ABR Update:
Radiation Oncology

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AAPM Summer School, Philadelphia
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Why discuss Radiation Oncology Exams?

- Medical physicists should be familiar with radiation oncology exam process
- Many medical physicists contribute to training of radiation oncologists
- Medical physicists contribute to RO exams
Written Exam

- Clinical, biology, and physics exams

- Residents can take physics and biology after 3rd year of training (PGY 1 + 36 months)
Oral Exam

- Administered in Louisville
- Residents take following completion of training and written exams
- One examiner in each of 8 major clinical categories
- 30 minutes/examiner
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Written Exam

• Until 2008: 215 Type A questions
  • multiple choice, one correct answer
  • Changed in 2009 to 100 questions

• Content
  • Written by volunteers, assembled by committee
  • Changing focus away from basics, toward newer techniques
  • Consistent with ASTRO Syllabus
ASTRO’S 2007 CORE PHYSICS CURRICULUM FOR RADIATION ONCOLOGY RESIDENTS

AD HOC COMMITTEE ON TEACHING PHYSICS TO RESIDENTS: ERIC E. KLEIN, PH.D., * BRUCE J. GERBI, PH.D., † ROBERT A. PRICE, JR., PH.D., ‡ JAMES M. BALTER, PH.D., § BHUDATT PALIWal, PH.D., ¶ LESLEY HUGHES, M.D., ¶¶ AND EUGENE HUANG, M.D., #
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Oral Exam

- RO Trustees asking for volunteers to:
  - write oral exam questions,
  - assemble, and manage the exam

- Introducing methods to evaluate:
  - Use of imaging
  - Target definition

- Exam to include
  - Improved images
  - Sophisticated treatment plans
Problem Areas

• Equivalent dose, effective dose

• Relative neutron dose equivalent

• Electron beam penumbra

• TG-43 dosimetry parameters

• IMRT:
  • Effect on leakage radiation
  • Effect on shielding requirements