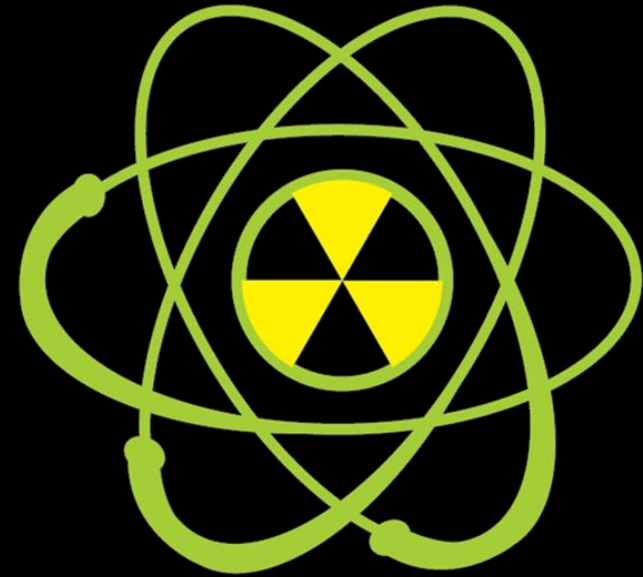


®



**RITN**

**RADIATION INJURY  
TREATMENT NETWORK**

-Fortuna Favet Paratis-

est. 2006

# **Radiation Injury Treatment Network® Overview**

Lindsey Gladish, RN, BSN, OCN

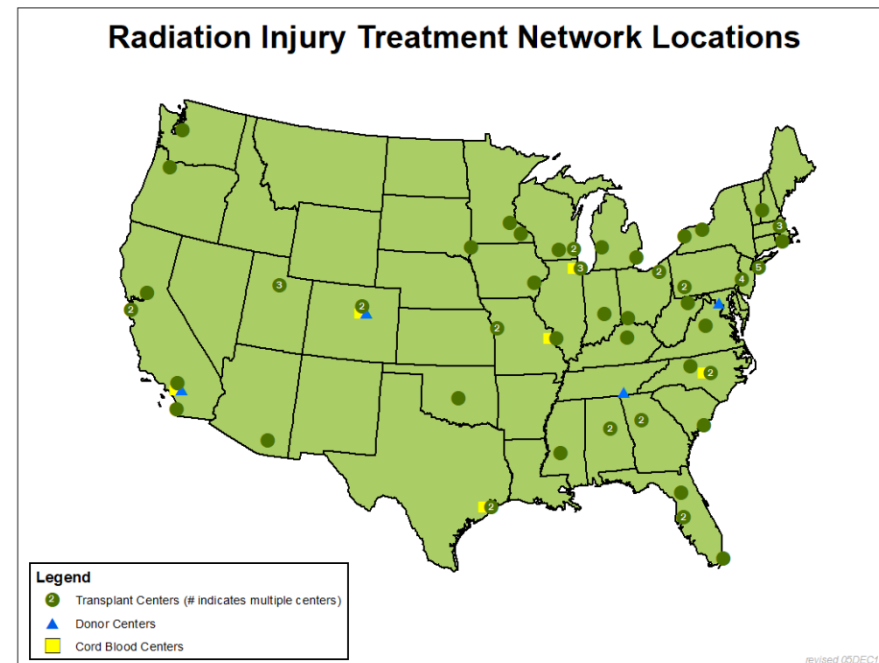
Londia Goff RN, BSN, OCN, BMTCN, CHTC

# Agenda

- History
- Concept of Operations
- Accomplishments
- Future Initiatives

# What is RITN?

- RITN is a collaborative effort, led by the NMDP-Be The Match and the ASBMT, of hospitals preparing for the medical surge resulting from a distant radiological incident
- RITN hospitals prepare to provide specialized care to patients with Acute Radiation Syndrome (ARS) following a mass casualty radiological incident
  - Hospitals near the incident will not be activated as part of the RITN
  - RITN expertise is for “radiation only” injuries, trauma patients should be sent to other NDMS hospitals



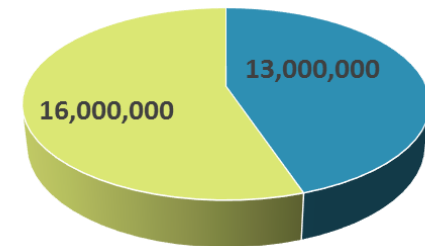
# Why the RITN Was Created?

- The gap of specialized care for ARS patients was identified by ASPR as well as the Office of Naval Research
- Following the leadership of the Office of Naval Research, the NMDP-Be The Match was developing capacity at Bone Marrow Treatment clinics in hospitals to prepare
- IN 2005 ASPR engaged the NMDP-Be The Match and American Society for Blood and Marrow Transplantation (includes industry leaders in transplantation) to collaborate on bridging the gap

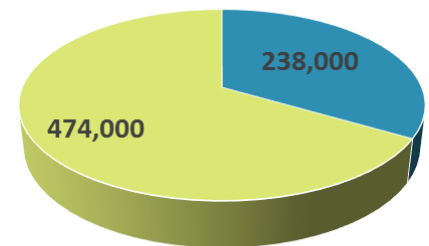
# NMDP Capabilities

- The NMDP-Be The Match lab network is able to conduct over 39,000 marrow typings per month
- Lab results are automatically sent to NMDP
- Facilitated over 100,000 transplants since 1987
- Access to 29 million volunteer marrow donors and over 700,000 stored cord blood units

Volunteer Marrow Donors



■ US (on NMDP Registry) ■ International  
Cord Blood Units



■ US (on Be The Match/NMDP Registry) ■ International

2016:  
YEAR  
AT A  
GLANCE



**6,200** patients  
received a marrow  
transplant,



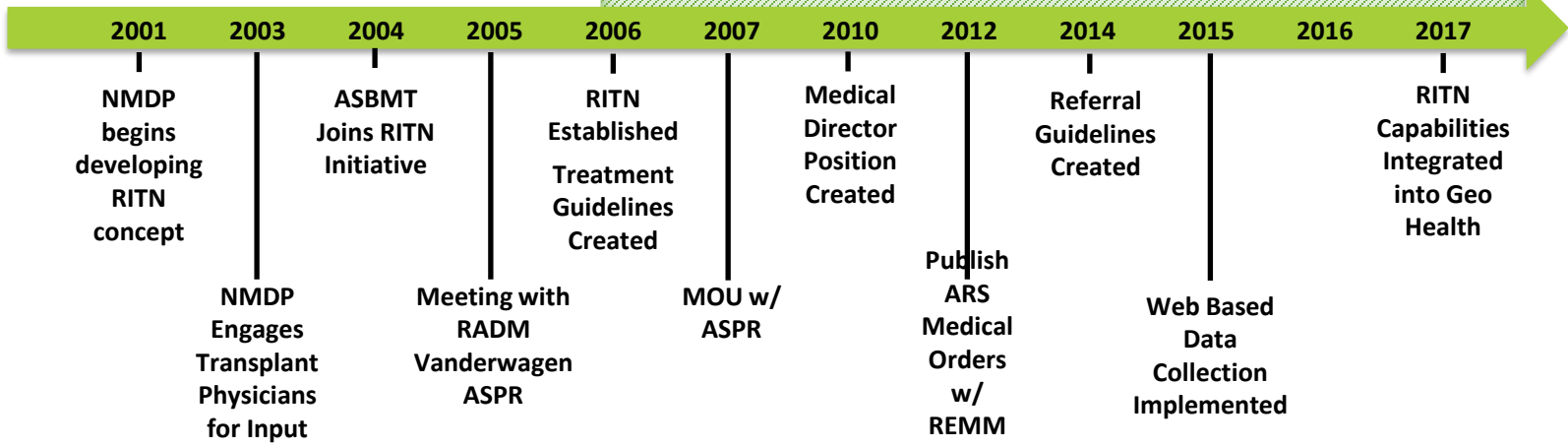
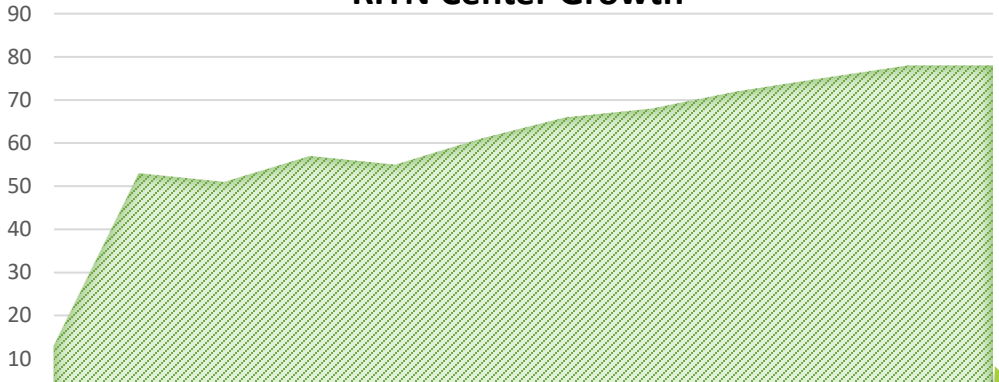
**80,000**  
since 1987

# RITN Timeline

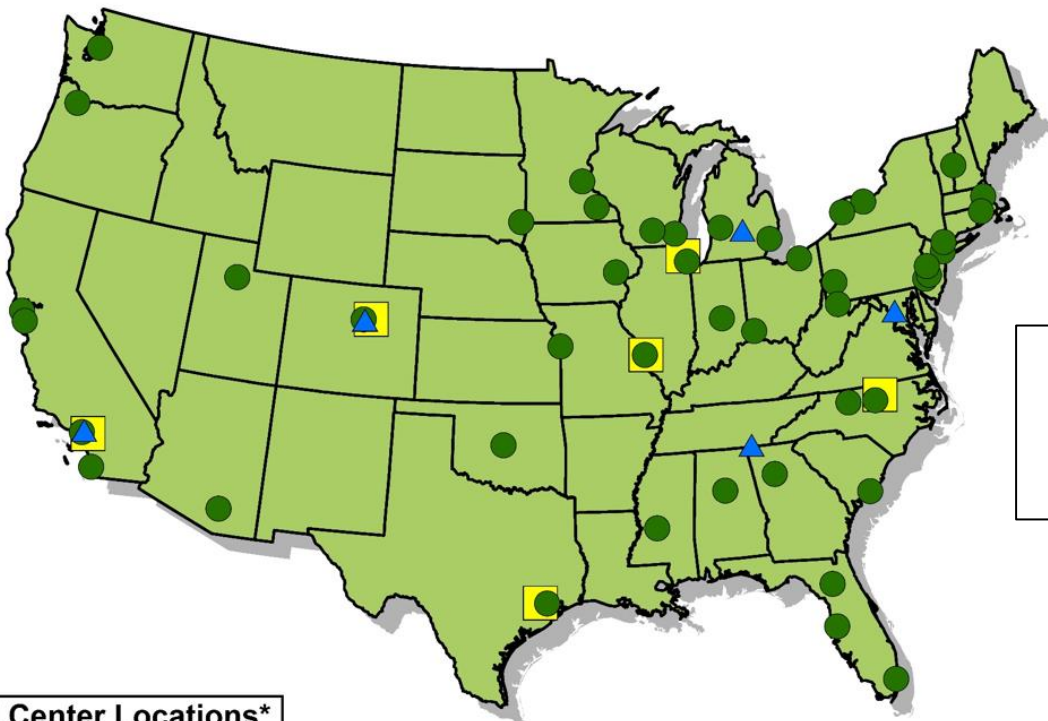
## Key NMDP Dates

- 1984 National Organ Transplant Act
- 1987 NMDP established & operates National Bone Marrow Registry
- 1990 ONR begins funding NMDP
- 1991 HRSA begins funding NMDP

## RITN Center Growth



# RITN Locations Map



**68 cancer centers/hospitals  
5 blood donor centers  
6 cord blood banks**

- RITN Center Locations\***
- ▲ Donor Centers
  - Transplant Centers
  - Cord Blood Centers

[www.RITN.net](http://www.RITN.net)



# Why Cancer Hospitals

- Acute Radiation Syndrome (ARS) mimics what BMT/hematology/oncology staff see daily while treating patients with blood cancers
- Bone marrow is the most sensitive organ in the body to ionizing radiation
- Bone marrow is the source of production of:
  - Red blood cells ----- for oxygen
  - White blood cells -- for immunity
  - Platelets ----- for clotting
- Failure to restore blood production following radiation injury would result in **death from marrow suppression**



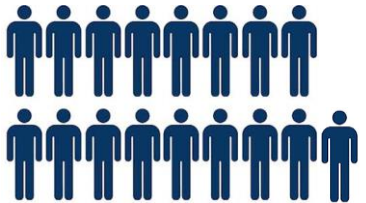
# Federal Plans Involving the RITN

- White House: Planning Guidance for Response to a Nuclear Detonation
- FEMA: Nuclear/Radiological Incident Annex
- ASPR: Radiological Dispersal Device Playbook
- ASPR: Rad/Nuke Annex to All Hazards Plan
- ASPR: State & Local Planners Playbook for Medical Response to a Nuclear Detonation
- ASPR: Medical Planning and Response Manual for a Nuclear Detonation Incident
- NLM: REMM-RITN Prototype for Adult & Pediatric Medical Orders During a Radiation Incident

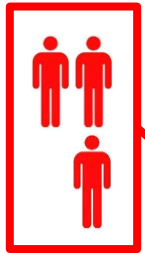


# RITN Patient Profile

## Total IND Casualties

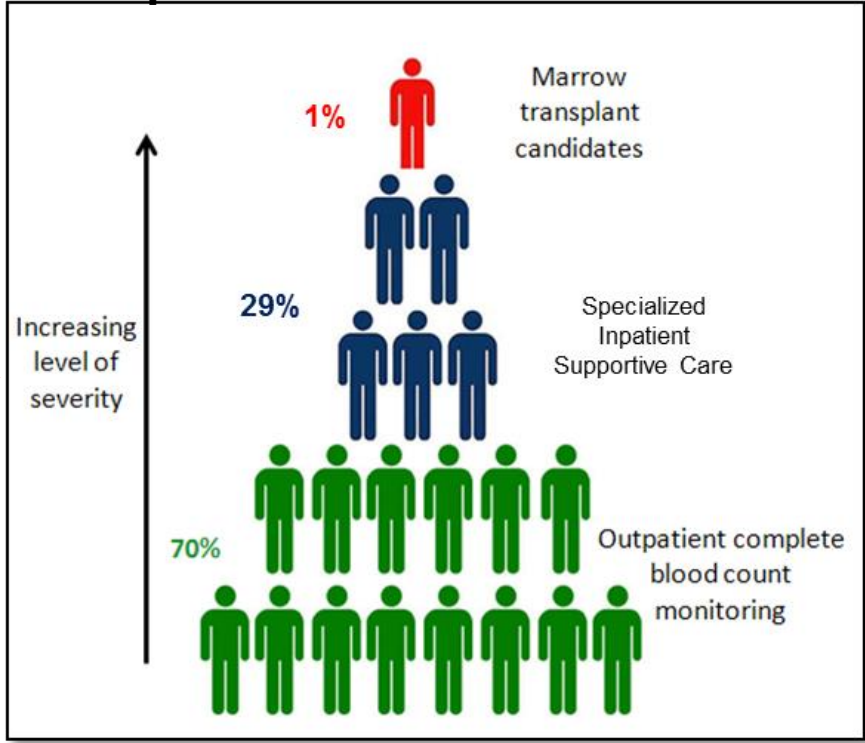


85% of casualties will have trauma or combined injuries and receive treatment elsewhere



15% will have "radiation only" injuries and be sent to RITN centers for definitive medical care

## Expected Patient Care Requirements for RITN Patients



Casualty Estimates adapted from: Knebel AR, Coleman CN, Cliffer KD; et al. Allocation of scarce resources after a nuclear detonation: setting the context. Disaster Med Public Health Prep. 2011;5 (Suppl 1):S20-S31

# RITN PREPAREDNESS EFFORTS

*Since  
2006*

**580 exercises**

\*\*\*All exercise materials available on RITN.net

**13,500+ medical staff trained**

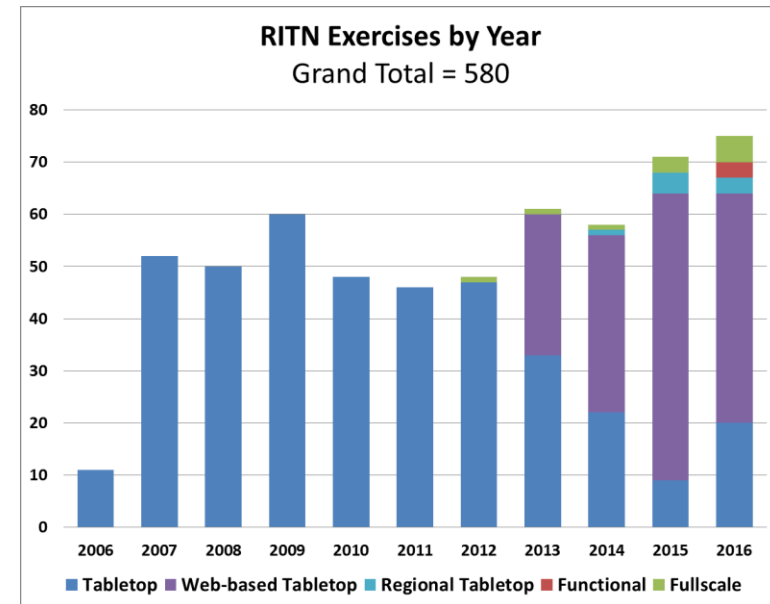
\*\*\*Free web-based courses available on RITN.net

**16,900+ doses of  
G-CSF in operational inventory**

\*\*\*Fluctuates throughout year, is sum of inventory at each RITN hospital

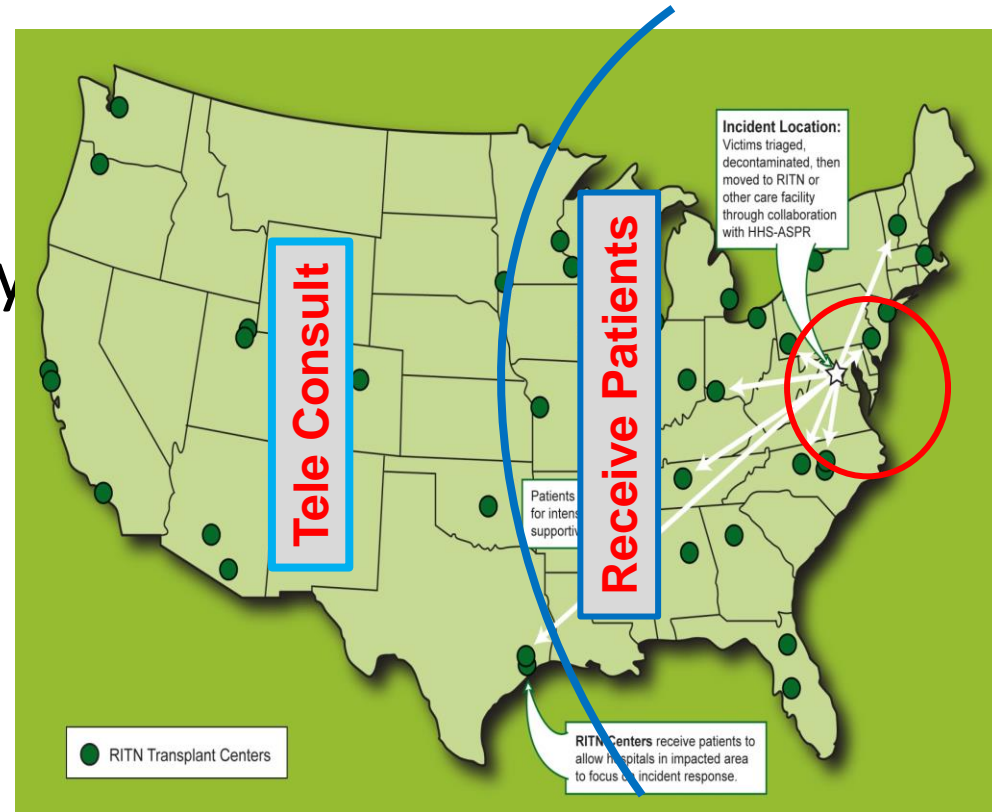
# Accomplishments

- Medical Guidance
  - ARS Treatment Guidelines
  - Referral Guidelines
  - Adult and Pediatric Medical Orders in collaboration with REMM
- Training
  - Mobile REAC/TS course
  - ARS Medical Grandrounds training
  - Web based training courses (basic radiation, ConOps, etc...)
  - Non-medical Radiation Awareness Course Adopted by NNSA for USAID staff
- Operations
  - Web based data collection
  - Integration of RITN capabilities into GEO Health



# Future Initiatives

- Grow RITN
- Triage guidelines for ARS
- Tele-consultation
- Expand on-hand inventory of Cytokines (G-CSF and GM-CSF) at RITN centers for a user managed inventory



# RITN Partners

## Partners



# Contact Info

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