The PANW's protest letter to the statements of Japan Nuclear Regulation Authority, Japan Atomic Energy Commission and Nuclear Emergency Response Headquarters

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Medical doctors and scholars who gathered in Tokyo, launched the medical professions' group, Physicians against Nuclear Weapons (PANW) in August 1987. Since then, PANW members have participated in activities against nuclear war and nuclear weapons, together with other NGOs. After the accident at the Fukushima Daiichi nuclear power plant in March 2011, recognizing that nuclear weapons and nuclear power plants share a common history and are based on the same technology, we decided to expand our activities to include the problems of nuclear power plants. As a medical professions' group, we have collected a large quantity of data on the health risks of radiation exposure and have summarized this data on our web site. During the last four months, the government of Japan and some governmental authorities have released statements on the Fukushima accident and accelerated the return of evacuees to the contaminated areas. The understanding of the health risks of low level radiation exposure mentioned in these statements is far removed from the understanding which has been obtained through some mega medical epidemiological studies on radiation exposure. We protest the recent statements from Japan Nuclear Regulation Authority, Japan Atomic Energy Commission and Nuclear Emergency Response Headquarters, and protest moves by the government to accelerate the return ofevacuees to the contaminated areas without sufficient participation of community members as stakeholders.

1 Problems of risk estimation for low level radiation exposure in the Fukushima accident

Approximately 150,000 people evacuated to non-radiation-contaminated areas after the accident at the Fukushima Daiichi nuclear power plant. On 20th November, 2013 Japan Nuclear Regulation Authority provided a statement of principals for the return of evacuees to their contaminated home towns (Statement A)[1]. Based on this statement, the Government of Japan decided to accelerate the return of evacuees. Japan Atomic Energy Commission and Nuclear Emergency Response Headquarters provided another statement on 20th December, 2013 (Statement B)[2]. In addition to these core statements, the Government and some governmental authorities have published

many documents and memorandums on the Fukushima accident. They have described the health risk of low level radiation exposure below 100 mSv as an uncertain health risk. But they have conducted very few discussions on the stochastic health effects of long term low level radiation exposure in these documents.

Some recent mega epidemiological studies have described the health effects of low level radiation exposure more clearly[3),4)]. The increase of cancer risk after CT scans is confirmed for medical radiation exposure of less than 100 mSv. Some epidemiological studies of atomic bombing survivors or industrial workers show causal links between long-term exposure to low doses of radiation and the increased incidence of cancer[5),6)]. The World Health Organization(WHO) report on the Fukushima accident estimated that radiation effective doses for the first year ranged from 12 to 25 mSv in the two most affected locations of Fukushima Prefecture. The report estimated a 4~7% additional lifetime risk for leukemia and some solid cancers in these areas[7)]. Furthermore, the report did not neglect the possibility of excess lifetime cancer risk among residents who had received radiation doses in the range of 3~5 mSv. Radiation doses of 3~5 mSv/year were estimated in Fukushima and some other prefectures after the accident. Japan Nuclear Regulation Authority, Japan Atomic Energy Commission and Nuclear Emergency Response Headquarters, however, did not mention all the conclusions and suggestions of these numerous medical reports in Statements A & B.

2 Problems with the return to contaminated areas without necessary protective measures

For radiation exposure after the Fukushima accident, the government of Japan relied on recommendations from the International Commissions on Radiological Protection (ICRP). Based on some general recommendations provided in 2007 and 2009, ICRP indicated a reference level radiation dose of above 20 mSv/year for evacuation and a reference level dose of 1 mSv/year to 20 mSv/year for people living in contaminated areas, with the long-term goal of reducing reference levels to 1 mSv/year[8)-10)]. ICRP confirmed that it is the role of authorities to implement all necessary protective measures for people who elect to live there rather than abandoning the contaminated areas, when the radiation source is under control[8), 10)].

To decide the reference level of radiation exposure to the public after the Fukushima accident, the authorities have estimated the level of radiation exposure, based on measurement of environmental radioactivity. But Statements A & B recommended measuring the real level of external radiation exposure for each person. For the purpose of justification and optimization for each industrial or medical worker, measuring personal external radiation exposure is necessary to prevent excessive occupational radiation exposures. For the general public, however, central and local governments and concerned authorities should first implement all necessary protective measures

to reduce the radiation exposure of the public. Without strong measures and support, a system based on personal measurement of one's own radiation exposure could easily result in responsibility being shifted to the individual for his or her personal radiation protection. Furthermore, the mental condition of people facing a higher level of radiation exposure may become worse if they have to take personal responsibility for their exposure. Especially for young people, their physical activity may be reduced if they have to personally measure and protect themselves from external radiation exposure.

3 Necessity of free total health management system in the contaminated areas - Urgent necessary actions before accelerating the return to contaminated areas -

The importance of a medical consultation system after the Fukushima accident was mentioned in Statement A. The main role of medical consultation was described as explaining that there was no or very limited health risk from low level radiation exposure after the Fukushima accident. The role and system of medical consultations were described more clearly in Statement B, as the provision of a public nurse to explain that there was very limited health risk from the Fukushima accident for the purpose of diminishing the radiation phobia among members of the community. The Fukushima Health Survey to detect thyroid cancer in the young generation will be promoted throughout this planning system, but other laboratory examinations and treatments will not be included in this planning.

Before the Fukushima accident, we had a serious radiation accident at the JCO nuclear fuel processing facility in Ibaraki Prefecture in 1999. Two nuclear plant workers died and approximately 700 people had excessive radiation exposures as a result of this accident. Free medical examinations supported financially by Ibaraki Prefecture have been conducted on the residents of all affected areas with levels of radiation exposure above 1 mSv/year[11),12)]. Free medical examinations included checking non-communicable diseases such as cancers and vascular diseases. Japan Nuclear Regulation Authority mentioned the post-JCO health check system as an example for constructing a health check system after the Fukushima accident in a document published in March 2013[12)]. However, thethe JCO accident was not mentioned in Statements A & B. In regard to the Fukushima accident, the special rapporteur of the United Nations Human Rights Council recommended total health management, including medical consultation and treatment for the residents of all areas with levels of radiation exposure higher than 1 mSv/year[13)].

The system of free medical examinations has been sustained in Ibaraki Prefecture since the JCO radiation accident, and for this health management system free and easy access is essential for the people living in the contaminated areas. However, the Victims Protection Law for the Fukushima accident did not determine the level of radiation exposure required for health management support

to be provided. Furthermore, except for ultrasonic examinations for thyroid diseases in the young generation, medical examinations to detect other non-communicable diseases were excluded from the support system of the Fukushima Prefecture Health survey.

The Nuclear Emergency Response Headquarters plans to allocate 900,000 yen for early return to the contaminated areas. When members of the community elect to live in these contaminated areas under conditions of low level radiation exposure rather than abandoning their home town, they cannot have a good quality of life without strong support for personal protection from radiation exposure and a free total health management system.

We, PANW members strongly protest the moves to accelerate the return of evacuees to the contaminated areas without sufficient supporting systems and provide recommendations as follows:

1 The Government of Japan and concerned authorities must summarize the results of recent mega epidemiological studies on the health effects of low level radiation exposure and provide them to people affected by the Fukushima accident.
- Some studies reported the health risks from low level radiation exposure, which is predicted in the contaminated areas where evacuees will return in the near future.
- Without understanding recent medical data on long-term exposure to low level radiation, members of the community cannot participate as stakeholders in the discussion about whether or not to elect to live in their contaminated home town.

2 For the control of occupational radiation exposure, measuring the level of external radiation is important and useful at a personal level. But personal measurement of radiation exposure is not acceptable as a means of controlling radiation exposure at a public level.
- The government and concerned authorities should implement all necessary protective measures for members of the community with the long-term goal of reducing reference levels to 1 mSv/year.
- Measuring radiation exposure at a personal level should be used for justification and optimization for each person, based on each person understanding the scientific data on low level radiation exposure.

3 Easy and free access to total health management is necessary for members of the community if they are to continue living in the contaminated areas.
- As the special rapporteur of the United Nations Human Rights Council recommended, total health management, including medical consultation and treatment, should be available for the residents of all affected areas with levels of radiation exposure

higher than 1 mSv/year.

- As with the support system provided by Ibaraki Prefecture after the JCO accident in 1999, health management should cover all radiation-related diseases, and 1 mSv/year should be established as the dose level for support under the Victims Protection Law for the Fukushima accident.

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