

Syllabus: Radiobiology for Residents 2009-2010
Thursdays, 1:00 – 2:00 pm

<u>Date</u>	<u>Topic</u>	<u>Instructor</u>	<u>Room</u>
September 24, 2009	Basic Molecular Biology	Yilun Liu	WWW Rm 201
October 1, 2009	Molecular Biology Techniques	Yilun Liu	WWW Rm 201
October 8, 2009	DNA Strand Breaks & Chromosomal Aberrations	Brooks Low	WWW Rm 201
October 15, 2009	Molecular Mechanisms of Radiation Damage	Dean Rupp	WWW Rm 201
October 22, 2009	Molecular Mechanisms of DNA Repair	Dean Rupp	WWW Rm 201
October 29, 2009	Repair at the Cellular Level	Dean Rupp	WWW Rm 201
November 5, 2009	Exam	Yilun Liu Brooks Low Dean Rupp	WWW Rm 201
November 12, 2009	Mechanisms of Cell Death	Doug Brash	WWW Rm 201
November 19, 2009	Molecular Signaling – Cytoplasmic	Doug Brash	WWW Rm 201
November 26, 2009	HOLIDAY	HOLIDAY	HOLIDAY
December 3, 2009	Molecular Signaling – Nuclear	Doug Brash	WWW Rm 201
December 10, 2009	Cancer I	William Summers	WWW Rm 201
December 17, 2009	Cancer II	William Summers	WWW Rm 201
December 31, 2009	HOLIDAY	HOLIDAY	HOLIDAY
January 7, 2010	Radiation Carcinogenesis	William Summers	WWW Rm 201
January 14, 2010	Exam	Doug Brash William Summers	WWW Rm 201
January 21, 2010	Tumor Microenvironment	Zhong Yun	WWW Rm 201
January 28, 2010	Cell & Tissue Survival Assays	Sara Rockwell	WWW Rm 201
February 4, 2010	Solid Tumor Systems	Sara Rockwell	WWW Rm 201
February 11, 2010	Models of Cell Survival	Sara Rockwell	WWW Rm 201
February 18, 2010	Cell and Tissue Kinetics	Sara Rockwell	WWW Rm 201
February 25, 2010	Oxygen Effect	Zhong Yun	WWW Rm 201
March 4, 2010	IN-SERVICE	IN-SERVICE	IN-SERVICE
March 11, 2010	Radiosensitizers, Bioreductive Drugs, Radioprotectors	Sara Rockwell	WWW Rm 201
March 18, 2010	Exam	Zhong Yun Sara Rockwell	WWW Rm 201

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except as noted in blue

Wednesday March 24, 2010 7:45 AM **	Clinically Relevant Normal Tissue Responses	Susan Higgins	WWW Rm 201
Wednesday March 31, 2010 7:45 AM **	Mechanisms of Normal Tissue Response	Susan Higgins	WWW Rm 201
April 1, 2010	Therapeutic Ratio; Time– Dose, Fractionation	Joanne Weidhaas	WWW Rm 201
April 8, 2010	Biological Aspects of Alternative Dose Delivery Systems	Joanne Weidhaas	WWW Rm 201
April 15, 2010	Interaction of RT with Chemotherapeutic Agents, PDT; MDR, Gene Therapy	Bruce McGibbon	WWW Rm 201
Wednesday April 21, 2010 7:45 AM **	Biology of Brachytherapy	Susan Higgins	WWW Rm 201
** Residents on satellite rotations will attend. They will inform the attending physician at the satellite that they will be late.			
April 29, 2010	Exam	Sara Rockwell Susan Higgins Joanne Weidhaas Bruce McGibbon	WWW Rm 201
May 6, 2010	Hyperthermia	Meena Moran	WWW Rm 201
May 13, 2010	Low Dose Hypersensitivity, Bystander Effects, Genomic Instability	Joe Contessa	WWW Rm 201
May 20, 2010	Total Body Irradiation – Therapeutic & Accidental	Abhi Patel	WWW Rm 201
May 27, 2010	Cataracts; Radiation Effects in the Developing Embryo	Bryan Chang	WWW Rm 201
June 3, 2010	Heritable Effects of Radiation	Faye Rogers	WWW Rm 201
June 10, 2010	Exam	Meena Moran Joe Contessa Abhi Patel Bryan Chang Faye Rogers	WWW Rm 201

1. Lectures last for one hour.
2. Handouts are to be given for each lecture. Handouts can be the slides. Please cite references in the handouts.
3. Provide a PowerPoint file of your lecture to Amrit Dhawan for uploading onto the Department Server.
4. Please give practice questions for each lecture. Practice questions can be taken from the in-service exam and other exam books.
5. Please e-mail exam questions to [Amrit Dhawan \(amrit.dhawan@yale.edu\)](mailto:amrit.dhawan@yale.edu) one week prior to the exam date. To better prepare the residents for the Board Exam, it is recommended that you use the format found in the in-service exam and other relevant exam books. Alternatively, you may want to include questions from the in-service exam and previous Boards. Include the answers on a separate sheet, along with the points to be given for each answer.
6. On the Exam day, the residents and instructors go over the answers to the questions. The exams are not graded.