

**Syllabus: Radiobiology for Residents 2017-2018**  
**8:05 am – 8:55 am, Thursdays**

<b>Date</b>	<b>Topic</b>	<b>Instructor</b>	<b>Location</b>
September 07, 2017	Basic Molecular Biology	Ryan Jensen	Smilow LL-505
September 14, 2017	Molecular Biology Techniques	Ryan Jensen	Smilow LL-505
September 21, 2017	Cancer	Ranjit Bindra	Smilow LL-505
September 28, 2017	<b>ASTRO</b>		
October 05, 2017	Radiation Carcinogenesis	James Hansen	Smilow LL-505
October 12, 2017	Heritable Effects of Radiation	Faye Rogers	Smilow LL-505
October 19, 2017	DNA Strand Breaks & Chromosomal Aberrations	Faye Rogers	Smilow LL-505
October 26, 2017	Molecular Mechanisms of DNA Repair	Faye Rogers	Smilow LL-505
November 02, 2017	Molecular Mechanisms of Radiation Damage	Ryan Jensen	Smilow LL-505
November 09, 2017	Repair at the Cellular Level	Ryan Jensen	Smilow LL-505
November 16, 2017	Mechanisms of Cell Death	Doug Brash	Smilow LL-505
November 23, 2017	<b>THANKSGIVING HOLIDAY</b>		
November 30, 2017	Molecular Signaling –Cytoplasmic	Doug Brash	Smilow LL-505
December 7, 2017	<b>RESIDENT INTERVIEWS</b>		
December 14, 2017	<b>RESIDENT INTERVIEWS</b>		
December 21, 2017	Molecular Signaling – Nuclear	Doug Brash	Smilow LL-505
December 28, 2017	<b>CHRISTMAS HOLIDAY</b>		
January 04, 2018	<b>RESIDENT INTERVIEWS</b>		
January 11, 2018	Solid Tumor Systems	Joseph Contessa	Smilow LL-505
January 18, 2018	Cell & Tissue Survival Assays	Ranjit Bindra	Smilow LL-505
January 25, 2018	Cell and Tissue Kinetics #1	James Hansen	Smilow LL-505
February 01, 2018	Cell and Tissue Kinetics #2	James Hansen	Smilow LL-505
February 08, 2018	Models of Cell Survival #1	David Carlson	Smilow LL-505
February 15, 2018	Models of Cell Survival #2	David Carlson	Smilow LL-505
February 22, 2018	Tumor Microenvironment	Zhong Yun	Smilow LL-505
March 01, 2018	Oxygen Effect	Zhong Yun	Smilow LL-505
March 08, 2018	<b>IN-TRAINING EXAM</b>		

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March 15, 2018	Radiosensitizers, Bioreductive Drugs, Radioprotectors	Henry Park	Smilow LL-505
March 22, 2018	Therapeutic Ratio, Time–Dose, Fractionation	Joseph Contessa	Smilow LL-505
March 29, 2018	Low Dose Hypersensitivity, Bystander Effects, Genomic Instability	Kirtesh Patel	Smilow LL-505
April 05, 2018	Total Body Irradiation – Therapeutic & Accidental	Abhi Patel	Smilow LL-505
April 12, 2018	Biological Aspects of Alternative Dose Delivery Systems	Abhi Patel	Smilow LL-505
April 19, 2018	Biology of Brachytherapy	Melissa Young	Smilow LL-505
April 26, 2018	Interaction of RT with Chemotherapeutic Agents, PDT; MDR, Gene Therapy	Kirtesh Patel	Smilow LL-505
May 03, 2018	Clinically Relevant Normal Tissue Responses & Mechanisms	Shari Damast	Smilow LL-505
May 10, 2018	Cataracts; Radiation Effects in the Developing Embryo	Kimberly Johung	Smilow LL-505
May 17, 2018	Hyperthermia	Meena Moran	Smilow LL-505
May 24, 2018	Immunotherapy	Kirtesh Patel	Smilow LL-505
May 31, 2018	General Discussion	Zhong Yun	Smilow LL-505

**Lecture Instructions:**

1. Handouts are to be given for each lecture. Handouts can be the slides. Please cite references in the handouts.
2. Provide a PowerPoint file of your lecture to Lisa Zucaro ([lisa.zucaro@yale.edu](mailto:lisa.zucaro@yale.edu)) for uploading onto the Department Server BEFORE your lecture.
3. Please incorporate and/or provide practice questions for each lecture. Practice questions can be taken from the in-service exams and other study guides, some of which can be downloaded from the [Department Website](#).