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### ABOUT ME



- Stewart J Becker, PhD DABR
  - Current Position:
    - NYU Langone Medical Center  
Assistant Professor / Medical Physicist  
Director, Medical Physics Residency Program (CAMPEP)
  - Certification:
    - Passed ABR Boards - 2009 (1<sup>st</sup> try)
  - Education:
    - University of Wisconsin  
PhD Medical Physics, 2006




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### EXAM PASS RATE -2013

# 50%




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### PLAN OF ATTACK

- ◉ Understand reason for exam and its mechanics
- ◉ Clarify necessary reading material and clinical experiences
- ◉ Learn how to effectively prepare for an oral exam
- ◉ Review example questions
- ◉ Review some final tips



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### POINT OF THE EXAM

- ◉ Make sure you are SAFE & COMPETENT
- ◉ Make sure you can practice INDEPENDENTLY
- ◉ This is your CAREER
  - not just a test



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### WHY ORAL?!?!?



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## HOW THE QUESTIONING WORKS



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## ABR SUBJECT TITLES

- ◉ Radiation Protection and Patient Safety
- ◉ Patient-Related Measurements
- ◉ Image Acquisition, Processing and Display
- ◉ Calibration, Quality Control and Quality Assurance
- ◉ Equipment

*These are kind of broad?*



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## BREAK IT DOWN

- ◉ Radiation Protection and Patient Safety
  - Instantaneous vs. Annual Allowed Dose
  - Signage and reporting requirements
  - Shielding calcs and wall/door composition
  - Implants and releasing patients
  - Emergency scenarios
- ◉ Equipment
  - All the parts of the Linac (Karzmark)
  - How x-rays are generated (therapy and diagnostic)
  - Types of detectors and how they work



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## BREAK IT DOWN

### ◉ Calibration

- Know how to do monthly, Annual, and commissioning forward and backwards
- Understand how PDDs & output factors work
- What happens if calibration isn't done correctly



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## BREAK IT DOWN

### ◉ Image Acquisition

- How images are created, how the detectors work
- Differences between Compton and Photoelectric and how they affect images
- Get used to looking at images and identifying anatomy, medical devices and the graticule

### ◉ Patient-Related Measurements

- Exposure, KERMA, Dose, PDD, TAR/TMR
- Inhomogeneity corrections
- Bolus vs. Compensators
- Planning Sites, typical doses and constraints
- Wedges



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## THE WHY BEHIND THE LIST



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### EXAMPLE #1: TG-51

- Standard Technique    How are patient treatments affected if
- ◉ What is the point of measurement?    ◉ the wrong SSD is used?
  - ◉ When is it used?    ◉ calibration is mistakenly assigned to another point?
  - ◉ Where is dose usually defined for calibrations?

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### HOW TO EXCEL AT ORAL EXAMS

- ◉ Write up your own questions
- ◉ Setup a mock oral group
  - In person or using skype
  - Ask each other questions
  - Questions should be fully prepared ahead of time
  - Alternating answering same question
- ◉ Mimic exam scenarios
  - Must answer questions **ALoud**
  - Limited Time
  - Pressure of an examiner looking at you
- ◉ Practice, Practice, Practice

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### HAVE A TECHNIQUE

- ◉ Repeat the question
- ◉ Lay out a plan for the answer
  - Ex: Linac QA (safety, mechanical, radiation tests)
- ◉ Follow the plan




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### EXAMPLE #2: SHIELDING

You are testing the shielding of a vault. You are in a patient waiting area next to the side wall of the vault and you read 4mR/hr.

- What do you do?



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### FINAL TIP

- Find ways to help you relate materials to each other
- Ex: How are Linac, Brachy, and CT QA related?
  - Safety
  - Mechanical
  - Radiation
- “Show your work”
- Fall back on personal experience
  - Think of what you do at your clinic



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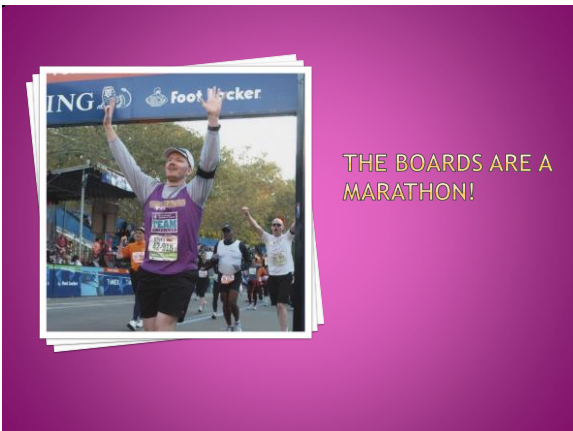
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THE BOARDS ARE A MARATHON!

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