

It was not radiation that caused the deaths of over 600 people in the nuclear disaster

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In the final report by the government's [Investigation Committee on the Accident at the Fukushima Nuclear Power Stations of Tokyo Electric Power Company](#), there are some important yet less than eye-catching findings. The account of the incident involving the deaths of approximately 50 patients at Futaba Hospital (Okuma Town, Fukushima Prefecture) and its associated nursing facilities stretches over eight pages.

On the morning of March 12 of last year, immediately following the disaster, five large buses were dispatched to the hospital in Okuma in response to an evacuation order over a 10km radius, and 209 people were rescued. At this time 230 bedridden patients were left behind, but it was mistakenly believed that the evacuation of Okuma had been completed, and they were abandoned. It was not until two days later that the Ground Self-Defense Forces received word that there were still patients there and began rescue operations, resulting in the deaths of many patients due to lengthy transportation and insufficient facilities at evacuation shelters.

The report indicates the cause was "inadequate coordination between the town and the Self-Defense Forces," but that is not the only issue. Futaba Hospital is located 4km southwest of Fukushima Daiichi Nuclear Power Plant, but the wind was blowing to the northwest, meaning that there was no urgent necessity for evacuation. Damage from low doses of radiation only appears after long-term cumulative exposure, so at the very least, the risk of death by abandoning patients in need of nursing care is higher. As matter of fact, the nuclear power plant's evacuation plans did not address how to deal with the patients at the hospital.

According to [Yomiuri Shimbun](#), the number of deaths recognized as "disaster-related deaths" in the 12 cities, townships and villages covered by the planned evacuation area around the nuclear power plant is 657 as of April of this year, accounting for 86% of the total number overall for Fukushima Prefecture. Of this number, 342 were in the Futaba District surrounding the nuclear power plant; 88 more deaths than those caused by the earthquake and tsunami. Not even a single death resulted from exposure to radiation from the nuclear power plant, and **the secondary disaster caused by excessive evacuation has produced a far greater number of victims.**

This is a fact that was pointed out regarding the [Chernobyl nuclear disaster](#) as well. There were roughly 60 victims of radiation exposure among the workers involved in controlling the fire, but more than 200,000 people lost their homes and employment due to the evacuation order issued over a vast area by the Soviet Union, resulting in several thousand suicides. The Russian government summarized, "The lesson of the Chernobyl disaster was that we underestimated the importance of social and psychological factors."

However, the government has not learned from this lesson. There are 160,000 people still forced to live as refugees, but the government has given no estimate for when they will be able to return to their homes. The official view remains that they can return home "after radioactive contamination greater than one millisievert per year has been cleaned up," however, to clean up the entire disaster area will require trillions of yen and several decades.

The ICRP (International Commission on Radiological Protection) advises that radiation exposure be maintained at a level below one millisievert per year internationally, and Japan's standards are fixed based on this recommendation. However, this amount of exposure is lower than the worldwide average annual natural background radiation exposure of 2.4 millisieverts, and is strongly criticized as an excessive regulation. Oxford University Emeritus Professor [Wade Allison](#) has pointed out that the majority of lives lost were in the secondary disaster due to excessive evacuation caused by inappropriate regulations, and has called for a review of international radiation exposure standards.

While there is a non-zero risk of developing cancer due to exposure to low doses of radiation, it is as comparatively negligible as that of second-hand smoking. Exposure to 100 millisieverts of radiation in a single dose can increase the probability of developing cancer, but it is common knowledge in medicine that exposure to the same cumulative dose spread over a year has no effect on health. For a dose of tens of microsieverts per hour, it is better to stay indoors than to evacuate in a panic. The appearance of cancer due to radiation exposure occurs 25 years after the fact on average, so there is almost no risk for the elderly.

However, when experts in radiology offer this sort of counsel, anti-nuclear groups attack them as “government yes men misrepresenting the risks of nuclear power plants.” In order to adhere to their drama that “the danger of nuclear power is limitless,” they exaggerate the risk of radiation and ignore the risk of a secondary disaster. The government has also made no move to review the radiation dosage standards, fearing criticism of having “disregard for human life,” though the sanctity of the lives of those who die due to radiation and those who die due to excessive evacuation is the same.

The ICRP dosage standard assumes a state of “ordinary conditions,” and does not consider the cost of forcing a large number of people to live as refugees. Their recommendation carries no legal force, so to avoid further expansion of the secondary disaster, the government must review the nation’s radiation dosage standards, make progress in returning the refugees to their homes, and call for the ICRP to review their standard. This is the biggest lesson that Japan can convey to the world as the first advanced nation to experience a large-scale nuclear disaster.