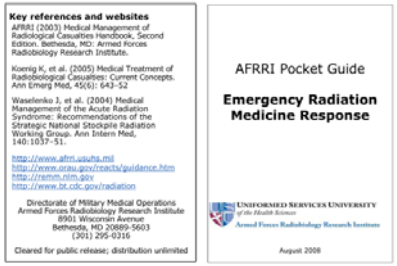
OTHER APPLICATIONS



Includes a digital copy of AFRRI's Pocket Guide—Emergency Radiation Medicine Guide

Recommended by AFRRI Military Medical Operations (MMO)

PLANNED

Biodosimetry integration into Armed Forces Health Longitudinal Technology Application (AHLTA)

GLOBAL INFORMATION for QUALITY CARE

Order from the National Technical Information Service
http://www.ntis.gov/products/

NTIS One Source. One Search. One Solution. National Technical Information Service

HOW TO GET FRAT

Attend the Medical Effects of Ionizing Radiation (MEIR) course offered by AFRRI
http://www.afrri.usuhs.mil/outreach/meir/meir.htm

Request FRAT online
http://www.afrri.usuhs.mil/outreach/request.htm

Contact information:
AFRRI
ATTN: BAT Project Manager
8901 Wisconsin Ave. Bldg. 42
Bethesda, MD 20889-5603

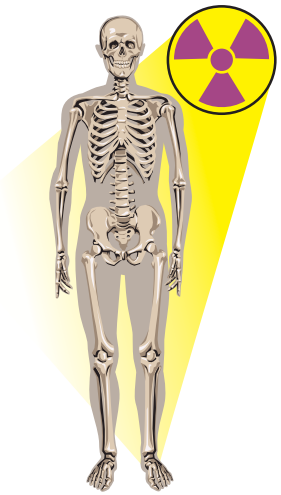
Phone: 301-295-0484
Fax: 301-295-1863
e-mail:
BATProjectManager@afrri.usuhs.mil

UNIFORMED SERVICES UNIVERSITY
of the Health Sciences
Armed Forces Radiobiology Research Institute

First-responder Radiological Assessment Triage (FRAT) v. 1.0

A tool for federal healthcare providers responsible for the management of radiation casualties to rapidly identify exposed individuals

PROBLEM



- Responders need to differentiate between the concerned public and exposed individuals for appropriate use of medical resources.
- Responders need to perform and record exposure assessments for each suspected exposed individual.
- No single assay is sufficient for all complex potential radiation exposure scenarios involving mass casualties.
- Multiple bioassay and integrated approach is required for triage, clinical, and definitive radiation biodosimetry.

The FRAT program is NOT a substitute for treatment decisions by physicians and other trained healthcare professionals.

SOLUTION

Software program for multiparameter dose estimation and data recording.

Dosimetry/Contamination

Patient: MEIR, Scenario, 1

Select Y=Yes, N=No, ?=Unknown

Does the patient have:

Y N ? Dosimetry Information

Y N ? Radioactivity Contamination

Data Entry/Report

Signs Symptoms & Erythema

Select Y=Yes, N=No, ?=Unknown

Y N ?	**Vomiting**	Y N ?	Weakness
Y N ?	**Diarrhea**	Y N ?	Fatigue
Y N ?	**Headache**	Y N ?	Erythema
Y N ?	Tachycardia		
Y N ?	**Impaired Consciousness**		
Y N ?	**Elevated Body Temp**		

Bold symptoms have a second page.

Data Entry/Report

Blood

Patient: MEIR, Scenario, 1

Lymphocyte Counts

#	Hours post exposure	Count (E+09/L)
1	19.00	.86
2	24.00	.70
3	48.00	.50
4		
5		

Add Delete

Data Entry/Report

BENEFITS

- Permits first responders to quickly triage suspected radiation casualties.
- Convenient minimal text entry of 3 categories: prodromal, lymphocyte and dosimetry.
- Multi-parameter triage dose prediction (expert consensus weighing factors).
- Additional output of triage dose-specific messages.
- Contains digital copy of AFRRI's Pocket Guide—Emergency Radiation Medicine Response.

Triage Dose Assessment – 1

Patient: MEIR, Scenario, 1

Radiation OVEREXPOSURE -- potentially SEVERE medical effect.

All results are based on acute whole body photon exposures of healthy subjects without medical treatment.

POOR Reliability

Next

Triage Dose Assessment – 2

Patient: MEIR, Scenario, 1

Lymphocyte Message:

Draw serial blood samples and make additional lymphocyte measurements. Determination of

Previous POOR Reliability Next

Triage Dose Assessment – 3

Patient: MEIR, Scenario, 1

CATEGORY	Est. Dose (cGy)
Signs and Symptoms	160.0
Dosimetry	370.0
Blood Lymphocyte Counts	465.7
Pooled	**388.9**
95% Confidence	289.8 - 487.9

Previous POOR TO MODERATE Reliability Next

Triage Dose Assessment – 4

Patient: MEIR, Scenario, 1

Reliability/Diagnostic Message:

The multiparameter triage exposure or dose estimate has POOR reliability based on the FRAT triage parameters. Additional patient signs and symptoms, blood cell counts, and

Previous POOR Reliability Next

Triage Dose Assessment – 5

Patient: MEIR, Scenario, 1

Hospitalization & Mortality Msg

Hospitalization (90%) for 60-90 days with 0-80% fatality risk in 3-12 weeks without extensive treatment.

Previous POOR Reliability Next