

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).
- Even in the area where the highest exposure dose was estimated, no significant increase would be observed in risks of childhood thyroid cancer and other types of cancer or leukemia and increased incidence of these diseases exceeding natural variation is hardly expected.
- 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.

The WHO's health risk assessment was conducted for the purpose of examining the scopes of people to be subject to health management and diseases whose incidence should be monitored. This assessment was based on exposure doses estimated under considerably conservative assumptions in order to avoid underestimation. Accordingly, resulting values in this Report are for roughly ascertaining current risk levels and are not intended to predict future health effects.

[Relevant parts in the reports]

- WHO Report on preliminary dose estimation (Tables 3 and 4 on pages 44 to 47)
- WHO Report on health risk assessment (pages 8 and 92 to 93, and Table 43 on page 156)

Included in this reference material on March 31, 2015

Updated on March 31, 2021