Preparing for Irradiated Casualties after a Radiological/Nuclear Incident

WHAT IS THE RADIATION INJURY TREATMENT NETWORK (RITN)?
RITN is a voluntary consortium focused on preparing for and responding to a large incident that results in casualties with acute radiation syndrome. RITN was established through a collaboration between the National Marrow Donor Program and the American Society for Blood and Marrow Transplantation. RITN includes:

- 54 academic medical centers with expertise in managing patients with bone marrow toxicity, including hematopoietic stem cell transplantation
- 42 of these are National Disaster Medical System (NDMS) centers
- Six blood donor centers to facilitate blood collection & distribution
- Seven umbilical cord blood banks to distribute cord blood units

WHAT IS ACUTE RADIATION SYNDROME (ARS)?
Acute radiation syndrome results from exposure to significant amounts of Ionizing Radiation (>2 Gy) and includes:

- Hematologic toxicity – bone marrow suppression manifested as leucopenia, anemia and thrombocytopenia
- Gastrointestinal toxicity – mucositis, nausea, vomiting and diarrhea
- Cutaneous toxicity – partial and full-thickness burns
- Neurovascular toxicity – autonomic instability, cardiovascular collapse

Note: Exposure to some chemicals (e.g. mustard agent) can cause a similar syndrome

PREPARATION ACTIVITIES continued
- Development of admission and treatment guidelines
- All participating centers have an emergency operations plan
- Centers integrate with hospital and local emergency planners
- Centers conduct an annual disaster response tabletop exercise
- Education of health care professionals:
  a. Basic Radiation Training (over 3,300 trained since 2006)
  b. Medical Grand Rounds education (over 2,700 since 2007)
  c. Radiation Emergency Assistance Center and Training Site (REAC/TS) (over 180 since 2008)
- Emergency communications equipment distributed to all centers
  a. Government Emergency Telecommunications Service calling cards
  b. Satellite telephones

ADDITIONAL RESOURCES

WHAT CAN BE EXPECTED FROM RITN CENTERS?
- Accept patient transfers to their institutions from the disaster area through the established NDMS distribution processes
- Provide intensive supportive care for casualties with marrow toxic injuries
- Provide treatment expertise to practitioners caring for victims at other locations
- Collect data on casualties treated at their treatment facility
- Facilitate marrow transplantation for those casualties who require hematopoietic stem cell transplantation

ONGOING EFFORTS
- Strengthen relationship with NDMS to facilitate selective transfer of casualties with ARS
- Establish guidelines for management of pediatric ARS casualties
- Support planning of outpatient and inpatient capabilities at non-RITN centers
- Develop strong relationships with association with similar interests:
  a. American Hospital Association (AHA)
  b. National Assoc. of County & City Health Officials (NACCHO)
  c. American Burn Association (ABA)
  d. Assoc. of State and Territorial Health Officials (ASTHO)

National Marrow Donor Program, ATTN: Radiation Injury Treatment Network, 3001 Broadway St. N.E., Suite 100, Minneapolis, MN 55413 | www.RITN.net | RITN@nmndp.org | (612) 884-8276
This project is supported by funding from the National Marrow Donor Program and the Department of the Navy, Office of Naval Research Grant #N00014-01-0039 to the National Marrow Donor Program.