Select Written Study Material  
For ABR Therapy Physics Oral Boards

**Equipment**

- A Primer on Theory and Operation of Linear Accelerators in Radiation Therapy by C. J. Karzmark & Robert J. Morton

**Patient-Related Measurements**

- TG 25 – Clinical Electron-Beam Dosimetry
- TG 42 – Stereotactic Radiosurgery
- TG 43 – Dosimetry of Interstitial Brachytherapy Sources
- TG 59 – High Dose-Rate Brachytherapy Treatment Delivery
- TG 64 – Permanent Prostate Seed Implant Brachytherapy
- TG 65 – Tissue Inhomogeneity Corrections for Megavoltage Photon Beams

**Radiation Protection and Patient Safety**

- The Physics of Radiation Therapy 3rd Edition by Khan Chapter 22 High Dose Rate Brachytherapy pp523-525, “Facility Design”
- NCRP 33 – Medical X-ray and Gamma-ray Protection for Energies up to 10 MeV
- NCRP 116 – Limitation to Exposure to Ionizing Radiation
- ICRP Publication 98, Chapter 2 – Dose to People Approaching Implanted Patients
- TG 27 – Neutron Measurements around High Energy X-ray Radiotherapy Machines
- TG 35 – Medical Accelerator Safety Considerations
- TG 36 – Fetal Dose from Radiotherapy with Photon Beams

**Calibration, Quality Control, and Quality Assurance**

- TG 20 – Physical Aspects of Quality Assurance in Radiation Therapy
- TG 40 – Comprehensive QA for Radiation Oncology
- TG 45 – AAPM Code of Practice for Radiotherapy Accelerators
- TG 53 – Quality Assurance for Clinical Radiotherapy Treatment Planning
- TG 56 – Code of Practice for Brachytherapy Physics
- TG 66 – Quality assurance for computed-tomography simulators and the computed-tomography-simulation process
- TG 106 – Accelerator beam data commissioning equipment and procedures
- TG 142 – Quality Assurance of Medical Accelerators

**Image Acquisition, Processing, and Display**

- TG 28 – Radiotherapy Portal Imaging Quality
- TG 58 – Clinical Use of Electronic Portal Imaging

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ACMP 2011  
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Select Clinical Experiences
For ABR Therapy Physics Oral Boards

☐ Machine QA - Daily, Monthly, Annual, Commissioning (if possible)
  o Linac
  o CT
  o HDR/LDR
  o MLC
  o Treatment Planning Systems
  o OBI systems

☐ Radiation Safety
  o Hot Lab
  o Room surveys
  o Shielding Calcs

☐ Procedures
  o HDR/LDR treatments
  o Treatment Planning (by hand and TPS) for Photons and Electrons
  o Patient Setup/Portal imaging/CBCT
  o End to End tests
  o SBRT
  o Gamma Knife

☐ Measurement Devices
  o Film
  o Electronic IMRT QA
  o Ion Chambers
  o Well Chambers
  o Diodes/TLDs
  o Water Tanks
  o GM/survey meters