

資料 2-11

# 旧ソ連核実験場セミパラチンスク近郊の 被曝線量再構築と健康影響調査

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## Late effects of exposure to ionizing radiation — Studies of the resident population in the Semipalatinsk area —

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### FOREWARD

Approximately half a century has passed after the first atomic bomb was exploded at the Semipalatinsk nuclear test site in the former USSR. After this explosion, several hundreds other explosions of the atmospheric and underground types were made, including the most powerful and dangerous explosions of hydrogen bombs. Several hundred thousand people in the Kazakhstan Republic and Russian Federation were exposed to various doses of ionizing radiation. Three generations of the exposed are now available for epidemiological and clinical studies. Even now, thousands of exposed people are battling diseases caused by radiation.

Our knowledge of late effects of radiation exposure derive from different sources, including studies of A-bomb survivors in Hiroshima and Nagasaki, studies of the exposed in nuclear plant accidents (in particular, the disaster at the Chernobyl nuclear facility in 1986), studies of the radiation-exposed in nuclear tests made in various parts of the world (for example, investigation of Marshall islanders), studies of people who received iatrogenic exposure, including diagnostic radiological examinations and some kinds of radiological treatment, and finally, studies of nuclear power plant workers and miners. Numerous comprehensive reports have been published concerning the late effects of radiation on the human body, including an excellent book "Genbaku Hoshasen no Jintai Eikyou 1992" (Effects of A-bomb Radiation on the Human Body). However, any other additional sources of information on late effects of radiation exposure are of some interest. This report was made in order to fill in blanks in the information concerning of people exposed in the Semipalatinsk area in hundreds of nuclear tests. It may be of particular interest because of the peculiarities of the population under study. These peculiarities include cultural, social and diet differences, especially lack of vitamins and proteins in the diet of those exposed in the Semipalatinsk area.

The authors of this report well understand that some of their published data will seem very unusual to a reader acquainted with western scientific medical literature. Some of our investigations depart much from the usual epidemiological and clinical standarts. However, we hope that the reader will realise the limited capacity of scientists who have lived and worked for decades in the former USSR, a country cut off by the "iron curtain" from western scientific medical literature. We hope that our reader will be benevolent; for we have only the data that we have. We also hope that this report will be useful in increasing the realization of the harmful effects of radiation exposure on human health.