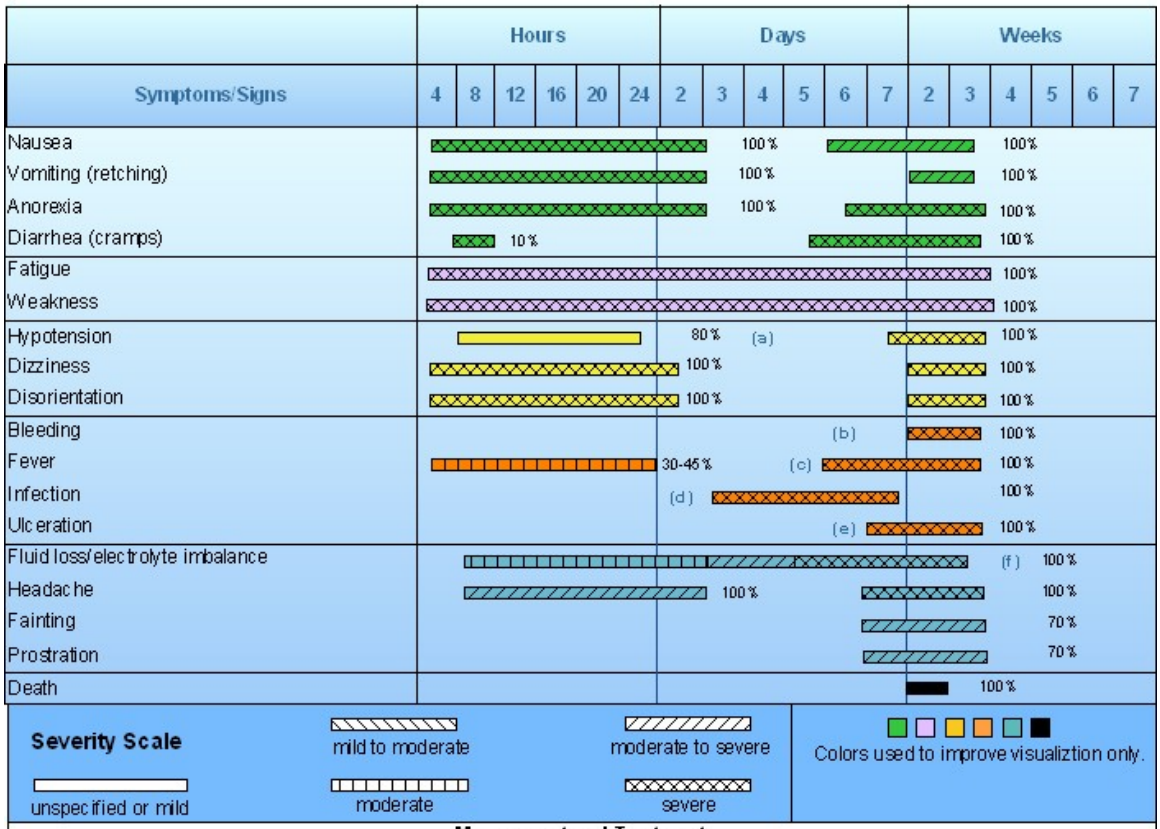
Time/Dose Effects in Acute Radiation Syndrome - Acute Clinical Effects of Single-Dose Exposure of Whole-Body Irradiation

Symptoms/Signs for Dose Range 11.0 to 15.0 Gy in Free Air



Management and Treatment

Performance:
- DT:PD from 1 to 5 hours; CI from 5 hours to 2 days; PD 2 to 6 days; CI from 6 days to death.
- UT:PD from 1.5 hours to 8 days; CI from 8 days to death.

Hospitalization Percentage/Duration
- 3 to 6 days medical care for 100%; 100% deaths at 1 to 4 weeks.
- Hospitalization as early as first day may be required depending on severity of symptoms.

Therapy
- Maintenance of electrolyte balance, in addition to treatment recommended at lower doses.

(a) Blood pressure drops 25%; temperature increases to 102 degree F.
(b) Platelet count drops to zero.
(c) Granulocyte count drops to zero.
(d) Lymphocyte count drops to zero.
(e) Epilation.
(f) Moderate to severe intestinal damage.

CI = Combat Ineffective (less than 25% performance)
PD = Performance Degraded (25-75% performance)
DT = Demanding Task
UT = Undemanding Task

Adapted from NATO Handbook on the Medical Aspects of NBC Defensive Operations AMedP-6(B), Chapter 6, General Medical Effects of Nuclear Weapons: Diagnosis, Treatment, and Prognosis, 1 February, 1996.