The Radiation Casualty Care Pathway

Adapted from the REACT/TS Treatment Algorithm
To be used with Chapter 35 of AMedP-7.1: NATO Management of CBRN Casualties Guidance

1. Tissue necrosis or local radiation injury?
   - Yes: Reassess cause for necrosis, and risk of bone marrow depression and ARS
   - No: Tissue necrosis or local radiation injury?

2. Estimated internal contamination burden require treatment?
   - Yes: Start decorporation therapy
   - No: Repeat process until contamination reduced to an acceptable level

3. Identify decontamination priorities
   - 1. Wound
   - 2. Body orifices
   - 3. Intact skin

4. Decontaminate
   - Repeat until contamination reduced to an acceptable level

5. Repeat survey
   - Yes: Other areas contaminated?
   - No: Other areas contaminated?

6. Internally contaminated?
   - Yes: Identify or confirm radionuclide(s)
   - No: Internally contaminated?

7. Assess and estimate any internal dose
   - Yes: Consider possible routes of exposure & excretion for assay
   - No: Internally contaminated?

8. Collect samples, and consider use of whole body counter, as appropriate

9. Repeat FBC (CBC) every 6 hours

10. Early estimated dose >3Gy?
    - Yes: Take cytogenetic samples at 24 hours
    - No: Early estimated dose >3Gy?

11. Consider stimulation (cytokine) therapy within first 24 hours

12. Baseline investigations include:
    - Full (complete) blood count (FBC (CBC)) with leucocyte differential
    - Serum amylase
    - C-reactive protein
    - Other serum biomarkers, where available
    - Continue screening for internal contamination including urinalysis & faeces

13. Prodrome symptoms or significant irradiation suspected (>2Gy)?
    - Yes: Primary surgery required?
    - No: Primary surgery required?

14. Internally contaminated?
   - Yes: Baseline investigations
   - No: Internally contaminated?

15. Unstable or requiring Damage Control Surgery?
    - Yes: Perform Damage Control Resuscitation & Surgery in a controlled area (including wound decontamination)
    - No: Unstable or requiring Damage Control Surgery?

16. T1 triage / Life or limb threatening injury?
    - Yes: Perform Emergency Medical Treatment
    - No: T1 triage / Life or limb threatening injury?

17. Document any prodromal symptoms and/or use of MedCM

18. Health Physics advice recommended

19. External contamination pathway

20. Internal contamination pathway

21. ARS assessment & therapy

22. Primary surgery

KEY

- Life / limb saving treatment
- External contamination pathway
- Internal contamination pathway
- ARS assessment & therapy
- Primary surgery

Radiation incident with or without trauma (combined injury)

Once stable, reassess radiation management priorities in accordance with this pathway