

MEIR SCIENTIFIC UPDATE
Medical Effects of Ionizing Radiation Course
Course Schedule
USUHS, Bethesda, MD
August 5 - 8, 2003

Lecture Room E

Tuesday

5 August 03 (Day 1)

0745 – 0800	Registration	Staff
0800 – 0840	Welcome and Introduction to the Threat <i>Discuss AFRRI's radiological program and introduce the threat.</i>	COL Jarrett
0840 – 0940	Physical Principles of Ionizing Radiation <i>Describe the process by which radiation interacts with matter.</i>	Mr. Rob George
0950 – 1040	Infectious Complications of Irradiation <i>Discuss basic treatment modalities for post-radiation infections and the immunocompromised patient.</i>	CDR Brook
1040 – 1130	Psychological Factors of Ionizing Radiation <i>Describe psychological reactions of populations who are exposed to the effects of a nuclear detonation and both real and perceived widespread radionuclide contamination.</i>	LTC Salter
1130 – 1230	Lunch	
1230 – 1330	Low Level (Late) Effects of Ionizing Radiation <i>Explain long-term, low-level, and chronic high-dose sub-lethal exposures of ionizing radiation.</i>	Miller PhD
1340-1500	Depleted Uranium Effects <i>Discuss concerns with the use of depleted uranium, and current research being conducted on its effects.</i>	McClain PhD

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6 August 03 (Day 2)

0800 – 0915	Management of Internal Contamination <i>List the methods for removal of internally deposited radioactive materials in the body.</i>	LTC Sedlak
0920 – 1010	Radioprotectants -- Prophylactic Drug Development <i>Discuss development of prophylactic drugs against expected radiological hazards.</i>	Whitnall PhD
1030 – 1130	Effects and Defense of Nuclear Weapons <i>Explain the effects and hazards of blast and thermal energy, and fallout characteristics released from a nuclear detonation.</i>	Mr. Rob George
1130 – 1230	Lunch	
1230 – 1320	Cellular Radiation Biology <i>Describe the energies released by ionizing radiation and their effects on biological systems.</i>	Shoemaker PhD
1330 – 1400	"Pre-Hospital Response to a Radiation Accident" <i>Recall the steps taken before transporting a radiologically contaminated patient to an emergency room.</i>	REAC/TS Film
1400 – 1500	Cytokine-Based Therapies <i>Describe the general concept of Cytokines with special reference to cytokine therapy for hematopoietic radiation injury.</i>	Srinivasan PhD

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7 August 03 (Day 3)

0800 – 0900	Western Radiation Exposure Experience <i>Recall case histories of operationally significant radiation incidents involved in the Western Hemisphere.</i>	LTC Salter
0910 – 1020	Soviet Radiation Exposure Experience <i>Describe the major radiation releases in the former Soviet Union and how they uniquely contribute to our understanding of the effects of radiation on human health.</i>	Dr. Reeves*
1030 – 1130	"Suicide Mission to Chernobyl" <i>Discuss the lessons learned since the Chernobyl accident.</i>	Film
1130 – 1230	Lunch	
1230 – 1400	NBC and Combined Radiation/Chemical and Biological Injury <i>Describe the potential for enhanced health risks associated with ionizing radiation in combination with BW or CW agents.</i>	Knudson PhD*
1400 – 1430	"Emergency Department Response to a Radiation Accident" <i>Recall the steps taken from the time a contaminated patient enters a hospital emergency room until their transfer or release, including wound decontamination and protection of medical personnel.</i>	REAC/TS Film
1430 – 1530	"Is Radiation as Bad as They Say?" <i>Discuss the evidence that shows a lack of risk for (and possibly beneficial effects of) low doses of radiation</i>	Cameron PhD*

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Friday

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8 August 03 (Day 4)

0800 – 0900	Biodosimetry <i>Describe the use of dicentric yields measured in human peripheral blood as a radiation biodosimetry.</i>	Blakely PhD
0910 – 1000	Biodosimetry Assessment Tool Exercise <i>Explain how the Biodosimetry Assessment Tool (BAT) software program can provide diagnostic information on radiation causalities.</i>	Blakely PhD
1000 – 1045	Training Exercise <i>Demonstrates the procedures for managing decontamination and radiac use.</i>	Mr. Rob George
1115 – 1200	Tour of AFRRRI facilities	Reactor Staff
1200 – 1300	Lunch	
1300 – 1400	Acute Radiation Syndrome <i>Recall the underlying causes of radiation sickness. Explain the treatments available for persons affected by radiation sickness and treatments being developed.</i>	Lt Col Tsu
1400 – 1430	Discussion Groups Exercise <i>Explain medical management of radiological casualties.</i>	LtCol Tsu
1430	Course Summation and Critiques	