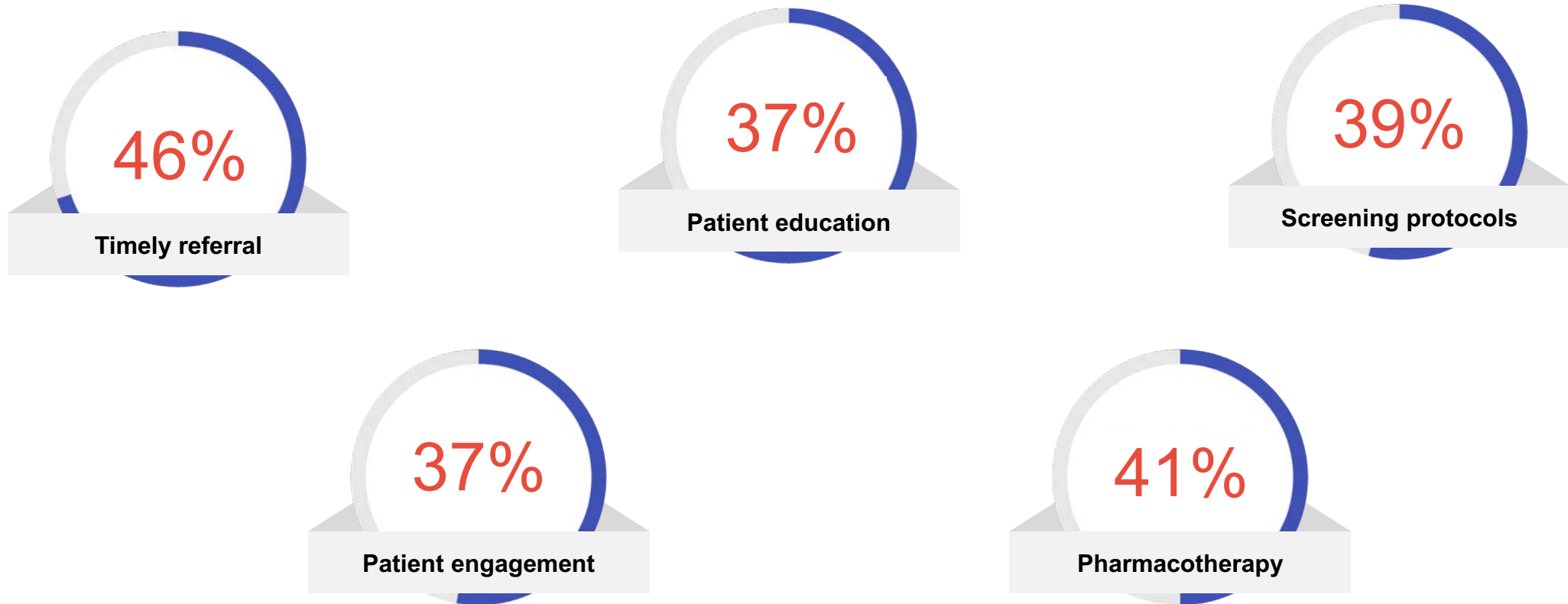
I am much more confident in understanding how to select treatment for sarcoidosis based on sarcoidosis phenotypes:



(4-week Post Assessment)

Please select the specific areas of *skills, or practice behaviors*, you have improved regarding the screening, diagnosis and treatment of Sarcoidosis since this CME activity. (Select all that apply.)

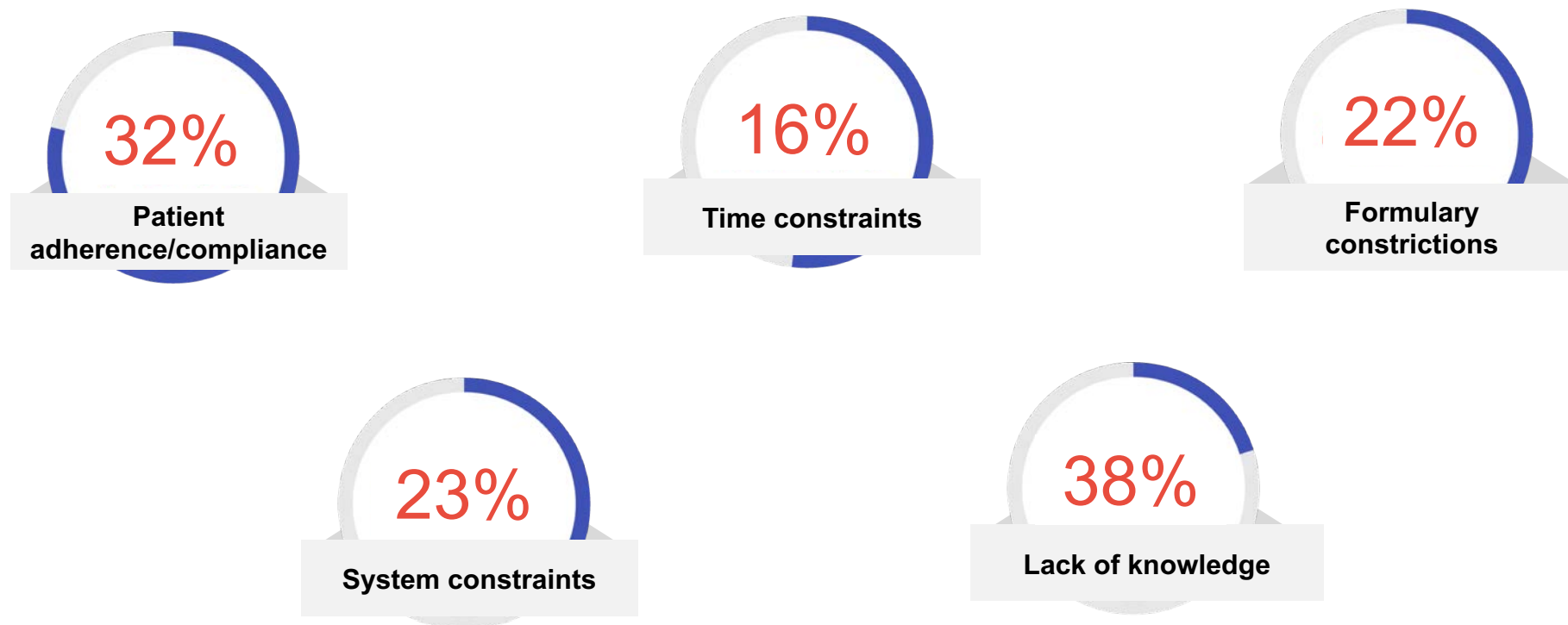
N=161



(4-week Post Assessment)

**What specific *barriers* have you encountered that may have prevented you from successfully implementing screening, diagnosis and treatment of Sarcoidosis since this CME activity?
(Select all that apply)**

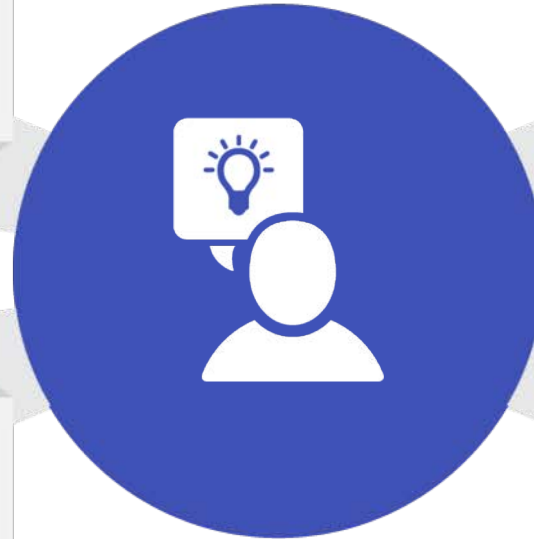
N=161



Participant Educational Gains

Increased awareness of the role of exaggerated T-cell activity in the pathophysiology of sarcoidosis

Greater competence in utilization of repository corticotropin for a patient with worsening symptoms of sarcoidosis despite prednisone and methotrexate



Decrease in likelihood of adding broad spectrum antibiotics for a patient with worsening symptoms of sarcoidosis despite prednisone and methotrexate

After 4 weeks, participants reported the following improved skills regarding the screening, diagnosis and treatment of Sarcoidosis: 46% timely referral, 41% pharmacotherapy, and 39% screening protocols

Persistent Educational Gaps After 4 Weeks

Awareness of the pathophysiologic mechanisms of sarcoidosis

Systemic impact of sarcoidosis

Requirements for confirming diagnosing sarcoidosis

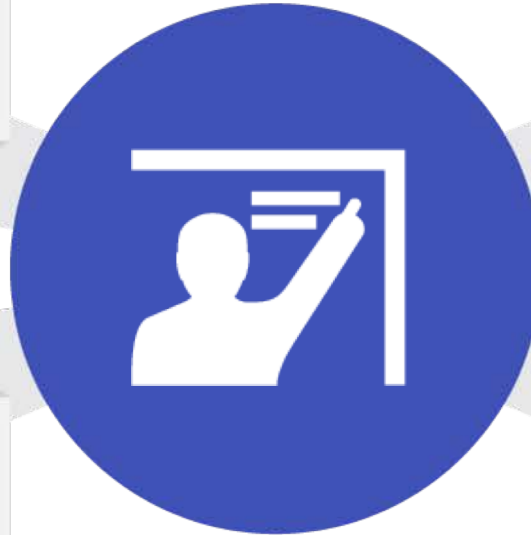
Phenotype guided treatment strategies



Key Take-Home Points

46% of learners reported using steroid sparing agents more often in the treatment of patients with sarcoidosis after the program

69% reported being much more confident in understanding the signs and symptoms of sarcoidosis



90% of learners are engaged in direct patient care and 91% reported that they will implement new strategies they learned

61% reported being much more confident in understanding how to select treatment for sarcoidosis based on sarcoidosis phenotypes