

- The probability that Japanese people develop thyroid cancer during the lifetime without any influence of radiation exposure is*

- 0.78% for females and 0.23% for males.

(Kamo et al., (2008) Jpan.J. Clin Oncol 38(8) 571-576)

* The probability that Japanese people develop cancer at least once during the lifetime, which was obtained based on the data on the number of cancer patients in Japan from 1975 to 1999
(Kamo et al., Journal of Health and Welfare Statistics, Vol. 52, No. 6, June 2005)

- When the thyroid exposure dose is 1,000 mSv, the probability of developing thyroid cancer increases

- by 0.58% to 1.39% for females and by 0.18% to 0.34% for males.

(United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) 2006 Report, Annex A)

- The probability that a Japanese person exposed to 1,000 mSv in the thyroid develops thyroid cancer during the lifetime is as follows (adding the probability of cancer incidence caused by other factors):

- Females: $0.78 + (0.58 \text{ to } 1.39) = 1.36\% \text{ to } 2.17\%$

- Males: $0.23 + (0.18 \text{ to } 0.34) = 0.41\% \text{ to } 0.57\%$

(Kamo et al., (2008) Jpan. J. Clin Oncol 38(8), UNSCEAR 2006 Report, Annex A)

However, it is considered to be difficult to scientifically prove risk increases due to low-dose exposure of the thyroid, as effects of other factors are larger.

The probability that a Japanese person will develop thyroid cancer during their lifetime is 0.78% for females and 0.23% for males, which is the probability that they will develop thyroid cancer at least once during the lifetime, obtained based on the thyroid cancer incidence rate among the total cancer incidence data in Japan from 1975 to 1999. This is an index devised with the aim of explaining cancer risks to ordinary people in an easy-to-understand manner.

Exposure to 1,000 mSv in the thyroid increases the probability of developing thyroid cancer by 0.58% to 1.39% for females and by 0.18% to 0.34% for males, and after adding the probability of cancer incidence caused by other factors, the probability would increase by 1.36% to 2.17% for females and by 0.41% to 0.57% for males.

However, if the thyroid exposure dose is low, it is considered to be difficult to scientifically prove risk increases due to the radiation exposure, as effects of other factors are larger.

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