



**50 years of service, 1960–2010**

The Armed Forces Radiobiology Research Institute celebrates five decades of advancements in the protection of soldiers and citizens. The AFRRI mission is to preserve the health and performance of U.S. military personnel and to protect humankind through research that advances understanding of the effects of ionizing radiation. To these ends and using its unique resources, the Institute collaborates with other government facilities, academic institutions, and civilian laboratories in the United States and other countries to research the biological effects of ionizing radiation. In addition, it provides medical training and emergency response to manage incidents related to radiation exposure.

#### **Positioned for collaboration**

Congress approved the construction of the AFRRI facility on the grounds of the National Naval Medical Center in Bethesda, Maryland, on June 8, 1960; ground was broken on November 29 that year. The Institute was formally established as a joint agency of the three military departments on May 12, 1961, and has operated continuously since the first occupants moved into the research facility in 1962. Now part of the Uniformed Services University of the Health Sciences, the Institute is ideally situated to collaborate with the National Institutes of Health as well as the military medical and research communities.

## **Resources available from the AFRRI Web site**

### **Medical/operational guides at**

<http://www.usuhs.mil/afri/outreach/guidance.htm>

Medical Management of Radiological Casualties handbook

Emergency Radiation Medicine Response, AFRRI Pocket Guide

Policies on depleted uranium, potassium iodide, and Prussian blue

Textbook of Military Medicine—Medical Consequences of Nuclear Warfare

Quick Reference Information:  
Recommendations of the National Council on Radiation Protection and Measurements

TMT Handbook—Triage, Monitoring and Treatment of People Exposed to Ionising Radiation Following a Malevolent Act

Planning Guidance for Response to a Nuclear Detonation

### **Biodosimetry tools at**

<http://www.usuhs.mil/afri/outreach/biodostools.htm>

Biodosimetry Assessment Tool (BAT) software

First-responders Radiological Assessment Triage (FRAT) software

Medical data forms

**For more information about AFRRI, the MRAT, and medical/operational guidance**

Visit <http://www.afri.usuhs.mil>

Call (301) 295-2950/0316

Write AFRRI MRAT Course  
8901 Wisconsin Avenue  
Bethesda, MD 20889-5603



# Medical Radiobiology Advisory Team

Providing advice to  
military and civilian command and  
control operations worldwide

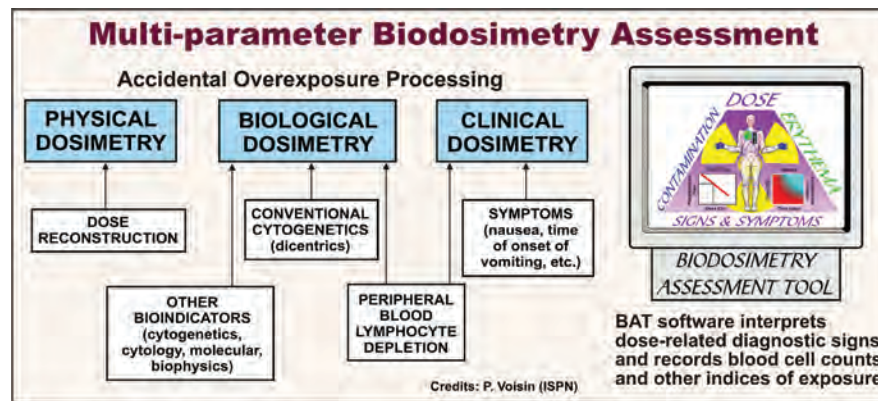
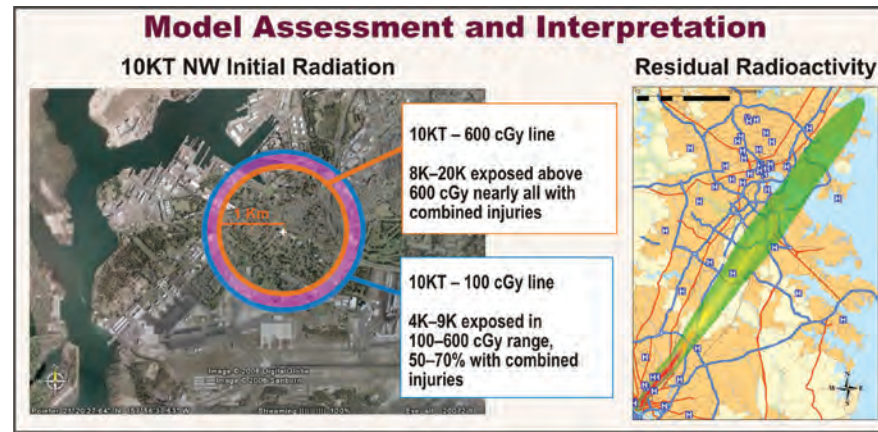


# Radiobiological and nuclear experts

The Medical Radiobiology Advisory Team (MRAT) provides health physics, medical and radiobiological advice to military and civilian command and control operations worldwide in response to nuclear and radiological incidents requiring a coordinated federal response. The MRAT is part of the Armed Forces Radiobiology Research Institute (AFRRI) and consists of radiation medicine physicians and senior health physicists who maintain readiness to deploy in support of government agencies tasked with radiological/nuclear consequence management. Through “reachback,” the deployed team can call on the knowledge and skills of radiobiologists, biodosimetrists and other research professionals at AFRRI as well as those of other Department of Defense (DoD) response teams.

Established by DoD doctrine through directives issued by the Secretary of Defense and the Chairman of the Joint Chiefs of Staff, the MRAT’s principal mission is subject matter expert augmentation to the Defense Threat Reduction Agency (DTRA) Consequence Management Advisory Team, which provides deployable teams of 2 to 20 personnel who are experts in chemical, biological, radiological, nuclear and explosives matters.

During a deployment, the MRAT’s military physicians advise on-scene commanders, senior officials and local medical personnel. The team’s health physicists advise senior officials with risk assessment



through analysis of plume models as well as guidance for patient, personnel and equipment decontamination. Team members interface with their counterparts from other organizations.

After the September 11, 2001, terrorist attacks, MRAT members provided direct support to the National Military Command Center and the DTRA Operations Center. During the early stages of Operation Enduring Freedom in Afghanistan, the team deployed to U.S. Central Command.

The MRAT provides direct support to the National Military Command Center, the Office of the Assistant to the Secretary of Defense

(Nuclear Matters), Response Task Force Commanders and Combatant Commanders. The MRAT is a key asset in the planning and execution of DoD and U.S. interagency exercises involving radiological and nuclear scenarios; it supports two to three major command post and field training exercises each year.

At AFRRI, a tri-service laboratory established in 1961, MRAT members collaborate with other operational experts to conduct graduate-level continuing education through the Medical Effects of Ionizing Radiation Course and to develop relevant information products. Those products include the Army field manual (FM 4-02.283) *Treatment of Nuclear and Radiological Casualties*, the AFRRI handbook *Medical Management of Radiological Casualties*, the NATO Standardization Agreement (STANAG) *Commander’s Guide on the Effects from Nuclear Radiation Exposure During War*, the STANAG *Guidance on the Use of Antiemetics for Radiation-Induced*

*Nausea and Vomiting*, the Allied medical publication [AMedP-6(C) Volume 1 (Nuclear)] *NATO Handbook on the Medical Aspects of NBC Defensive Operations*, and the DoD manual (DoD 5130.8-M) *Nuclear Weapon Accident Response Procedures* (NARP, Chapters 10 and 11).

At the same time, AFRRI researchers seek to understand the biological effects of ionizing radiation and to develop means of protecting against its effects, determining levels of exposure, and assessing risks. AFRRI is part of the Uniformed Services University of the Health Sciences, the Nation’s only military medical university.