Conversations in Cardiology: September 8, 2018

Recognizing and Managing hATTR Cardiac Amyloidosis: Bridging Evidence and Clinical Practice

Supporter: Alnylam

December 13, 2018

ABC Association of Black Cardiologists, Inc.

NACE

Executive Summary

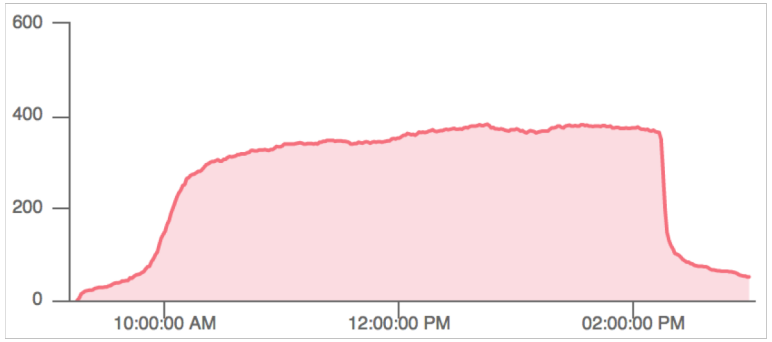
- Significant improvement across all learning objectives with: increased awareness of the different types and clinical manifestations of amyloidosis; increased competence in the diagnostic evaluation of cardiac amyloidosis; and greater awareness of the hATTR amyloidosis treatment options and mechanisms of action. These changes persisted at 4 weeks after the program.
- 200% more confident in ability to recognize features that suggest ATTR Cardiac Amyloidosis
- 91% of participants said they would implement new strategies that they learned in practice

414 Total Attendees

One Live Online Broadcast

Engagement Per Meeting

Average Live Duration:	204 min
Questions Asked by Attendees:	217
# of Pre/Post Questions:	29
# of Pre/Post Responses:	6336



Persistent Gaps

At 4 weeks follow-up, the *most consistently reported changes in practice behavior* were: more disease state awareness, more patient education and better screening protocols. The most consistently reported barrier to implementing strategies for patients with Cardiac Amyloidosis was a lack of knowledge.

Future education should focus on identified persistent learning gaps:

- Types of amyloidosis, clinical manifestations of hATTR Amyloidosis, diagnostic evaluation, and hATTR treatment options with their mechanisms of action

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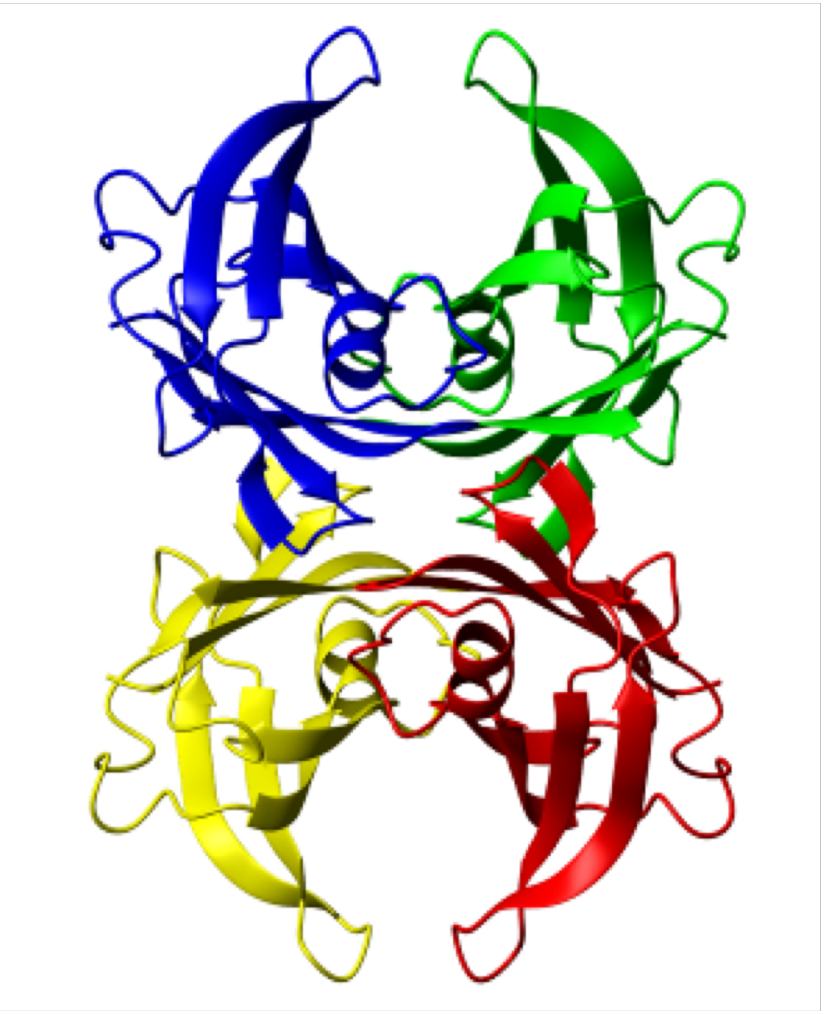
Curriculum Overview

- Accredited Live Virtual Symposia, Date: September 8, 2018
- Non-accredited “Clinical Highlights” - The program content was reinforced to participants with a document containing key teaching points from the program and is distributed 1 week after the live broadcast.
- Enduring Symposium Webcast, Launch Date: October 15, 2018 End Date: October 14, 2019
  - http://naceonline.com/CME-Courses/course_info.php?course_id=1040

Learning Objectives

1. Describe the different types of cardiac amyloidosis
2. Recognize the clinical manifestations of hATTR amyloidosis
3. Implement current strategies for the diagnosis of hATTR amyloidosis
4. Utilize the most recent clinical evidence to inform decisions about treatment of hATTR amyloidosis



Course Director

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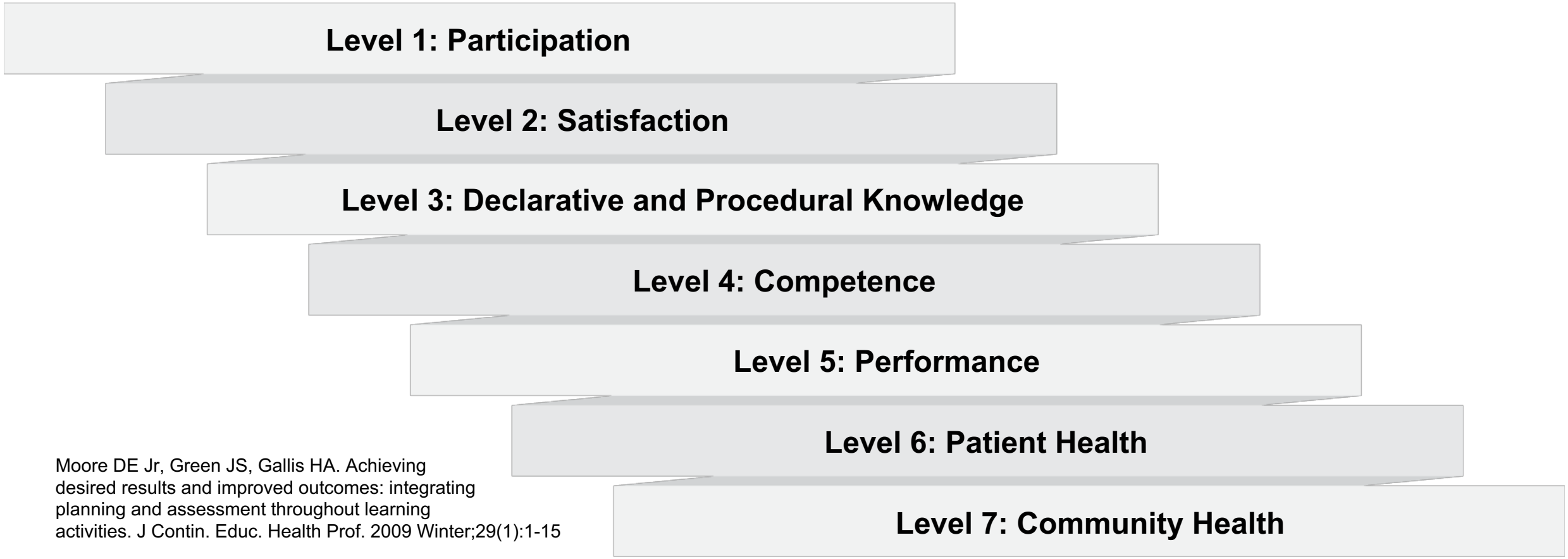
Levels of Evaluation

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.

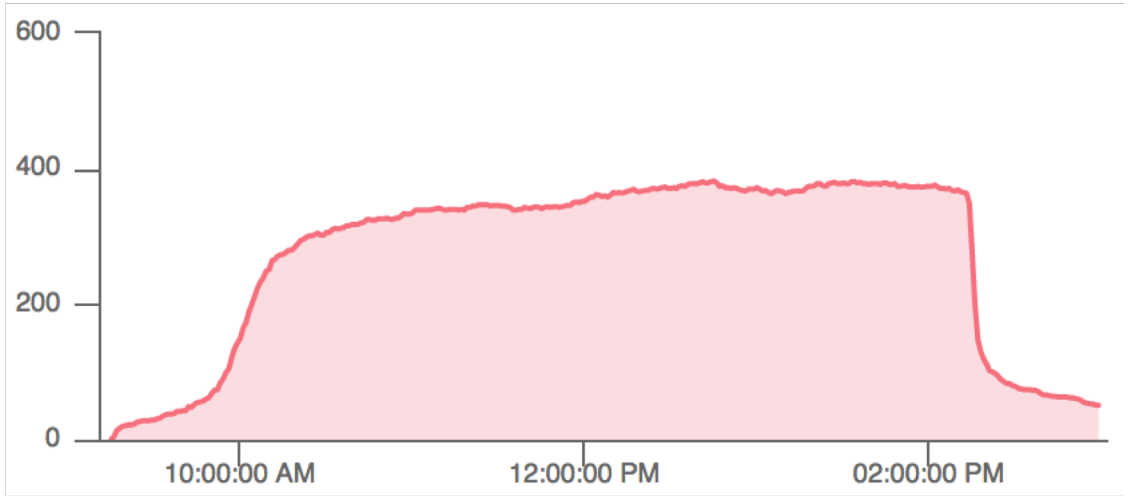


Moore DE Jr, Green JS, Gallis HA. Achieving desired results and improved outcomes: integrating planning and assessment throughout learning activities. J Contin. Educ. Health Prof. 2009 Winter;29(1):1-15

Level 1 (Audience Engagement for Entire Program)

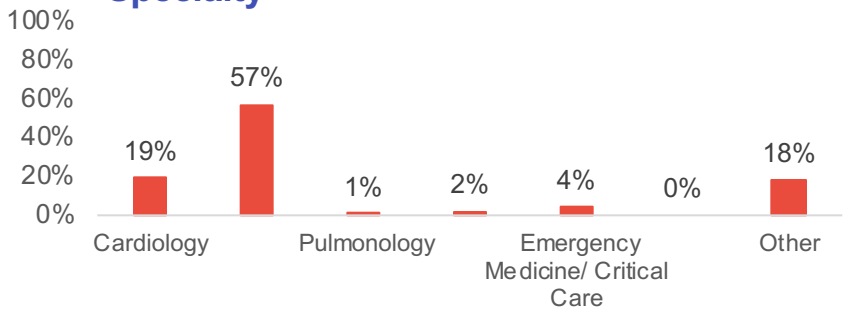
Average Live Duration:	204 min
Questions Asked by Attendees:	217
# of Pre/Post Questions:	29
# of Pre/Post Responses:	6336

Attendance Live:

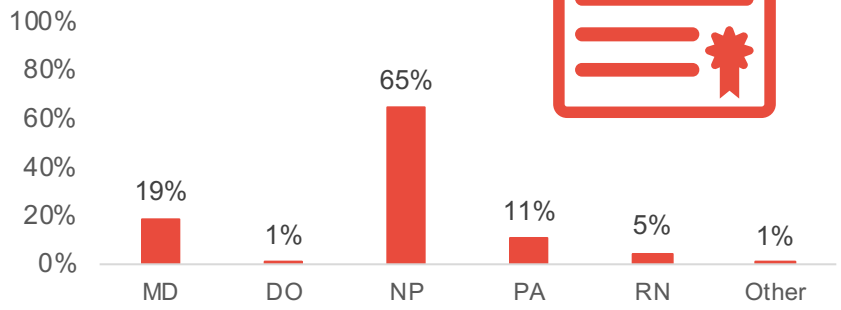


Level 1: Participation

Specialty



Profession



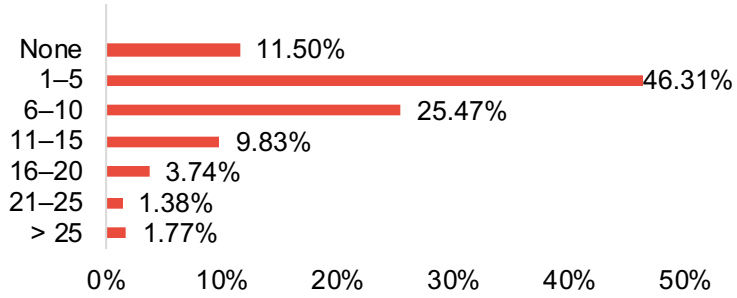
414

total attendees

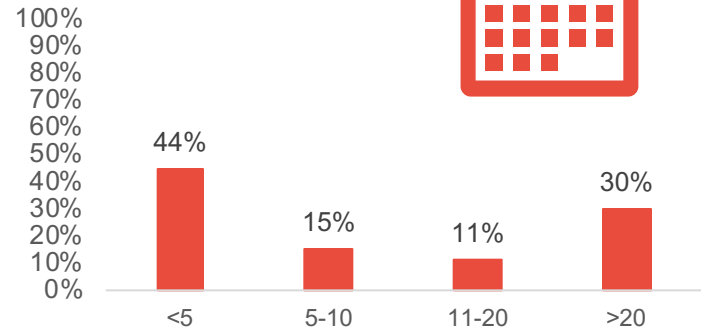
93%

Provide direct patient care

Patients each week, in any clinical setting:



Years in Practice




Level 2-5:
Outcomes Metrics

Sample Size: N = 515

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

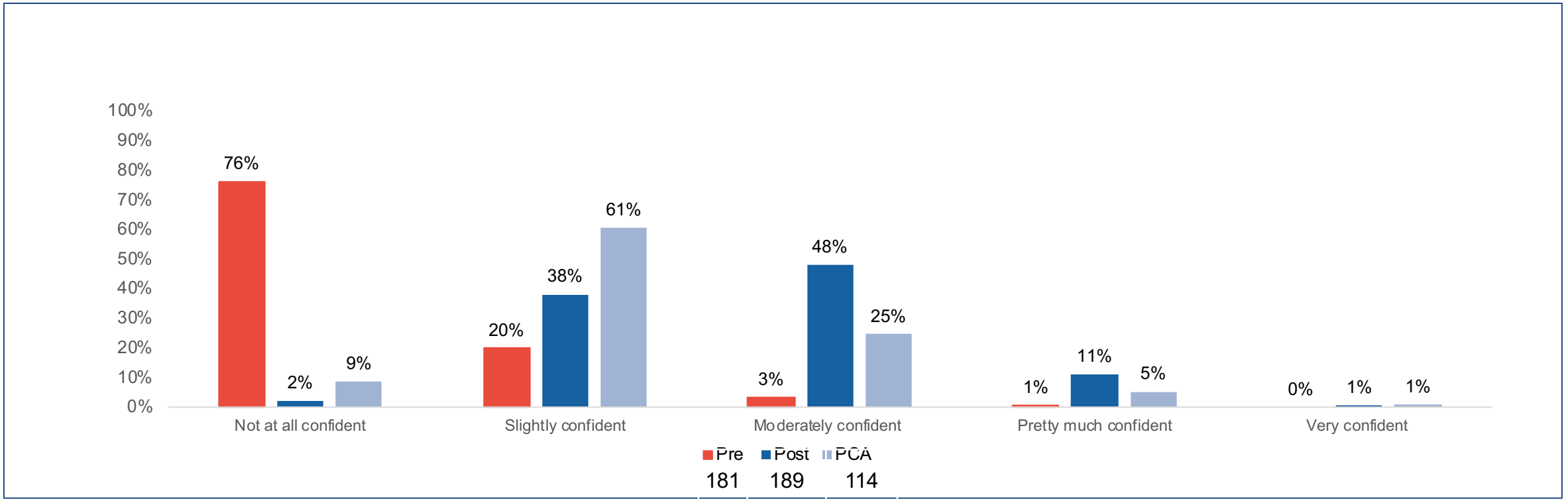
91% said they would implement new strategies that they learned

100% said the program was fair-balanced and unbiased

Confidence Assessment

Please rate your confidence in your ability to recognize features that suggest ATTR Cardiac Amyloidosis:

(Learning Objective 1,2,3)



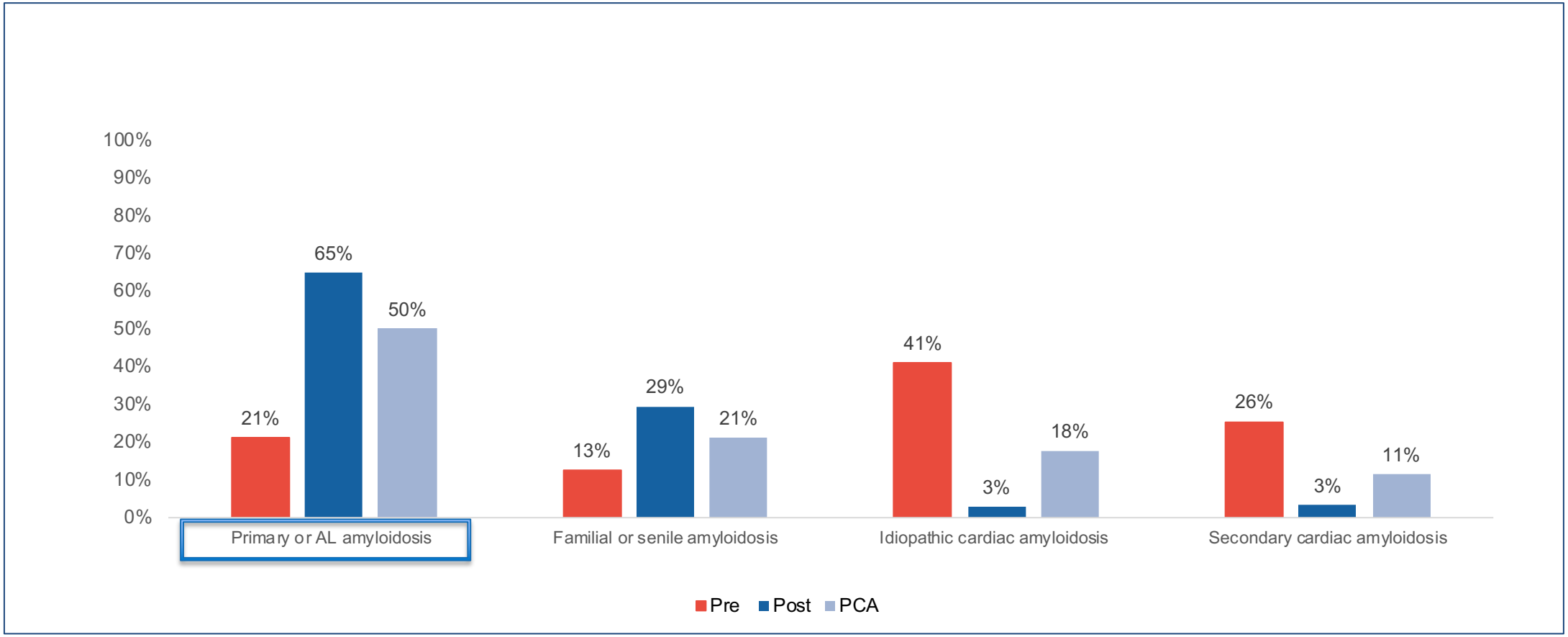
Pre N = 181 Post N = 189 4 weeks N = 114

Pre-Post Change	200%
Pre-PCA Change	129%

Which of the following types of amyloidosis accounts for the majority of cases of cardiac amyloidosis?

(Learning Objective 1)

P Value: <=0.05



Pre N = 193 Post N = 210 4 weeks N = 158

Pre-Post Change	210%
Pre-PCA Change	138%

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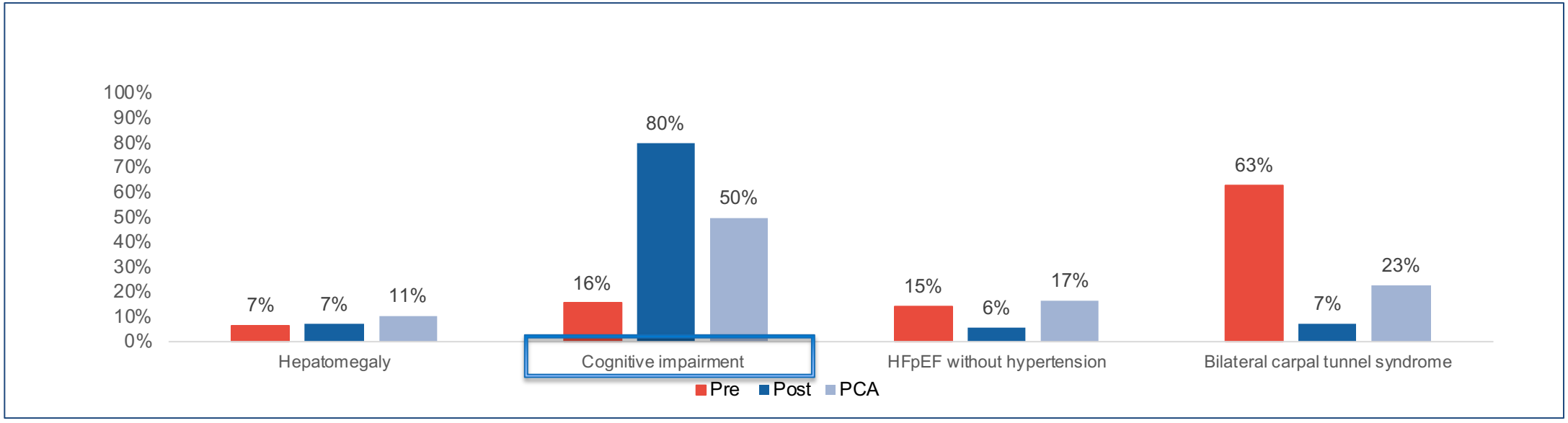
A 73-year-old man with a history of HFpEF reports progressive dyspnea on exertion over 3 months. Workup identifies BP 105/78 mmHg, bilateral crackles, mild lower extremity edema, hepatomegaly, cognitive impairment, and bilateral carpal tunnel syndrome. All of the following features may suggest cardiac amyloidosis in this patient, EXCEPT:

(Learning Objective 2)

P Value: <=0.05



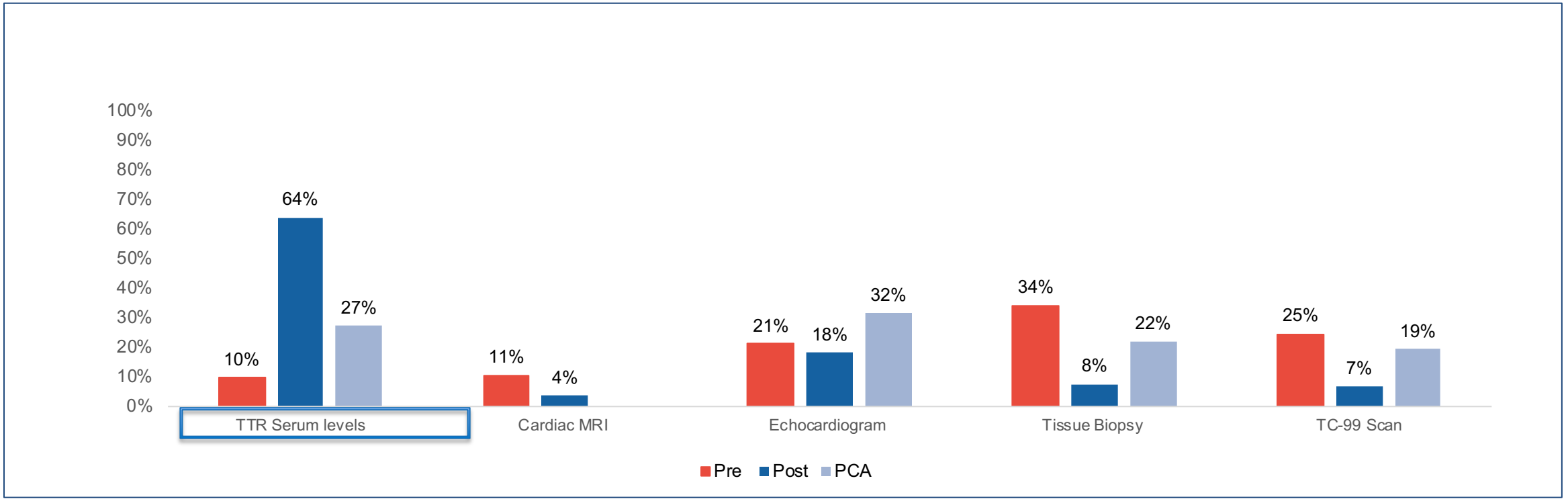
Pre N = 182 Post N = 221 4 weeks N = 158

Pre-Post Change	400%
Pre-PCA Change	213%

You decide to evaluate this 73 y/o man with HFpEF for possible ATTR Cardiac Amyloidosis. Which of the following tests will not contribute to making the diagnosis?

(Learning Objective 3)

P Value: 0.0506 – Not Significant



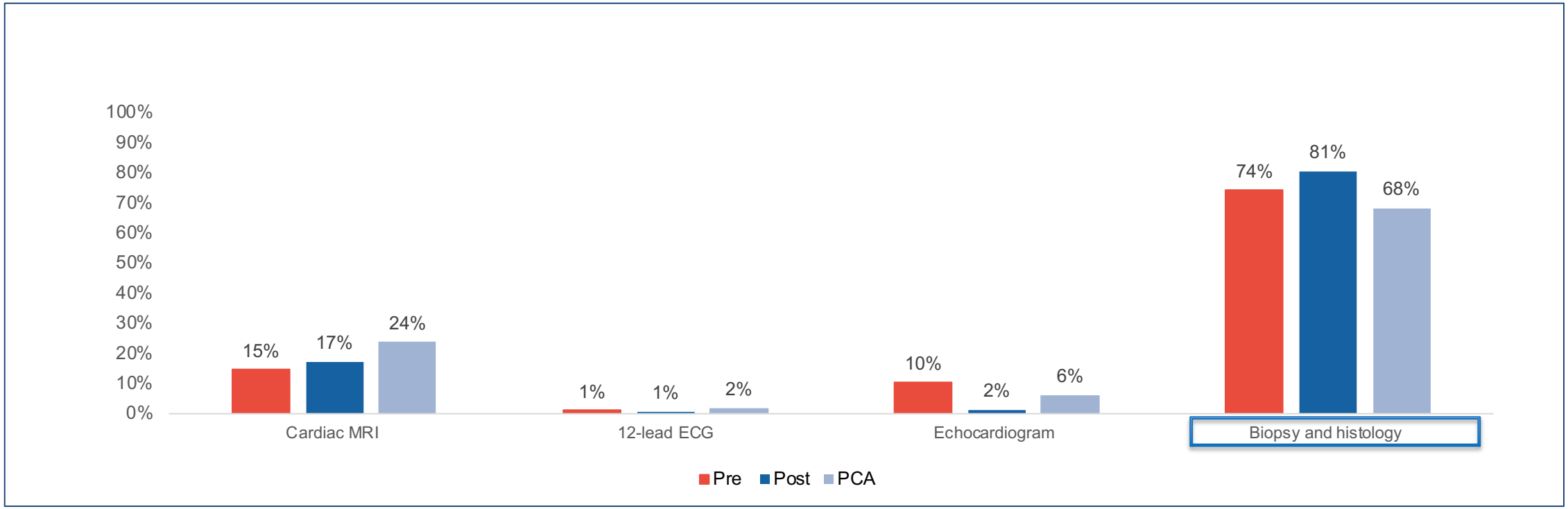
Pre N = 191 Post N = 216 4 weeks N = 158

Pre-Post Change	540%
Pre-PCA Change	170%

Which of the following tests is considered diagnostic for hATTR cardiac amyloidosis?

(Learning Objective 3)

P Value: >0.05 – Not Significant

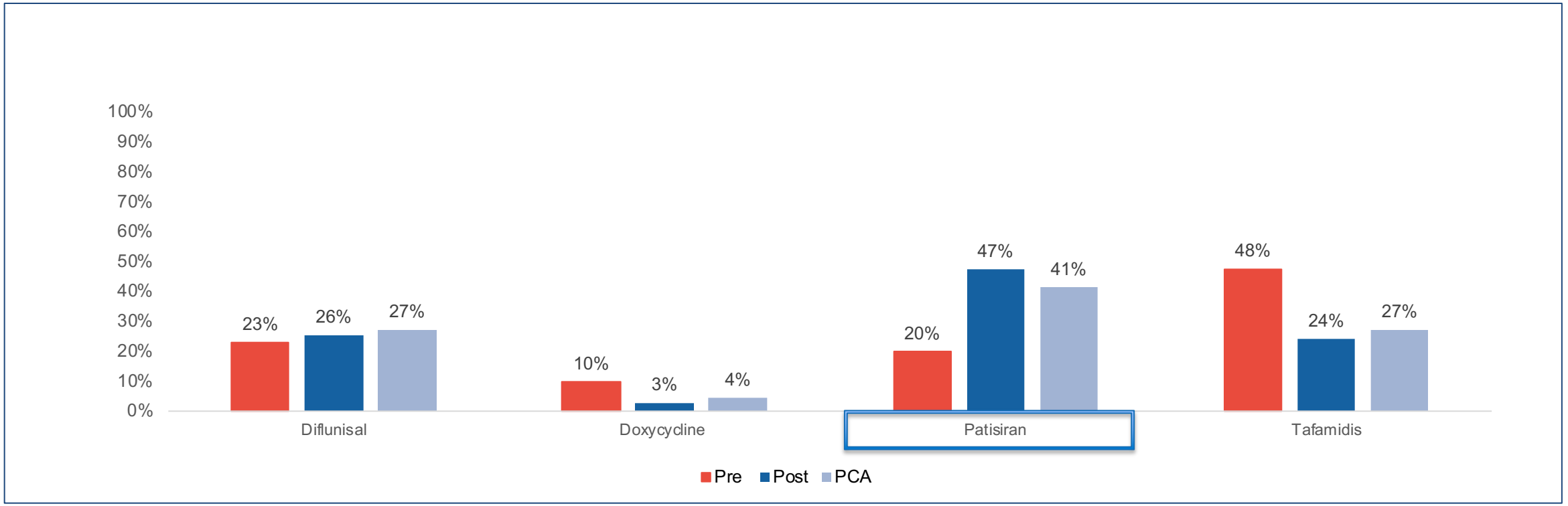


Pre N = 192 Post N = 216 4 weeks N = 158

Pre-Post Change	9%
Pre-PCA Change	-8%

Which of the following agents acts by reducing hepatic production of TTR and has demonstrated efficacy for TTR amyloidosis?

(Learning Objective 4)



Pre N = 193 Post N = 210 4 weeks N = 158

Pre-Post Change	135%
Pre-PCA Change	105%

Data Interpretation

210% increased recognition that Primary or AL Amyloidosis accounts for the majority of cases of cardiac amyloidosis

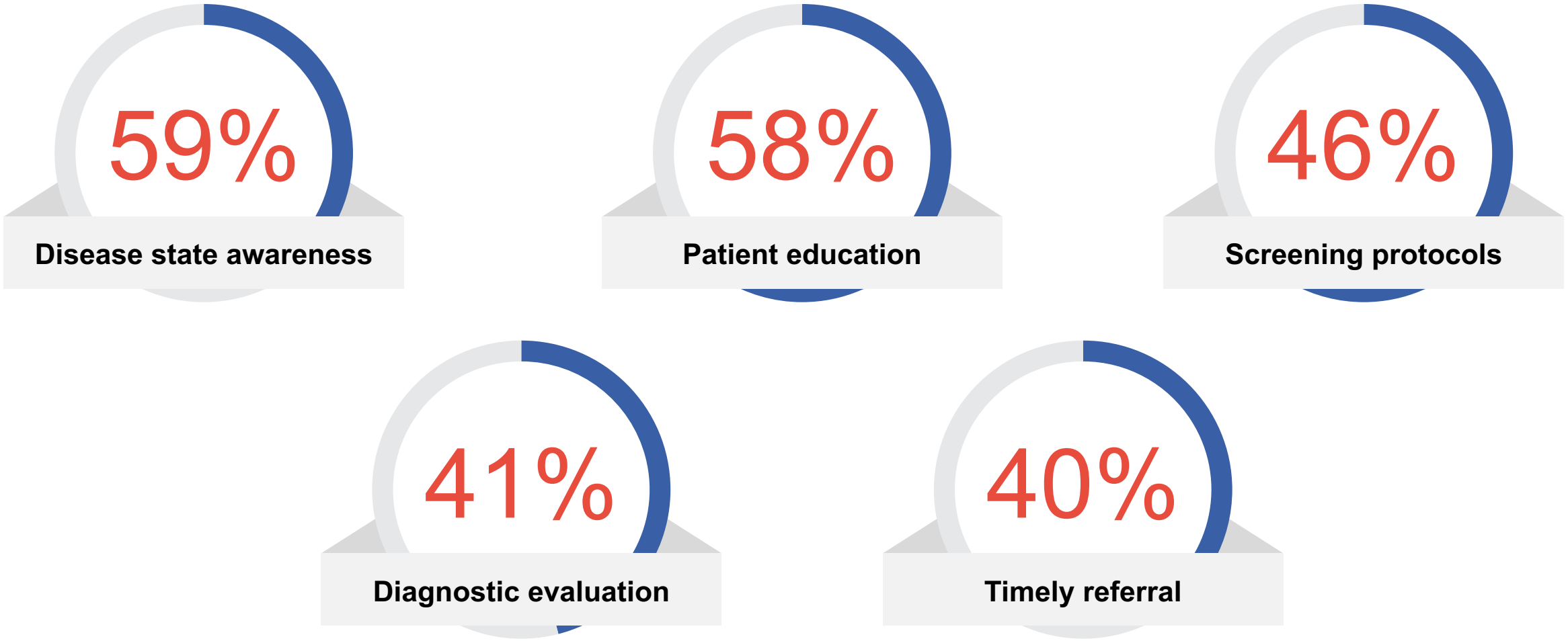
400% improvement in awareness that bilateral carpal tunnel syndrome is a feature of cardiac amyloidosis however, cognitive impairment is not

540% increased recognition that TTR serum levels will not contribute to making a diagnosis of ATTR Cardiac Amyloidosis

135% improvement in recognition that patisiran acts by reducing hepatic production of TTR and has demonstrated efficacy for TTR amyloidosis

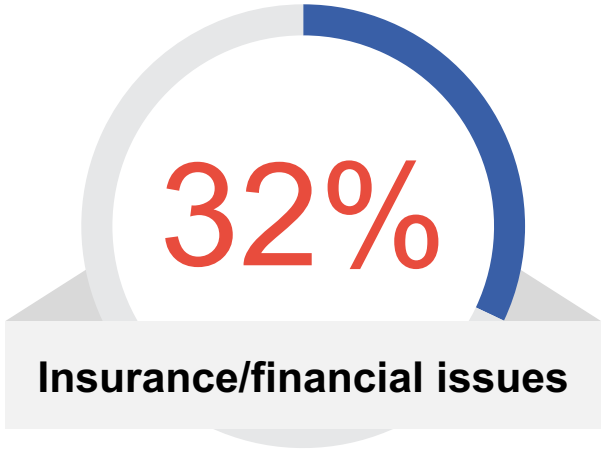
(4-week Post Assessment)

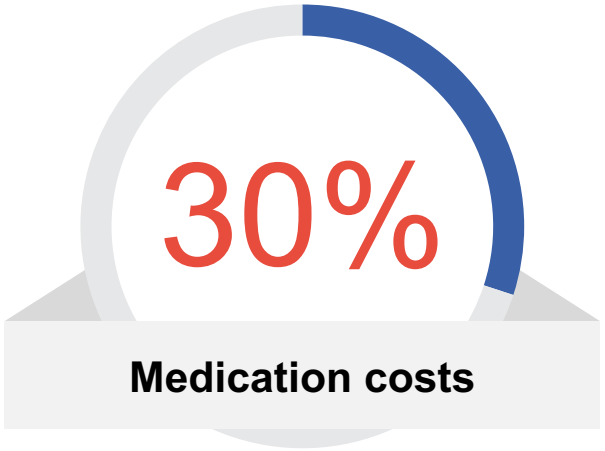
Please select the specific areas of skills, or practice behaviors, you have improved regarding the care of patients with Cardiac Amyloidosis since this CME activity. (Select all that apply.)

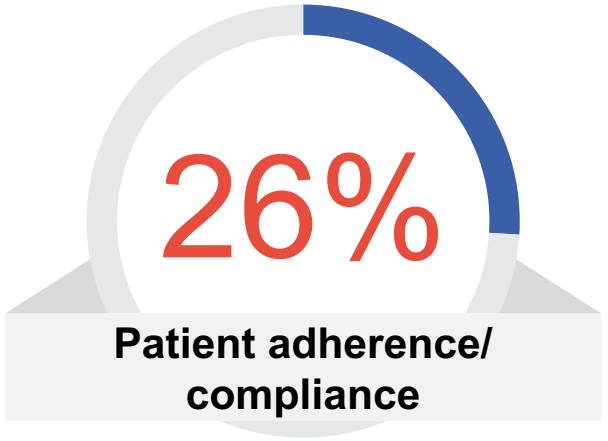


(4-week Post Assessment)

What specific barriers have you encountered that may have prevented you from successfully implementing strategies for patients with Cardiac Amyloidosis since this CME activity? (Select all that apply)







Educational Impact

This curriculum focused on helping cardiologists, internists, primary care physicians, nurse practitioners and physician assistants clinicians recognize how to appropriately diagnose and treat patients with hATTR Cardiac Amyloidosis.

Participants made the following educational gains after the program:

- 210% increased recognition that Primary or AL Amyloidosis accounts for the majority of cases of cardiac amyloidosis
- 540% increased recognition that TTR serum levels will not contribute to making a diagnosis of ATTR Cardiac Amyloidosis
- 400% improvement in awareness that cognitive impairment is not a feature of cardiac amyloidosis, but bilateral carpal tunnel syndrome is
- 135% improvement in recognition that patisiran acts by reducing hepatic production of TTR and has demonstrated efficacy for TTR amyloidosis
- 200% more confident in ability to recognize features that suggest ATTR Cardiac Amyloidosis
- Slight improvement in awareness that biopsy and histology are diagnostic for hATTR amyloidosis after the program, but confusion persisted at 4 weeks regarding the role of Cardiac MRI in diagnostic evaluation

4-Week Retention and Persistent Learning Gaps

At 4 weeks follow-up, the *most consistently reported changes in practice behavior* were:

- More disease state awareness
- More patient education
- Better screening protocols

At 4 weeks follow up, the most consistently reported barrier to implementing strategies for patients with Cardiac Amyloidosis was:

- Lack of knowledge

For all learning objectives, score slippage from post-test to the PCA occurred, reinforcing the need for continued education on the recognition and management of hATTR Cardiac Amyloidosis, with a focus on:

- Types of amyloidosis
- Clinical manifestations of hATTR Amyloidosis
- Diagnostic evaluation
- hATTR treatment options and mechanisms of action