


**MOC Update for Medical Physicists**  
AAPM Spring Clinical Meeting

G. Donald Frey  
Associate Executive Director  
American Board of Radiology

### Disclosures

- I am a part time paid employee of the American Board of Radiology



### NOTE

- The information given in this presentation is accurate as of March 13, 2017.
- For the latest information, please visit the ABR website at


**www.theabr.org**




### Maintenance of Certification

### Why do we have MOC?

ABR Mission:  
To certify that our diplomates demonstrate the requisite knowledge, skill, and understanding of their disciplines to the benefit of patients.



### MOC Components

- Part 1: Professional Standing
  - ✓ State Licensure or Professional Standing Attestation
- Part 2: Lifelong Learning and Self-Assessment
  - ✓ Category 1 CME/CE and Self Assessment CME/CE (SA-CE)
- Part 3: Cognitive Expertise
  - ✓ ABR Online Longitudinal Assessment (ABR-OLA)
- Part 4: Practice Performance
  - ✓ Practice Quality Improvement (PQI) Projects or Participatory Activities



## Meeting MOC Requirements

### 10-Year Cycle System

- Part 1: Valid licensure or attestation
- Part 2: 250 CE and 20 SAMs every 10 years
- Part 3: Exam every 10 years
- Part 4: 3 projects every 10 years



### Continuous Certification

- Part 1: Valid licensure or attestation
- Part 2: 75 CE, including 25 SA-CE in previous 3 years
- Part 3: Pass OLA summative decision at the most recent annual review or have passed a traditional exam in previous 5 years
- Part 4: 1 PQJ project/activity every 3 years

## Continuous Certification Basics

- All diplomates who are participating in MOC follow the continuous certification requirements.
- MOC participation evaluation is completed annually.
- Major MOC requirements are unchanged
- Fees are unchanged
- All ABR certificates issued 2012 and beyond are continuous.
- Ongoing validity of continuous certificates depends on meeting MOC requirements.

## MOC Annual Review

MOC Element	Compliance Requirement
Professional Standing	Valid, unrestricted state license (TX, FL, HI, NY) or professional standing attestation by one ABR certified diplomate
CE	At least 75 Category 1 CME/CE credits in previous 3 years
Self-Assessment CME/CE (SA-CE)	At least 25 of the 75 Category 1 CME/CE credits must be SA-CE.
Assessment	Pass most recent OLA summative decision or have passed a traditional exam in previous 5 years
PQJ	Completed at least 1 PQJ project or Participatory Activity in previous 3 years
Fees	Current with MOC fees

## MOC Annual Attestation

- MOC annual attestation must be completed between January 1 and March 1 of each year
- Attestation can be completed quickly
  - no need to enter detailed data
  - save documentation in event of MOC audit
- MOC Team Tracker Group Practice Administrator (GPA) can complete attestation for participating diplomates
- Third party data feeds to myABR may automatically complete attestation for:
  - Part 2: data feed from CME Gateway
  - Part 4: data feed from ABMS Multi-specialty Portfolio Program

## Previous myABR

- Required submission of information for Parts 1, 2, and 4 to ABR
- Submitted material was archived, but reviewed only if audited.

## MOC Annual Attestation

- Starting Jan 4, 2016, diplomates only *attest* to meeting MOC requirements.
- If audited, documentation must be provided.
- ABR has direct feeds from definitive sources
  - CME Gateway
  - ABMS Multi-Specialty Portfolio Program
- GPAs in MOC Team Tracker can attest for diplomates.

## MOC Annual Attestation

**myABR**

**MOC Attestations**

Enrollment Date: 10-28-2013

**Part 1 Incomplete**

**Part 2 Incomplete**

**Part 3 Complete**

**Part 4 Incomplete**

**State Licensure and Professional Standing**

Part 1 requires valid, unrestricted licensure if practicing in FL, HI, NY, or TX. Those with a license but practicing in other state(s) may also attest to licensure. Those without licensure must have one available attester as defined by the ABR.

I have one available attester, as defined by the ABR, or where required, my active state licenses are valid and unrestricted.

## MOC Annual Attestation – Part 1

**MOC Attestations** Enrollment Date: 10-28-2013

Need help? Watch a how-to video regarding MOC Attestations.

**Part 1 Complete**

**Part 2 Incomplete**

**Part 3 Complete**

**Part 4 Incomplete**

**State Licensure and Professional Standing**

Part 1 requires valid, unrestricted licensure if practicing in FL, HI, NY, or TX. Those with a license but practicing in other state(s) may also attest to licensure. Those without licensure must have one available attester as defined by the ABR.

**Attested by Jane Doe on February 2, 2017**

## MOC Annual Attestation – Part 2

**MOC Attestations** Enrollment Date: 10-28-2013

Need help? Watch a how-to video regarding MOC Attestations.

**Part 1 Complete**

**Part 2 Complete**

**Part 3 Complete**

**Part 4 Complete**

**Continuing Education and Self-Assessment**

Part 2 requires that you acquire a minimum of 75 continuing education (CE) or continuing medical education (CME) credits, at least 25 of which are self-assessment CE (SA-CE) or self-assessment CME (SA-CME), during the period from 2014 to the present.

**Attested by Jane Doe on February 2, 2017**

## MOC Annual Attestation – Part 3

**MOC Attestations** Enrollment Date: 10-28-2013

Need help? Watch a how-to video regarding MOC Attestations.

**Part 1 Complete**

**Part 2 Complete**

**Part 3 Complete**

**Part 4 Complete**

**MOC Examination**

Exam	Content	Location	Exam Required by:
Therapeutic Medical Physics MOC	Therapeutic Medical Physics	Online	When online assessment is available

[Online Assessment FAQs](#)

## MOC Annual Attestation – Part 4

**MOC Attestations** Enrollment Date: 10-28-2013

Need help? Watch a how-to video regarding MOC Attestations.

**Part 1 Complete**

**Part 2 Complete**

**Part 3 Complete**

**Part 4 Complete**

**Practice Quality Improvement**

Part 4 requires that you complete a PQI Project or Participatory Activity, as defined by the ABR, during the period from 2014 to the present.

**Attested by Jane Doe on February 2, 2017**

## MOC Annual Attestation

**myABR**

**MOC Attestations**

Enrollment Date: 10-28-2013

Need help? Watch a how-to video regarding MOC Attestations.

All MOC requirements complete for 2017.

### MOC Annual Attestation

- Overall feedback from diplomates has been very positive.
- Audits must be part of attestation.
- Balances the needs for self-regulation and professionalism
  - We trust our diplomates.

ABR

### When does ABR Annual Review occur?

March 2    March 2    March 2

2015    2016    2017    2018

First complete Annual Review was in 2016

ABR

### What happens if I fail to meet the MOC requirements?

- If, at an annual review (March 2), you do not complete the MOC requirements or fail to complete the MOC attestation, your status will be updated to "not meeting" the requirements of MOC.
- If you do not complete the MOC requirements or complete the MOC attestation by the next annual review (March 2), your status will be updated to "not participating" in MOC and your certificate may become invalid.

ABR

### Professional Standing: Part 1

- If you have a license from one of the states that licenses medical physicists (FL, HI, NY, TX), then you may use this to fulfil the Part 1 requirement.
- If you do not have a license from one of the states listed above, then you need to identify one<sup>1</sup> ABR certified diplomate that can attest to your professional standing. This individual would only be required to attest if you are selected for an MOC audit.

<sup>1</sup>This may be an ABR diplomate certified in Medical Physics, Radiation Oncology, Diagnostic Radiology or Interventional Radiology.

ABR

### Lifelong Learning and Self Assessment: Part 2

Requirement: 75 CE of which 25 must be self-assessment CE (SA-CE) in the previous three years

75 CE Credits

25 SA-CE Credits

75 CE credits must be earned every 3 years. At least 25 of the 75 credits must be SA-CE

Cat 1 – approved Enduring...

SDEPs (optional)

SAMs

In addition to SAMs, Self-Assessment CE (SA-CE) has been broadened to include SDEP and "Enduring Materials"

ABR

### Self-Assessment CE (SA-CE)

- SAMs (Self-Assessment Modules):
  - In-person Category 1 CME or CE activities
  - Must have questions/feedback
  - Society-offered SAMs count as SA-CE
- SA-CE:
  - Enduring Category 1 CE activities
- 1 CE credit = 1 SA-CE credit

ABR

### SA-CE: Part 2

- No need to travel to earn SA-CE credits
- All SA-CEs required can be obtained online
- Free to members of many organizations

ABR

### Future Focus: Part 3

- Requirement to pass a secure, proctored exam every 10 years.
- ABMS member boards are piloting alternatives:
  - Remote proctoring
  - Continuous assessment
    - ABA: MOCA Minute™
    - ABMS: CertLink™
- ABR Task Force assessed options with diplomate input.

ABR

### Part 3 Alternatives Explored

- Distributed exam at test centers
- Real-time streamed exam
- Remote proctoring
- Distributed open book testing
- ABA MOCA Minute™ model

ABR



### MOCA Minute™ Model

- Random question sent to device/email
- Opt in or out
- One minute to answer question
- Testing “walk-around knowledge”
- Beta tested by ABA in 2015
- General release January 2016

ABR



### ABR Online Longitudinal Assessment (ABR-OLA)

### ABR Online Longitudinal Assessment (ABR-OLA)

- One item set for each certificate
- 104 opportunities (items) provided per year.
- 52 required item attempts per year
- Up to 10 “declines” per item set per year
- Opportunities administered weekly with opportunities having a 4-week shelf life.
  - Opportunities are not converted to specific content until the diplomate chooses to answer an item.

ABR

### ABR-OLA continued...

- First passing decision based on 200-item summative decision threshold.
- Rolling summative decisions after the 200 item threshold.
- Must pass the most recent summative decision at annual review, OR
- Must pass a traditional exam taken in the previous 5 years
- No MOC exam required until OLA launch if meeting part 3 in 2017

ABR AMERICAN BOARD OF RADIOLOGY

### ABR-OLA Benefits

- No travel to Pearson-Vue needed to complete Part 3 requirement
- Little impact on workday
- Immediate feedback after question is answered
- Supplemental information provided (i.e. answer rationale)
- Option to “decline” up to 10 questions in each item set per year
- Flexibility – options for how frequently questions are answered
- Literature proven educational model
- Potential for retesting in areas of weakness

ABR AMERICAN BOARD OF RADIOLOGY

### What are the questions like?

- Questions are based on common clinical knowledge that should be familiar to all medical physicists within their discipline (DMP, NMP, TMP)
- Sometimes called “walking around knowledge”

ABR AMERICAN BOARD OF RADIOLOGY

### Sample OLA Item

A pediatric patient of 25 cm effective diameter had a CT exam on a scanner using the 32 cm diameter phantom for CTDI calibration. Subsequently, the patient had another exam that was performed on a CT scanner using the 16 cm diameter phantom for CTDI calibration. Both scanners used automatic exposure control with tube current modulation, equal pitch, and produced images of equal image quality. Which scanner generated a higher estimate of CTDI<sub>vol</sub> for the patient?

- A. Scanner using the 32 cm diameter CTDI phantom for calibration
- B. Scanner using the 16 cm diameter CTDI phantom for calibration
- C. Neither – the indicated CTDI<sub>vol</sub> was the same for both scanners

ABR AMERICAN BOARD OF RADIOLOGY

**Answer: B**

**Rationale:** The CTDI metric in computed tomography is a measurement of the absorbed dose (mGy) in a cylindrical plastic phantom of either 16 or 32 cm diameter, calibrated to acquisition techniques including kV, mA, exposure time per x-ray tube rotation, beam width at the isocenter, and pitch. If the resulting image quality and noise characteristics of the patient images are comparable, this indicates a similar x-ray output per rotation. When the 32 cm diameter phantom is used for calibration, the attenuation of the x-ray beam is larger, and results in a lower weighted (CTDI<sub>w</sub>) estimate compared to 16 cm diameter phantom, by about a factor of 2. A key aspect is that the patient dose estimate will vary from the CTDI<sub>vol</sub> estimate depending on the discrepancy of the PMMA phantom diameter relative to the patient effective diameter, as described in the AAPM Size-Specific Dose Estimate (SSDE) document (Reference 1). In general, if the CTDI calibration phantom is larger than the patient diameter, the indicated CTDI is an underestimate of the patient dose, and if the phantom is smaller than the patient diameter, the indicated CTDI is an overestimate of the patient dose. An example is illustrated in a case report (Reference 2).

**References:**

1. AAPM Task Group 204, “Size Specific Dose Estimates (SSDE) in Pediatric and Adult CT Examinations.” 2012. Available at [http://www.aapm.org/pubs/reports/RPT\\_204.pdf](http://www.aapm.org/pubs/reports/RPT_204.pdf). Accessed 6/172016.
2. Seibert JA, Boone JM, Wootton-Gorges SL, Lamba R. “Dose Is Not Always What It Seems: Where Very Misleading Values Can Result from Volume CT Dose Index and Dose Length Product.” J Am Coll Radiol 2014; 11:233-237. [Editor’s choice manuscript – available with open access at [http://www.jacr.org/article/S1546-1440\(13\)00663-7.pdf](http://www.jacr.org/article/S1546-1440(13)00663-7.pdf)]

ABR AMERICAN BOARD OF RADIOLOGY

### Online Longitudinal Assessment Model

- For MP up to three sets
- 104 opportunities (items) provided per year
- 52 required item attempts per year
- Up to 10 “declines” per item set per year
- Content administered weekly with a 4 week shelf life


ABR AMERICAN BOARD OF RADIOLOGY

### Online Longitudinal Assessment Model

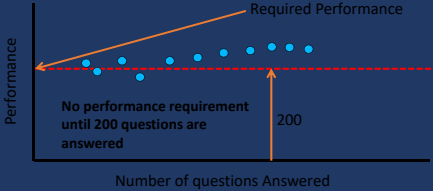

- 200 Item summative decision threshold
- Rolling summative decisions
- Must pass the most recent summative decision at annual review

OR

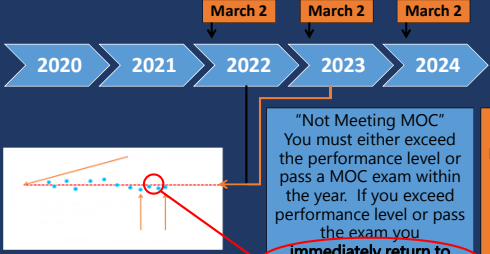
- A traditional exam taken in the previous 5 years
- No MOC exam required until OLA launch if meeting all parts in 2017 or beyond



### Summative Threshold





### Performance Threshold




**"Not Meeting MOC"**  
You must either exceed the performance level or pass a MOC exam within the year. If you exceed performance level or pass the exam you **immediately return to "Meeting MOC"**

If you do not return to "Meeting MOC" by your next annual review you are shown as "Not participating in MOC" and may lose your certification




### Performance Threshold

- If you have answered 200 items and you are not meeting the performance threshold at the time of an MOC Annual Review (March 2 each year), then your status is shown as "not meeting" the requirements of MOC
- As soon as you meet the threshold you will be shown as "meeting."



### Traditional MOC Exams

- Will continue to be administered for:
  - those not meeting requirement in 2017
  - those who fail exam
  - those who don't participate in OLA
  - those with inadequate performance on OLA




### Do you have to take an MOC exam?

YES, if your certificate(s) expired in 2016 or earlier  
NO, if you are meeting Part 3 requirements in 2017

Remember:

- No matter when you took your MOC exam, this does not "buy" you 10 years.
- 10-year cycles are gone – now we use Continuous Certification.



### When do in need to start participating in OLA?

- 2019 is the planned OLA launch for Diagnostic Radiology
- Availability for other ABR specialties (MP, RO and IR/DR) after that

ABR

### Practice Quality Improvement (PQI): Part 4

- Started 2007
- Revisions of MOC policy after lessons learned
- Maturation of Quality and Safety activities in medicine/radiology

ABR

### PQI Principles

- QI: systematic approach to study of healthcare and/or commitment to continuously improve performance and outcomes in healthcare
- ABR honors each diplomate's privilege to choose PQI activities or projects that are pertinent to his or her own practice and that meet the spirit of this definition.

ABR

### PQI: Part 4

- Most confusing part of MOC for many
- Societies provide many project templates.
- Group PQI projects encouraged.
- ABR changed Part 4 requirements in 2015:
  - Gave medical physicists credit for routine QI activities
  - Decrease burden of MOC

ABR

### Expanded PQI Options

- PQI Projects
  - More accepted methodologies
- Participatory Quality Improvement Activities
  - Requires active participation, leadership, or management

ABR

### PQI Projects

- Use any standard QI methodology
  - PDSA
  - Six Sigma, Lean, etc.
- Can be developed by an individual, group, department, healthcare system, or society
- ABMS Multi-Specialty Portfolio Program
- Remain the gold standard

ABR



### Participatory Quality Improvement Activities

- Many categories of participatory activities
  - Documentation required if audited
- Requires **active** participation, leadership, or management

ABR 

### Participatory Quality Improvement Activities

- Completion of an SDEP on a quality or patient safety-related topic
- Service as a radiation safety officer
- 25 prospective chart rounds/yr (MP & RO diplomates only)
- Clinical quality/safety review committee
- Peer review/OPPE
- RCA team
- National registry
- Peer-reviewed QI/safety publication or presentation

ABR 

### Participatory Quality Improvement Activities


- Participation in 10 patient safety conferences per year
- Safety/QI program (scorecard/huddle)
- Peer or patient survey
- Leadership in QI program such Image Wisely, Image Gently, etc.
- National accreditation programs
- MQSA
- NCI cooperative group clinical trial

ABR 

### ACR Activities that count for Part 4

- RADPEER™, R-O PEER™, MP-PEER™
- Registries
- ACR Accreditation Programs
- Radiology Support, Communication and Alignment Network (RSCAN)
- ACR Appropriateness Criteria panel

See all Participatory Activities on the ABR website,  
<https://www.theabr.org/moc-part4-activities>


ABR 

### MOC Program Enhancements

- Activities that count as SA-CME expanded (2012)
- MOC Team Tracker Program launched (2013)
- PQI Participatory Activities added for fulfilling Part 4 requirements (2015)
- ABR Connections Customer Service Center launched (2015)
- Simplified MOC Annual Attestation implemented (2016)
- Updated ABR website launch (Fall 2017)
- ABR Online Longitudinal Assessment (ABR OLA) launch (2019)


ABR 

### ABR Optional Programs



**MOC Team Tracker**

- For group practices
- Assists with attestation ‘bookkeeping’
- Authorized administrator can sign on to myABR and attest on your behalf

ABR 

### Volunteer Opportunities with the ABR

- Eligible one year after certified
- Item writers
- Angoff committee members
- SAM reviewers
- Advisory committee members
- Board members

[www.theabr.org/abr-volunteering](http://www.theabr.org/abr-volunteering)



ABR | AMERICAN BOARD OF RADIOLOGY

### QUESTIONS?

Please contact ABR Connections Customer Service at:  
[information@theabr.org](mailto:information@theabr.org)  
or  
(520) 519-2152