Diagnostic Medical Physics ABR-part 3

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Content was derived largely from the ABR website:

- https://www.theabr.org/medical-physics/initial-certification
- Check this website to remain up to date.

Advice is based on my own opinions and personal studying experiences
Contents and Objective

What to Expect/Tips
- Test logistics
- Oral exam tips

After the Test
- Results and MOC

Study Materials and Methods
- Study habits and resources
So, you’ve passed part 2...

- Congratulations, you get to keep studying!

- Maintain your part 2 brain, continue reviewing your study materials at least monthly. (Full disclosure I did not do this but I wish that I had)

- Consult the ABR website to stay informed

- https://www.theabr.org/medical-physics(initial-certification)

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Study Materials/Methods

- Content tests “fitness to practice applied medical physics”
- Make sure you have medical physics and some clinical experience in each category
- Identify areas you may be lacking and plan hands-on experiences in those areas as feasible.

Radiography, mammography, fluoroscopy, and interventional imaging

- X-ray production, beam characteristics, interactions, and image-formation principles;
- Types and characteristics of image detectors;
- Clinical protocols for common imaging exams;
- Fluoroscopy and interventional procedures, including acquisition parameters and dose-reduction strategies;
- Image noise assessment and dose metrics for all projection imaging modalities;
- Common artifacts, quality assurance, quality control, mammography accreditation, and MQSA standards
Study Materials/Methods

- Task Groups, NCRP, and ICRP Reports:
  - There are many of these but cross-referencing them with the content guide online should help narrow and focus your studies.

- The Essential Physics of Medical Imaging, Bushberg, Seibert, Leidholt and Boone.
  - Consider reviewing figures as a good quick refresher after part 2

- Review of Radiological Physics, Huda
  - Practice questions in back of book are a good sanity check
Study Materials/Methods

- DICOM Header
  - Go through each field in DICOM Headers of each modality.

- Review Artifacts
  - What: Physical Principles at work
  - How: Technique Factors/Prevention

- Hands-on Experience
  - It is not enough to “go through the motions”
  - Actively question why tests are conducted and trace their origin to clinical significance and/or regulatory compliance
Study Materials/Methods

- *Do not study in a vacuum!*

- Talk through procedures and instrumentation with colleagues/fellow students to fill understanding gaps and discover areas you have neglected.

- Added bonus of gaining experience verbally expressing your knowledge base.

- You can also practice with non-medical physics friends. Can help you explain concepts completely and simply.
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After the Test
• Results and MOC

Categories
• Radiology, Mammography, Ultrasound & IR
• Computed Tomography
• Fluoroscopy & Ultrasound
• Informatics, Image Display, Image Fundamentals & Professionalism/Ethics
• Bio, Dosimetry, Protections &
What to Expect

Before the Test

- ~ 5 Months before test (Dec/Jan) you should be contacted with an invite.

- When you respond you will have to pay $$

- Then you anxiously wait for communication about your test date…
What to Expect

The Test

- 5 Reviewers
- Each topic covered by each reviewer
- The composite score from all reviewers will determine your pass/fail status
- So if you bomb with one reviewer you can make up for it by doing well with the others

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“The Part 3 oral exam includes the same material as the Part 2 computer-based exam, but with a strong emphasis on practicing clinical medical physics, clinical judgment, and communication.”
How to Respond

- While in the test take your time and give thoughtful focused answers.

- If you feel like you have the answer rolling around in your head, ask for a moment and get your thoughts straight.
  - Remember decision making and communication are a focus of the exam.

- If you don’t know the answer, do you perhaps know where you could find the answer? (Task Group reports, NCRP reports, etc.)
How to Respond

- If you’re completely stuck you might try asking some questions.

- Guessing is in general not a good idea, but offering a logical progression to a solution seems more reasonable.
  - Example from Review of Radiological Physics by Walter Huda:
    - What tissue has the highest acoustic impedance in U/S?
      - Incorrect: “I’m gonna guess, Air?”
      - Better: “I’m not exactly sure, but I know that the difference in acoustic impedance creates reflections and bone/air interfaces create the largest reflections. So, I’m thinking either bone or air, but I’d have to look it up in Bushberg”
Contents and Objective

Study Materials and Methods
• Study habits and resources

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Categories
- Anatomical, Image Display, Image Fundamentals
- Surgical, Oncology, Professionalism/Ethics
- Radiology, Mammography, Microscopy & IR
- Radiology, Ultrasound
- Radiology, Computed Tomography
After the test...

- You can finally relax…
  - YEAH RIGHT!!! More like relive the test for the next two weeks until they post results

- Pass (2014-2016 pass rate was 67%)
  - All categories satisfactory-Welcome to MOC!

- Condition (13%)
  - One category unsatisfactory

- Fail (20%)
  - More than one category unsatisfactory

- You can request feedback within 60 days (for a fee).
After the test...

- If you condition, ABR will send you a “Next Steps” letter outlining where and when your conditioned exam will take place.
  - Two reviewers, 30 minutes each, over only the conditioned category.

- If you fail...
  - “Board eligibility for medical physicists begins once a candidate has been approved for the Part 2 Exam, or has completed a CAMPEP-accredited residency, whichever occurs first. Once board eligible, medical physics candidates have six calendar years to attain certification, that is, fully pass the Part 1 and Part 2 (computerized) and Part 3 (oral) certifying exams.”
If you pass you get to begin your MAINTAINENCE OF CERTIFICATION (MOC)

- **Part 1**
  - State Licensure or Professional Attestation

- **Part 2**
  - 75 CE credits (25 of them are Self Assessment)
  - Every 3 yrs

- **Part 3**
  - Assessment mode is shifting to Online Longitudinal Assessment (OLA).
  - May also do traditional exam
  - Pay attention going forward to understand requirements

- **Part 4**
  - Complete/document a Practice Quality Improvement project
  - OR Participatory Quality Improvement Activity
  - Every 3 yrs
Useful MOC Links

- The ABR MOC Brochure

- The American Board of Radiology
  - www.theabr.org

- myABR
  - https://myabr.theabr.org

- CME Gateway
  - www.cmegateway.org

- ABMS Public Site
  - www.certificationmatters.org