Preparing for the ABR Diagnostic Medical Physics Board Exams - Oral Exam

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Outline

• What is oral exam, why is it special?
• What are examined in oral exams?
• How should I prepare oral exam?
• How can I do well during the exam?
• Any practical tips?

What is oral exam?

• The final step to be a board certified medical physicist.
• June 9-12, 2013; Louisville, KY

• Hotels are all close; pros and cons of booking a hotel right at exam site

http://www.theabr.org/
How is oral exam performed?

- The oral examination is designed to test your knowledge and fitness to practice applied medical physics in the specified area(s).
- 5 examiners, 30 minutes each
- 5 questions in 5 categories
- Have to pass all 5 categories to get certificate
- If one category failed, you are considered ‘conditioned’

Is oral exam difficult?

What are examined in oral exam?

- Radiation Protection and Patient Safety
- Patient-Related Measurements
- Image Acquisition, Processing and Display
- Calibration, Quality Control and Quality Assurance
- Equipment
What are examined in oral exam?

- All imaging modalities in diagnostic medical physics
  - General X-ray: CR, DR
  - Fluoroscopy
  - Mammogram
  - CT
  - MRI
  - US
  - Informatics
- No nuclear medicine questions
- Emphasize on clinical experience

What are examined?

- Basic imaging principles
  - How are images generated?
  - Familiar with terminologies, basic anatomies
- Equipment components and functions
  - Familiar with sketched figures
- Quality Control
  - What tests need to be conducted
  - With what phantoms and equipment
  - What are the limitations of each measurement
- ACR accreditation

What are examined?

- Image quality assessment
  - Spatial resolution, low contrast detectability, geometry accuracy, …
  - Familiar with typical values
- Image artifacts
  - Appearance, cause, correction
- Safety: Patient and operator
- Shielding and siting
  - ICRP 147; MRI siting
Do I need to read books?

- **Books**
  - *Medical Imaging Physics*, William R. Hendee and E. Russell Ritenour
  - Other books in each modality

- **Reports**
  - NCRP147
  - ACR accreditation: general requirement and phantom studies
  - AAPM reports

How should I prepare oral exam?

- **Start early**
- **Talk to people who recently took the exams**
  - How they prepared
  - What they found to be useful
- **Fully utilize your resources**
  - Physicist, technologist and radiologist at your hospital
  - Your classmates, your friends, your colleagues …
  - Yahoo Med Phys group
- **Prepare a list of ‘things you need to know’ for each imaging modality**

Group Study

- **Benefit of group study**
  - Motivate and support each other
  - Learn faster
  - Fill in knowledge gaps
- **Conduct group study effectively**
  - Group members on the same page
  - Each in charge of a specific area, e.g. one modality
  - Meet regularly
  - Question/challenge each other (in a friendly way)
- **Distance is not a problem**
Mock oral exam

• Get senior medical physicists to help
• Benefit of mock oral exam
  – Get familiar with oral exam format
  – Organize thoughts and answers during exam
  – Alleviate stress in real exam
  – Identify areas to focus and improve

How can I do well during the exam?

• Answer questions correctly and effectively
  – Give short and precise answers
  – Be honest, don’t make up an answer
  – Talk about related topics if you don’t know the answer
  – No need to sweat out on a single specific question
  – No need to guess which category a question belongs to

How can I do well during the exam?

• Interact with examiners
  – Experienced medical physicists
  – Different personal style of examiners
  – The purpose is to test your knowledge base and clinical experience, not to fail you. (They are helping you!)
  – Don’t argue with examiners
  – Don’t feel bad if you were stopped by the examiner, it could be a good thing
  – Examiners won’t tell your performance
  – Final score is averaged among examiners
How can I do well during the exam?

- Other things to consider
  - Be confident
  - Dress appropriately
  - There might be a half hour break – the longest 30 min

Summary

- Know your exam
- Start early
- Prepare a list of ‘things you need to know’
- Group study and mock oral exam
- Answer questions precisely
- Interact with examiners
- Be confident, take it easy

Good Luck!
Thank you