Preparing for the ABR Initial Certification Board Exam - Handout

Bonnie Chinsky – 8/1/2012
NYU Langone Medical Center

Disclaimer: The content provided here is based on personal experience. Your Initial Certification exam experience may differ.

1. Helpful Study Materials

The following texts may be helpful supplements in addition to your medical physics graduate program notes:

- Diagnostic Radiology & Basic Computer Science:
  - The Essential Physics of Medical Imaging – Bushberg
  - Radiology Review: Radiologic Physics – Nickoloff
  - Medical Imaging Physics – Hendee
  - Review of Radiologic Physics – Huda
- Radiation Basics:
  - Physics in Nuclear Medicine – Cherry & Sorenson
- Radiation Measurement & Statistics:
  - Radiation Detection & Measurement – Knoll
- Dosimetry:
  - The Physics of Radiation Therapy – Kahn
- Anatomy:
  - Essentials of Anatomy & Physiology – Scanlon & Sanders
- Radiobiology:
  - Radiobiology for the Radiologist – Hall

Note: Some people also utilize the Raphex exams to study. If you use them, focus on the general questions that test basic physics, therapy, and diagnostic concepts rather than questions that rely on clinical experience or MU calculations. Old exams can be found on the internet.

2. Exam Preparation Advice

- Practice with the TI-30XS calculator – either by purchasing one or reading the manual on the Texas Instruments website
- Register with Pearson VUE *as soon as registration opens* to increase your chances of getting a testing center that is closer to you. Be forewarned that your top few choices may not be available even when registration opens, since the testing centers are used by several other organizations.

3. Important Constants & Equations

The following are *a few* examples of the general physics constants and equations that you should know for the Initial Certification exam. They should give you an idea of what are considered important concepts, numbers and equations.

$1\ R=2.58\times10^{-4}\ C/kg$	$1\ Ci=3.7\times10^{-10}\ Bq$	$HVL=\ln 2/\mu$	$A=A_0e^{-\lambda t}$
$W_{air}=33.97$ J/C or eV/ion pair	$q_e=1.602\times10^{-}19$ C	$N=N_0e^{-\lambda t}$	$K=X(W/e)$