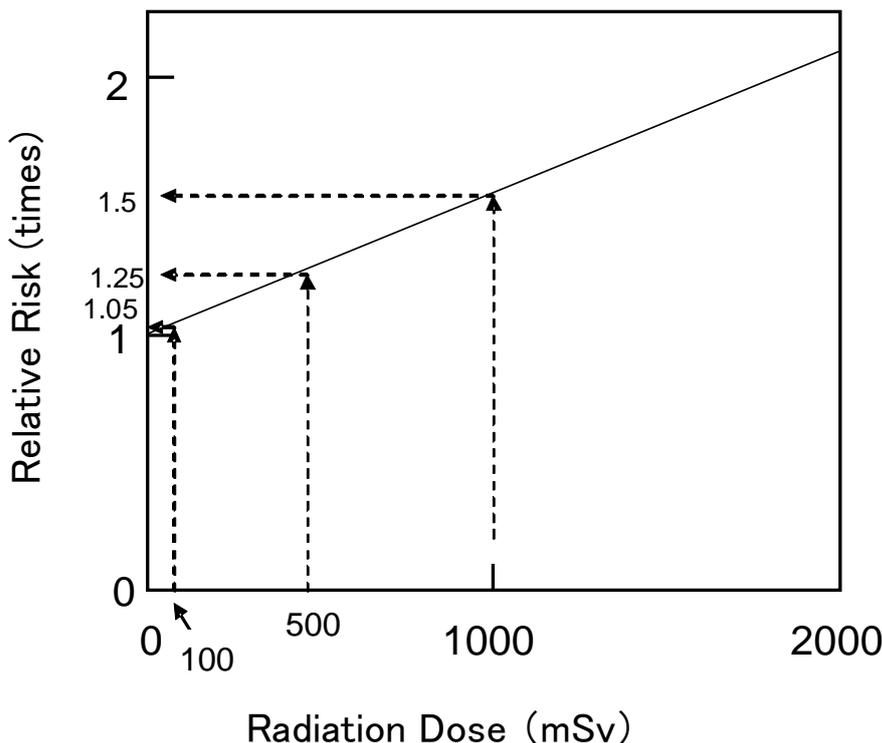


## Matters elucidated thus far by RERF studies

1. RERF has conducted epidemiological research of A-bomb survivors that revealed long-term health effects from radiation: radiation exposure of 1 sievert (1,000 millisieverts, mSv, or 1,000,000 microsieverts) at age 30 increases risk of dying from solid cancer (cancer as generally understood, excluding leukemia) at age 70 an average of about 1.5 times for both sexes. The risk increases in direct proportion to radiation dose above around 100 to 200 mSv. However, association remains unclear below that level. If we assume that cancer risk is proportional to radiation dose without “threshold” (the demarcation point above which there are effects and below which there are no effects), it is projected that exposure to 100 mSv and 10 mSv increases cancer risk by about 1.05 and 1.005 times, respectively. Lifetime risk of radiation-associated cancer mortality can also be estimated on the basis of such data. Exposure to about 100 mSv at age 30 is thought to increase lifetime risk of cancer mortality, which is 20% without radiation exposure, to about 21 % (increase of 1 percentage point) on average for both sexes. Please note the difference between A-bomb exposure and exposure to environmental contamination: A-bomb exposure was a single, acute exposure, while environmental contamination represents chronic exposure, the effects of which even from the same total dose are speculated by scientists to be smaller than those from acute exposure (1/2 or 1/1.5). Based on this theory, chronic exposure to a total dose of about 100 mSv would increase lifetime risk by 0.5 to 0.7 percentage point.



2. Among people exposed to high dose radiation (at least 1 sievert), increased frequency of non-cancer disease (cataract, benign thyroid tumor, heart disease, etc.) has been observed.
3. Our studies have not found thus far any inherited genetic effects from parental radiation exposure among the children of A-bomb survivors.