Symposia
Studies on Radiation Effects and International Collaboration

S1–1 Dosimetry study of high radiation concerning exposed people near Semipalatinsk nuclear test cite, Chernobyl nuclear power plant and of atomic bomb survivors in Hiroshima and Nagasaki.

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Dosimetry study for exposed people has been studied among worldwide laboratories. These dosimetry and epidemiological study, for example, cancer induction is combined and results are used to estimate radiation risks for general people. The characteristics of the radiation at Semipalatinsk are different from Chernobyl, for example, radiation doses are large but contamination from radioactivity is low at Semipalatinsk. According to our brick sample measurements by using thermoluminescence dosimetry method verified that radiation level is an order of 1 Gy at Dolon. The subjects of the research are that (1) the measurements of Plutonium, Cesium and Uranium in soil samples and in born and organs of people and (2) The dosimetry study of external doses by using tooth enamel samples and brick samples. Recently we begun to examine thyroid gland and found that high incidence of nodule. At the same time chromosome aberration in lymphocyte have been examined. All of our study indicates high incidence in these area, therefore we must proceed in our study to find causes and mechanism of the abnormalities. In addition to these study I will introduce recent reevaluation efforts for atomic bomb doses in Hiroshima and Nagasaki and dosimetry in Chernobyl.

S1–2 International Cooperation of Chernobyl Thyroid Tissue Bank


Fifteen years after the Chernobyl accident, the accumulative data suggest the direct involvement and impact of radiation-fallout exposure on human health. First the new Chernobyl Sasakawa project will be introduced, which has been focused on the continuation of thyroid screening and epidemiological studies; cohort study and case-control study of childhood thyroid cancer in Belarus and in Russia, respectively. Furthermore, the comparative study has been completed in Gomel region, Belarus for the children who were born before and after the Chernobyl accident, in order to clarify the vulnerable population of thyroid diseases. Based on the clinical data on Chernobyl, we have started to cooperate with the international societies (EC, WHO and NCI) to establish Chernobyl Thyroid Tissue Bank (http://www.srl.cam.uk/nistb/). We have been also collaborating with WHO to establish a new health telematics project in Belarus (http://www.who.int/peh/Radiation/). International Chernobyl Thyroid Tissue Bank is now expected to contribute on gene diagnosis and therapy for the radiation-exposed victims through clarification of radiation-induced signature genes, radiation-sensitive and resistant genes on a basis of evaluation of accurate dosimmetrical data on individuals as well as different groups.