

Radiation Biology

Chapter 1 Physics and Chemistry of Radiation Absorption

Chapter 2 Molecular Mechanism of DNA and Chromosome Damage and Repair

Chapter 3 Cell Survival Curves

Chapter 4 Radiosensitivity and Cell Age in the Mitotic Cycle

Chapter 5 Fractionated Radiation and the Dose-Rate Effect

Chapter 6 Oxygen Effect and Reoxygenation

Chapter 7 Linear Energy Transfer and Relative Biologic Effectiveness

Chapter 8 Acute Radiation Syndrome

Chapter 9 Medical Countermeasures to Radiation Exposure

Quiz on first 9 Chapters

Chapter 10 Radiation Carcinogenesis

Chapter 11 Heritable Effects of Radiation

Chapter 12 Effects of Radiation on the Embryo and Fetus

Chapter 13 and 14 Radiation Cataractogenesis and Radiologic Terrorism

Christmas Break

Chapter 15 Doses and Risks in Diagnostic Radiology, Interventional Radiology and etc

Chapter 16 Radiation Protection

Martin Luther King Birthday

Quiz on Chapters 10 to 16

Chapter 17 Molecular Techniques in Radiobiology

Chapter 18 Cancer Biology

Chapter 19 Dose-Response Relationships for Model Normal Tissues

Chapter 20 Clinical Response of Normal Tissues

Chapter 21 Model Tumor Systems

Chapter 22 Cell, Tissue and Tumor Kinetics

Chapter 23 Time, Dose and Fractionation in Radiotherapy

Chapter 24 and 25 Retreatment after Radiotherapy and Alternative Radiation Modalities

Chapter 26 Biology and Exploitation of Tumor Hypoxia

Chapter 27 and 28 Chemotherapy and Hyperthermia

April 12 --Final