Dose Scale **Natural Background Radiation Artificial Radiation** Radiation exposure in living Environment Approx 0.33 mSv from land Approx 0.3 mSv from space Cancer radiotherapy (Dose only at thetreated region) 10 Gv Temporary hair loss Approx 0.48 mSv from Radon etc. Approx 0.99 mSv from food Cardiac catheter (Skin dose) Permanent 1000 mSV sterility It has been found that the risk of cancer death will gradually increase ens opacity Dose limit for nuclear and radiation workers with radiation dose. 100 mSv / 5 years Depression of Natural background radiation blood-forming process 100 mSv (Annual dose) Ramsar / Iran CT (Dose per examination) Kerala, Chennai / India 10 mSv Stomach X ray with Barium (Dose per examination) Natural background radiation per person Approx 2.1 mSv (Average annual dose in Japan) PET (Dose per examination) 1 mSV The annual dose limit of radiation for general public recommended by the ICRP (Not applicable to post-accident contamination, natural Tokyo-NY (Round trip) background radiation, medical exposure of patient) 0.1mSv (Increase in cosmic radiation due to high altitude Chest X ray (Dose per examination) Dental X ray (Dose per examination)

Illustrated by NIRS (April 2013) Reference:

- UNSCEAR 2008.
- ICRP 2007 Recommendations.
- The Guidelines for Medical Exposure by Japan Association of Radiological Technologists.

etc.

 Radiation in the living environment, new version. (Radiation Safety Research Association, 2011)

## [Note]

- 1. The numerical values are approximate figures based on significant digits.
- The scales shown by the dotted lines are a logarithmic display. Each step up on the scale represents ten times more than the previous step.
- 3. This chart is subject to revision without notice

## Units of dose

## Absorbed dose to each organ or tissue: Gy

The unit to show energy received per unit weight (J/kg) at each organ or tissue exposed to radiation.

## Effective dose: mSv

The dose of radiation to the entire human body considering sensitivity of each organ or tissue to cancer and hereditary effects. This unit of dose is used for radiation protection.

When the entire human body is evenly exposed to gamma rays at an absorbed dose of 1 Gy, the dose is equivalent to 1000 mSy as effective dose.



QST National Institutes for Quantum Science and Technology

National Institute of Radiological Sciences http://www.qst.go.jp

