

## Radiation Assessment Software Beta Testing Gets Under Way

The First-responder Radiological Assessment Triage (FRAT) software, launched in April 2010, enables radiological and nuclear emergency response professionals to triage suspected casualties according to recognized assessment and treatment principles. The FRAT software, which can be loaded onto handhelds used in the field, collects, records, and assesses data regarding radiation dose exposure.

With minimal text entry, FRAT accepts exposure signs and symptoms, blood lymphocyte counts, and dosimetry data. It can assess the multiparameter triage dose or the exposure without an assigned dose, and it can indicate there is no evidence of overexposure. In addition, it generates dose-specific messages addressing reliability and diagnostic information, hospitalization estimations, and mortality projections.

FRAT is one of several tools being developed for a deployable multiparameter biodosimetry system that includes AFRRRI's Biodosimetry Assessment Tool software for laptops, standard operating protocols, and medical data recording forms.

### Be a FRAT Tester

To volunteer to participate in the FRAT prototype beta testing, contact the BAT project manager as shown on the back panel.

## Get FRAT



### Request FRAT online

AFRRRI Web site

<http://www.afrrri.usuhs.mil/outreach/request.htm>



### Receive FRAT at the MEIR Course

AFRRRI Medical Effects of Ionizing Radiation Course

<http://www.afrrri.usuhs.mil/outreach/meir/meir.htm>

## Find Other Resources

### Medical/operational guides at

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

Medical Management of  
Radiological Casualties Handbook  
Emergency Radiation Medicine  
Response, AFRRRI Pocket Guide

### Biodosimetry tools at

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

BAT, Biodosimetry Assessment Tool  
AFRRRI Adult/Pediatric Field Medical Record  
AFRRRI Biodosimetry Worksheet  
Radiocesium RDD Patient Initial Contact  
Worksheet

## Contact Project Manager

Mail: AFRRRI

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

Phone: 301-295-0484

Fax: 301-295-1863

E-mail: [BATProjectManager@afrrri.usuhs.mil](mailto:BATProjectManager@afrrri.usuhs.mil)

Cleared for public release; distribution unlimited  
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# First-responder Radiological Assessment Triage

Prototype Beta Version 0.85b for  
federal health-care providers  
responsible for the management of  
radiation casualties to rapidly identify  
exposed individuals



# CHALLENGES



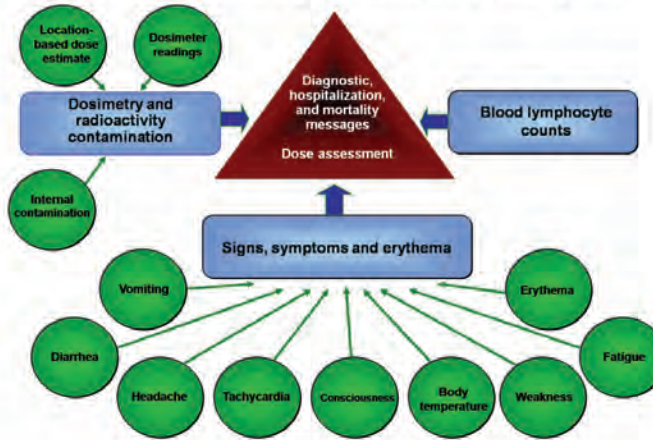
- Responders need to differentiate between the concerned public and exposed individuals for appropriate use of medical resources.
- Responders need to perform and record exposure assessments for each suspected exposed individual.
- No single assay is sufficient for all complex potential radiation exposure 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 health-care professionals.

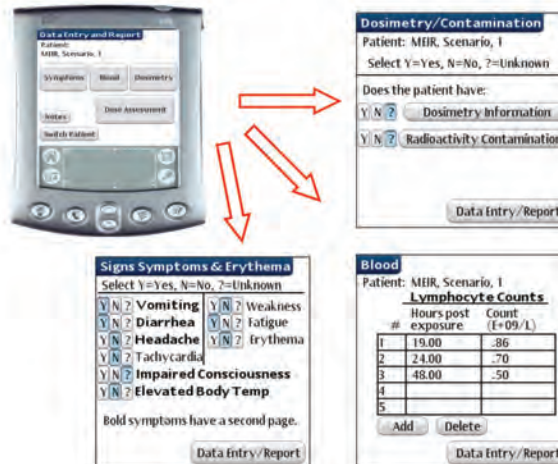
# SOLUTION

Software for integrated, multiparameter biodosimetry for dose estimation and triage

## First-responder Radiological Assessment Triage (FRAT)



- Real-time recording of diagnostic information
  - Prodromal signs and symptoms
  - Blood lymphocyte counts
  - Physical dosimetry
- Based on initial or prodromal features of AFRR's radiation pocket guide



# BENEFITS

- Handheld and portable
- Permits first responders to quickly triage suspected radiation casualties
- Convenient minimal text entry of prodromal symptoms, lymphocyte counts, and dosimetry
- Multiparameter triage dose prediction (expert consensus weighting factors)
- Additional output of triage dose-specific messages
- Expected hospitalization and mortality notification
- Contains digital copy of AFRR's Pocket Guide—Emergency Radiation Medicine Response



Triage Dose Assessment - 3		
Patient: MEIR, Scenario, 1		
<b>CATEGORY</b>	<b>Est. Dose (cGy)</b>	
Signs and Symptoms	160.0	
Dosimetry	370.0	
Blood Lymphocyte Counts	465.7	
<b>Pooled</b>	<b>388.9</b>	
95% Confidence	289.8 - 487.9	
POOR TO MODERATE Reliability		
Previous		Next