Overview of the Fukushima Nuclear Power Plant Accident and Early Response

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On behalf of the Japanese colleagues in the arena of radiation emergency medicine and dose evaluation, it is highly appreciated and a really turning point to have the WHO-REMPAN on-line web symposium in this special occasion of the ten years since the Great Eastern Japan Earthquake and the subsequent accident at the Fukushima Daiichi Nuclear Power Plant (NPP), but significant challenges still remain. All of the REMPAN members surely remember or recall, just 10 years ago in Nagasaki, three weeks before the unforeseen Fukushima NPP accident, the 13th WHO-REMPAN meeting was held and discussed deeply about the necessity of practical approach for radiation emergency medicine, including strengthening the internal communication within the network through the current WHO-REMPAN newsletters.

This overview recalls what really happened just after the Fukushima NPP accident and presents the lessons learned from the initial chaos and confusion of the Fukushima accident. The declining creditability of the Japanese governmental and official bodies may worsen the difficult situation of radiation fear and anxiety. The Fukushima NPP accident has also severely shattered public faith in the academic societies and international regulatory bodies. Therefore, it is important to regain public trust and narrow the gaps in knowledge between the experts and the public on the stochastic effects of low-dose radiation exposure, where a large uncertainty exist, and on public health emergency and wide radio-contamination areas from the nuclear disaster, which poses a real problem. Our experience and knowledge in Fukushima will assist both policymakers and the general public to understand the multi-dimensional issues stemming from the accident. These include evacuation planning, interaction with the residents, health and environmental monitoring, disaster recovery, compensation for damages, education system of radiation risk, nuclear safety, nuclear regulation, radiation protection, risk communication, psycho-social issues in the community and societal resilience. We should always bear in mind that more profound attention, when preparing for and responding a nuclear accident, should be paid and deliberation practiced to involve all stakeholders who can collaborate and cooperate in establishing comprehensive radiation health risk management.