Assessments by International Organizations

WHO Reports (1/2): Outline of the WHO's Dose Assessment [Reference]

Purpose

- To identify areas requiring emergency measures in response to the accident at Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi NPS
- To estimate exposure doses for the first one year after the accident for that purpose
- To assess health risks of people in Japan and the whole world based on the estimated doses

Assessment method

- Set conservative conditions for dose estimation and assess exposure doses
- Estimate doses both from internal and external exposure
- Estimate exposure doses by age (one year old (infants), 10 years old (children), and 20 years old (adults)) and by area

Assessments by International Organizations

WHO Reports (2/2): Summary of Health Risk Assessment [Reference]

Assumptions for risk assessment

- Assuming that there is no threshold dose for radiation carcinogenesis, the linear model and the linear quadratic model were adopted for dose-response relationships for solid cancer and leukemia, respectively.
- Dose and dose-rate effectiveness factors (DDREF) were not applied.

Results

- People's exposure doses were below all thresholds of deterministic effects (tissue reactions).
- When using a method to avoid underestimation of risks, among people of either gender in a specific age group in the most affected area, the lifetime risk of developing some types of tumors is estimated to increase slightly. However, this merely shows a relative increase against the baseline (lifetime risk of naturally occurring tumors) and does not show an increase of the absolute risk of developing tumors.
- Risks of heritable effects due to radiation exposure are further smaller than the risks of generating cancer.
- The results suggest that increases in the incidence of diseases attributable to the additional radiation exposure are likely to remain below detectable levels.

Conclusion

- Values in this Report are for roughly ascertaining current risk levels and are not intended to predict future health effects.