

2021-2022 Radiation Oncology Residents Chapters
Radiation Biology Eric Hall 8th edition
(corresponding ASTRO lectures)

Date	Chapter #	Title of Lecture
September 10	1	Overview: Physics and Chemistry of Radiation Absorption – ASTRO Lecture 1
September 17	7	Linear Energy Transfer and RBE – ASTRO Lecture 7 (2 hours)
September 24	4	Radiosensitivity and the Cell Cycle – ASTRO Lecture 4
October 8	2	DNA strand breaks and Chromosomal Aberrations – ASTRO Lecture 2
October 15	5	Repair and dose rate effect – ASTRO Lecture 5
October 22	6	Oxygen Effect – ASTRO Lecture 6
October 29	3	Cell survival curves – ASTRO Lecture 3
November 5	8	Acute effects of total body/Radiation syndrome – ASTRO Lecture 8 (Part 1)
November 12	10	Radiation Carcinogenesis/Radioprotector – ASTRO Lecture 10
November 19	14 & 16	Radiologic terrorism/radiation protection – ASTRO Lecture 8 & 15 (Part 2)
December 3	11, 12, 13	Heritable Effects of Radiation, effects on embryo and fetus, cataractogenesis – ASTRO Lecture 11,12 & 13
December 17	18	Cancer Biology part 1 – ASTRO Lecture 16
January 7		Cancer Biology (Part 2)
January 14	19	Dose response relationships for model normal tissues – ASTRO Lecture 17
January 28	20	Clinical responses of normal tissues – ASTRO Lecture 18
February 11	21	Model tumor systems – ASTRO Lecture 19
February 18	22	Cell tissue and tumor kinetics – ASTRO Lecture 20
February 25	23	Time dose fractionation (Part 1) – ASTRO Lecture 21 (1 hour)
March 4	23	Time dose fractionation (Part 2) – ASTRO Lecture 21 (1 hour)
March 11	28	Hyperthermia ASTRO Lecture (add topic)
March 18	27	Chemotherapy and radiation/radiosensitizers and bioreductive ASTRO Lectures 23 & 25
March 25	24	Retreatment after radiotherapy
April 1	26	Tumor hypoxia
April 8	17	Molecular techniques
April 15		Tumor Immunology
April 22		Extra cellular vesicles
April 29		Alternative treatment modalities ASTRO Lecture 22
May 6		FINAL EXAM