

# Joint Council on Anesthesiology Examinations

## 2011 Report to the Society of Academic Anesthesiology Associations

**Cynthia A. Lien, M.D.**

Chair, Joint Council  
Weill Cornell Medical College  
New York, NY 10021

# 2011 Joint Council Members

## **ABA Representatives**

Douglas Coursin

Deb Culley

James DiNardo

John Emhardt

Glenn Gravlee

Cynthia Lien

David Warner

## **ASA Representatives**

Sylvia Dolinski

Robert Gaiser

Jeffrey Gross

Jerome Klafta

Donald Martin

Roger Mecca

John Rowlingson

# What Does the Joint Council Do?

- Reviews the questions generated by junior and senior editors for use on several exams
  - In-Training Examination
  - Part 1 Examination (2 different forms)
- Special thanks to Sylvia Dolinski, John Emhardt, Bob Gaiser, Jeff Gross, Don Martin & Mike Wall

# Joint Council Receives Invaluable Assistance from

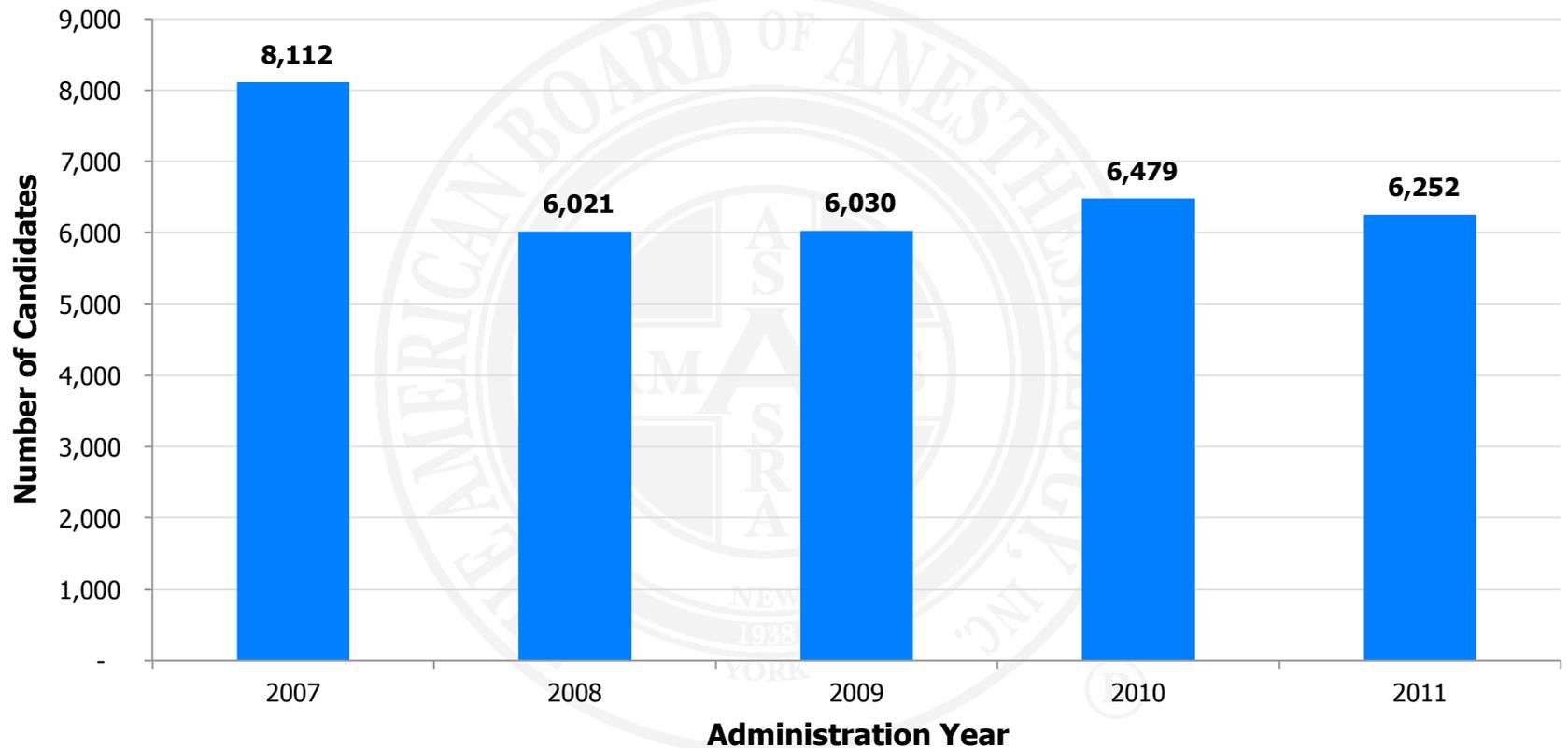
- 47 Junior Editors
- 34 Senior Editors
- We appreciate your support and encouragement



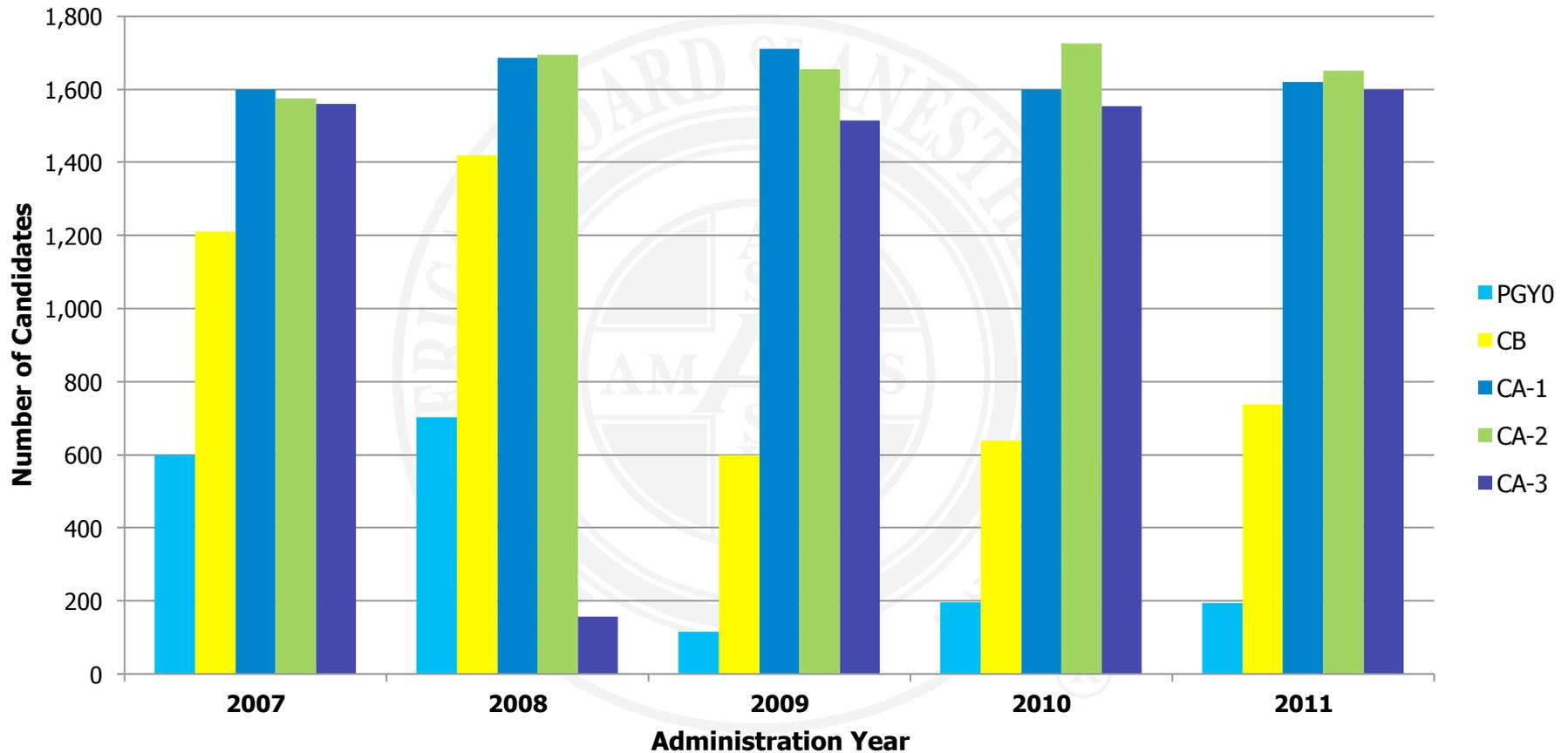
# Junior Editors

- Seeking nominations for new question writers
  - Each of whom will be responsible for preparing 15 multiple choice questions/year
- Nominations must be received by November 15, 2011.
  - Nominations should be sent to: The American Board of Anesthesiology, 4208 Six Forks Road, Suite 900, Raleigh, NC 27609-5735

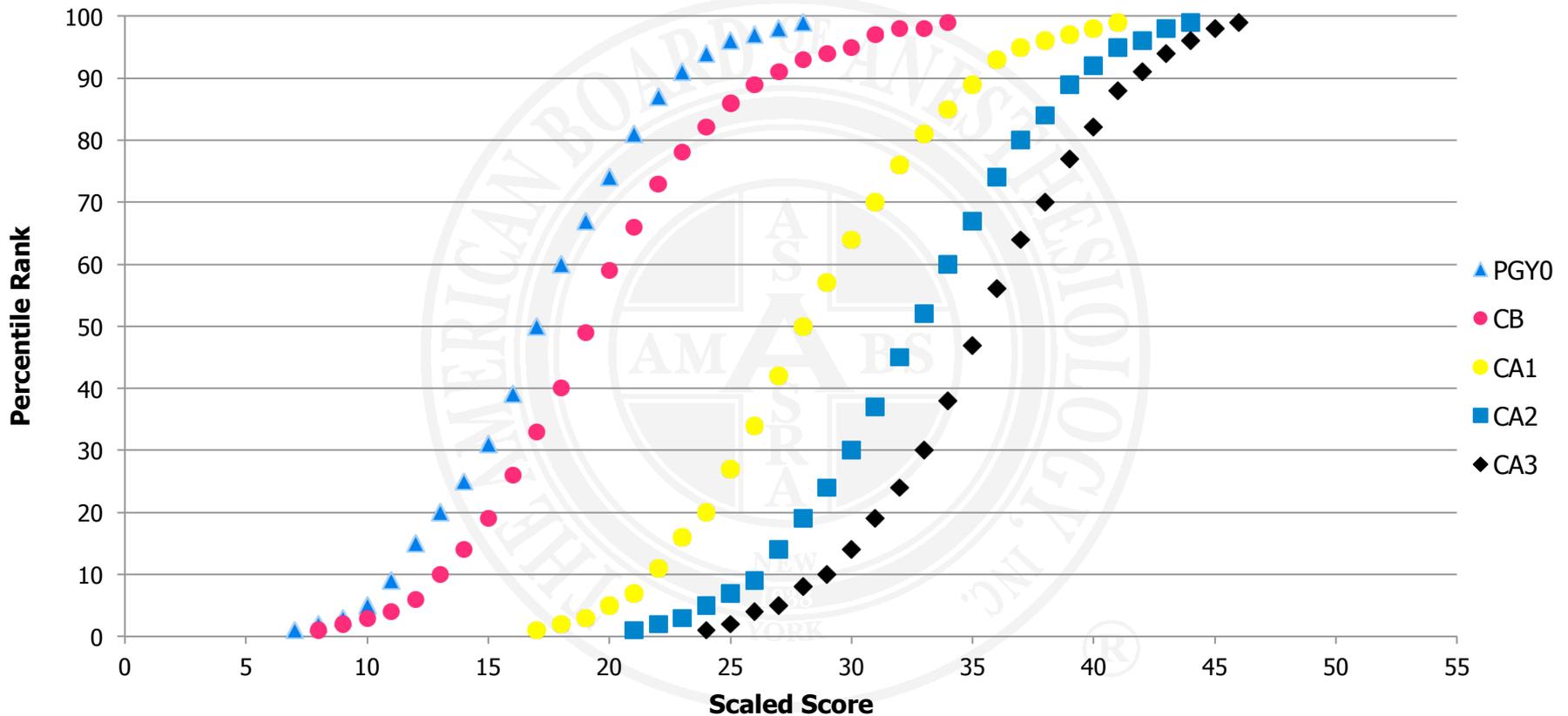
# In-Training Exam (ITE) Number of Examinees



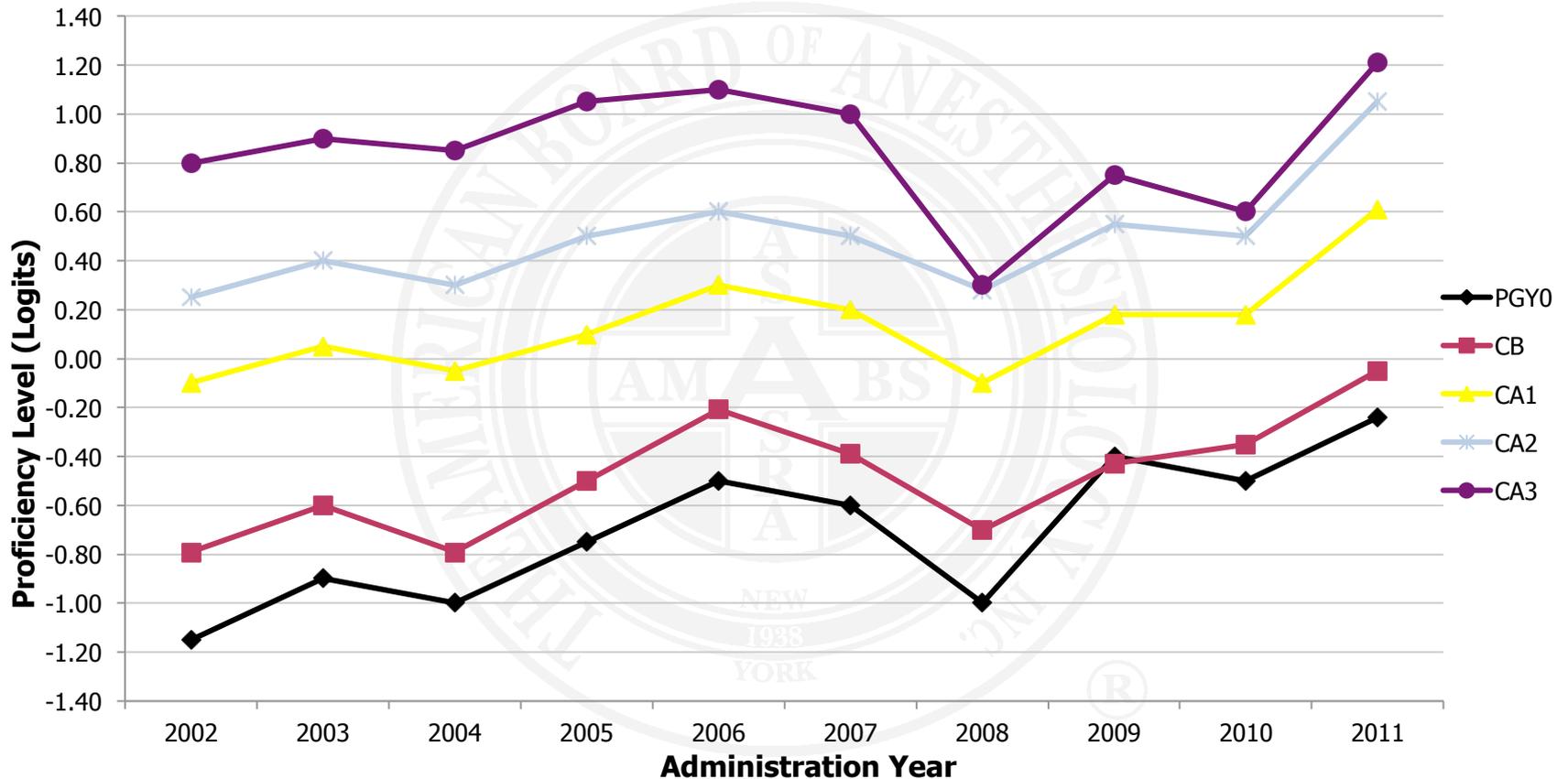
# Residents Taking the In-Training Exam



# ITE Performance by Year of Training



# In-Training Exam Performance by Training Level & Exam Year

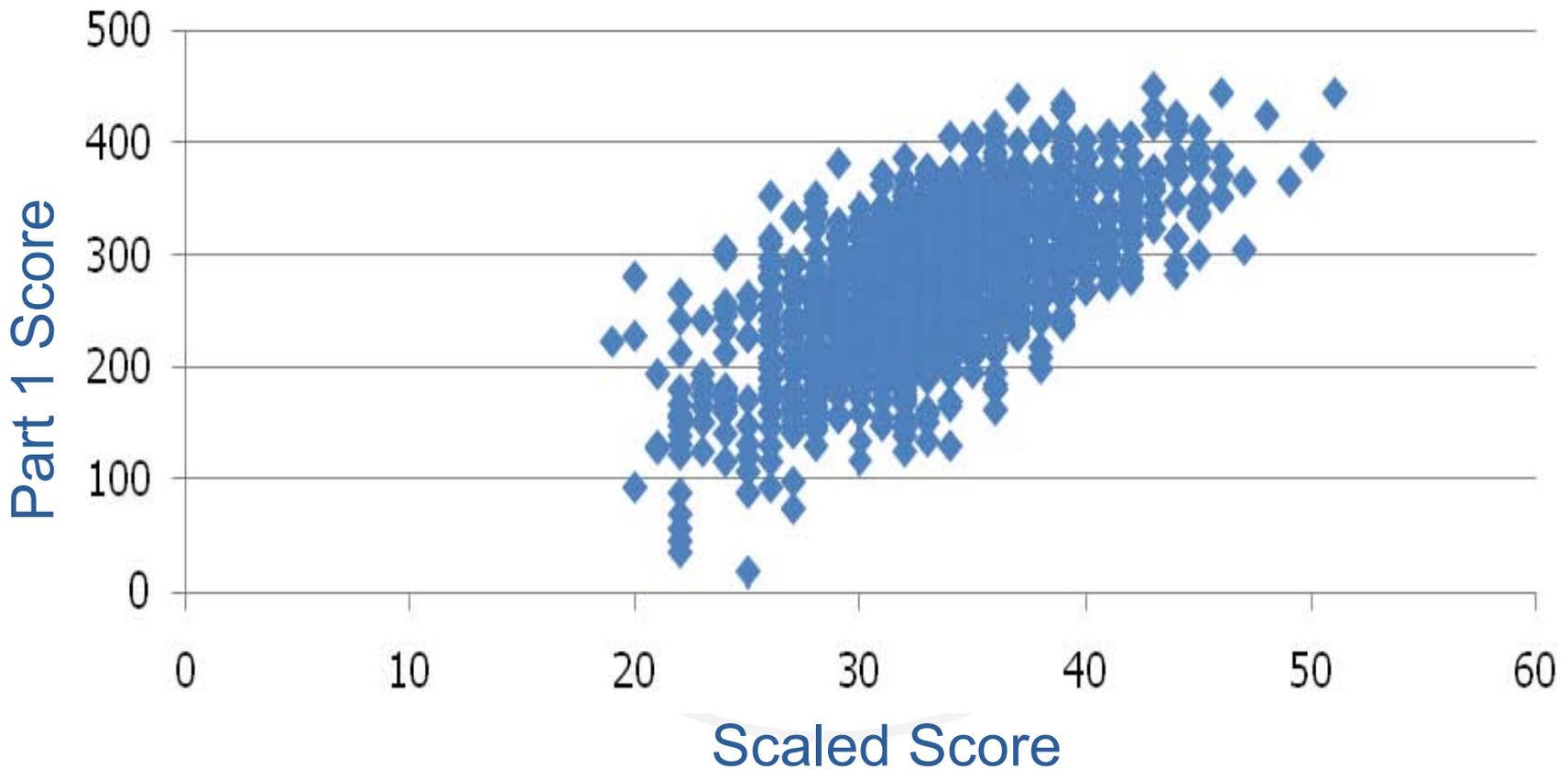


# Growth in Knowledge of 2011 CA-3 Residents

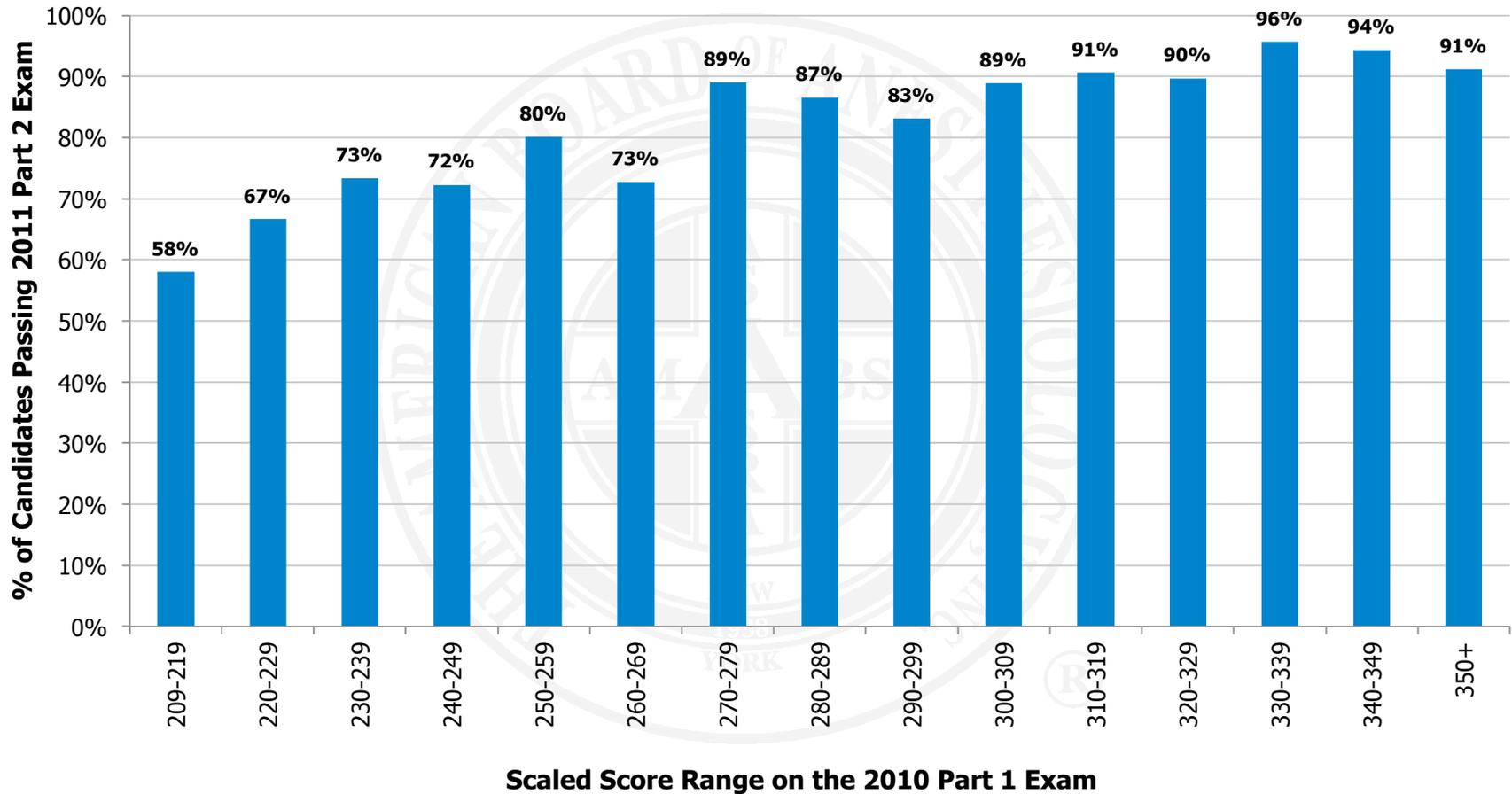
## Changes in ITE Scores from March 2010 (CA-2) to March 2011 (CA-3)

2010 ITE Score	2011 ITE Score	Difference '10 - '11	n
16-20	25.1	6.3	20
21-25	29.6	5.9	149
26-30	33.5	5.4	507
31-35	36.5	3.7	591
36-40	40.1	2.5	214
41-45	43.0	1.1	48
46+	48.5	0.3	10

# Relation of ITE to Part 1 Scores



# Relationship Between Part 1 Score and Passing Part 2



# ITE Report

- Scaled Score
- Number of questions in each category
- Number answered correctly
- # correct for 50<sup>th</sup>, 75<sup>th</sup> and 90<sup>th</sup> percentile score in each category

# Sample ITE Report

**AMERICAN BOARD OF ANESTHESIOLOGY**  
**2011 ABA/ASA In-Training Examination**  
**Personal Performance Report**

Name: [REDACTED]

ID Number: [REDACTED]

Your performance on the In-Training Examination (ITE) is reported as a scaled score. For more information about your In-Training Examination score and to compare your performance with other residents, refer to the "Guidelines for Interpreting Your Personal Performance Report."

Your scaled score is: 31

To help you evaluate your performance in various content areas measured by the ITE, the number of questions answered correctly for each content area is listed below.

Also listed below are the percentile scores for your reference group for 3 points: the 50th percentile, the 75th percentile, and the 90th percentile. You can compare your score to the percentile scores to find out where your performance falls relative to your reference group.

Category	# of questions	# Answered Correctly	50%-ile	75%-ile	90%-ile
Anatomy	6	2	4	4	5
Mathematics, Statistics, Computers	3	2	1	1	1
Organ-based Clinical: Cardiovascular	15	8	11	12	13

# In-Training Exam Report: Categories

**Anatomy**

**Mathematics**

**Pharmacology**

**Physics, Monitoring and Anesthesia Delivery Systems**

**Anesthesia Procedures, Methods and Techniques**

**Physiology**

**Subspecialties: Regional Anesthesia, Critical Care, Obstetric Anesthesia, Pain,  
Pediatric Anesthesia**

**Organ-based Clinical: Cardiovascular, Endocrine/Metabolic, Hematologic,  
Neurologic and Neuromuscular, Respiratory, Renal**

# Test Centers and Proctors

Proctors are critical partners with the ABA in administering the ITE Exam

- Find and reserve testing rooms
- Receive, secure and manage all test materials
- Manage administration of the In-training Examination
- Monitor for and report irregular behavior

# Irregular Behavior

- Examples of Irregular Behavior include:
  - Falsifying information required to get into the exam or impersonating another examinee
  - Attempting to observe another examinee's test book or answer sheet
  - Copying the questions for use outside of the exam
- These behaviors constitute cheating

# Investigating Irregular Behavior

- When the ABA receives an Irregular Behavior Report from a test site proctor, the psychometric vendor performs a *Scrutiny!* analysis
- The *Scrutiny!* software compares the number of identical wrong answers between all possible pairs of examinees at the test site

# Investigating Irregular Behavior

- The *Scrutiny!* analysis flags pairs of examinees that demonstrate unusually high numbers of identical wrong answer choices
- Identified pairs are compared to the Irregular Behavior Report to determine if
  - They were the same as those observed and reported by the proctor
  - They were seated in a way that is consistent with what the proctor reported

# Scrutiny! Analysis Example

~~~~~  
SUSPICIOUS ANSWER-SIMILARITIES REPORT  
~~~~~

\*\*\*High answer-similarity for examinees: 3587 and 3586.

(Examinee 3587 scored 136 out of 225 .)

(Examinee 3586 scored 150 out of 225 .)

Number of matches on incorrect answers = 59

Number of matches on all answers = 184

Items where there were matches on incorrect answers:

3	4	7	11	28	41	43	48	51	52	53				
56	58	63	65	71	72	73	79	81	84	90				
114	115	122	123	125	139	141	142	151	153	155				
162	164	165	166	168	172	173	174	177	180	184				
188	190	191	196	198	202	204	208	210	215	216				
217	221	222	223											

Scrutinized using Normal Distribution Analysis of Incorrect-Answers.

Standard z-score = 7.243514

Probability of this answer-similarity is extremely small.

Certainly less than ONE CHANCE in a BILLION.

~~~~~

# Scrutiny! Analysis Example

~~~~~  
NUMBER OF PAIRED COMPARISONS ANALYZED = 6441  
NUMBER OF SUSPICIOUS PAIRS OF EXAMINEES = 2

NOTE: GIVEN THE NUMBER OF EXAMINEES,  
ONE MIGHT (BY CHANCE ALONE) FIND SOME  
'SUSPICIOUS SIMILARITIES'. THE FOLLOWING  
NUMBER OF 'SUSPICIOUS' EXAMINEES PAIRS  
AT EACH PROBABILITY LEVEL COULD QUITE  
EASILY BE THE RESULT OF CHANCE:

2 No star (p=.001) SUSPICIOUS SIMILARITIES.  
0 \* SUSPICIOUS SIMILARITIES.  
0 \*\* SUSPICIOUS SIMILARITIES.  
0 \*\*\* SUSPICIOUS SIMILARITIES.

PREDICTED MEAN NUMBER OF INCORRECT ANSWER MATCHES = 19.60  
ACTUAL MEAN NUMBER OF INCORRECT ANSWER MATCHES = 18.42

HIGHEST NUMBER OF INCORRECT ANSWER MATCHES FOUND = 59  
AVERAGE PROB OF INCORRECT ANSWER MATCH = .47

NO SEATING PLAN INFORMATION AVAILABLE

# ABA Policy on Irregular ITE Behavior

- For residents found to have engaged in irregular examination behavior the ABA will:
  - Invalidate their ITE scores
  - Give a “U” on the CCC Report for the 6-month period in which the exam was given
  - Accept an application for the Part 1 Exam no sooner than 2 years after the exam for which the resident would have otherwise qualified

# Inadequacies of the ITE

- Scores are not available quickly
  - This year Part 1 scores were available 4 weeks after administration of the exam
  - Scoring a paper and pencil test takes longer
- Images on a paper and pencil test
  - Static
  - Poor quality
- Part 1 has been a CBT since 2008

# Computerized ITE

- The Joint Council approved pilot testing computer-based delivery of the ITE in March 2012
- ABA is recruiting interested residency programs to participate in the pilot test
- Pilot sites must have hard wired computer stations for test administration. Laptop delivery possible in 2013.

# Computerized ITE (Continued)

- The ABA is working with Internet Testing Systems (ITS) to deliver the online ITE.
- ITS currently delivers the ITE of The American Board of Surgery (ABS) ITE
- ABS' s experience with ITS has been positive
- Learn more about ITS at [www.testsys.com](http://www.testsys.com)

# Computerized ITE (Continued)

- ITE will be delivered on Saturday, March 3, 2012
- Pilot test sites will receive full paper-and-pencil ITE materials for all residents taking the ITE online as a backup
- ABA will work closely with residency program staff to prepare for, administer, proctor and evaluate the online ITE

# Computerized ITE (Continued)

- To find out how to join this pilot test send an email to:

Ann Harman  
Chief Assessment Officer  
**[ann.harman@theABA.org](mailto:ann.harman@theABA.org)**

# Options for Future Exam Development

- More graphics and addition of video clips
  - Still shots of a monitor screen
  - Video clips from a simulator or real-time bedside monitor
  - Laryngoscopy, FOB images
- Basic level TEE video clips
- Ultrasound images for placement of regional blocks and central venous lines

# 2013 Part 1 Examination

- Will have questions based on 2 different moving images on each form of the exam.
- Similar questions will be available on the ABA website for practice prior to the exam.
- Thanks to: Drs. DiNardo, Pardo and Mecca for their assistance.

# The Staged Part 1 Exam

Residents increase their study and learning in direct response to high-stakes exams.

A staged Part-1 exam will:

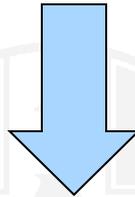
- promote studying over the course of residency.
- lead to a greater knowledge base upon completion of the ABA exam sequence.

# Rationale for Staging of the Exam

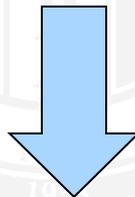
- A staged exam process may complement the ACGME movement toward competency-based training and promotion.
- Residents will no longer be tested on the same material year after year during training.

# Exam Sequence

BASIC Exam



ADVANCED Exam



APPLIED Exam

# The BASIC Exam

- Material covered: pharmacology, basic physiology, anatomy, anesthesia equipment, basic monitoring
- First BASIC exam will be offered in August 2014
- The exam will be offered every 6 months for those residents who are off-cycle or do not pass

# The ADVANCED Exam

- Material covered: Emphasis will be on subspecialty-based practice and advanced clinical issues
- Candidates will be eligible to take the exam after satisfactory completion of both the BASIC exam and residency training
- The exam will first be offered in August 2016



**Thank you!**

[calien@med.cornell.edu](mailto:calien@med.cornell.edu)