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Utilization by international organizations of results from A-bomb radiation effects studies in radiation health-risk assessment and protection-standards establishment

Conducted continuously over many years in Hiroshima and Nagasaki, research on health effects of atomic-bomb radiation in A-bomb survivors has contributed greatly to the assessment by international organizations of health risks from radiation exposure. The studies have played a central role in particular as a source of information regarding radiation health risks for the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR). Of all the research conducted worldwide that provides basic data for radiation protection standards, the A-bomb survivor studies are the most reliable, as they have continued over the longest timespan with the broadest scope and scale. UNSCEAR investigates in detail all data it obtains from around the world regarding exposure levels due to “source” (manmade and natural sources of radiation used for peaceful and military purposes) and “effects” (physical and genetic effects in humans, as well as environmental effects), scientifically compiling and assessing the results of such efforts and reporting its findings to the United Nations General Assembly. UNSCEAR also publishes detailed materials, issuing a total of 20 major reports as of May 2011. In its recent “UNSCEAR 2006 Report,” results from studies of radiation health effects in the A-bomb survivors played a prominent role in the sections “Epidemiological studies of radiation and cancer (Annex A),” “Epidemiological evaluation of cardiovascular disease and other non-cancer diseases following radiation exposure (Annex B),” and “Effects of ionizing radiation on the immune system (Annex D).”

UNSCEAR’s risk-assessment efforts have provided the scientific foundation for establishment of radiation protection standards for radiation workers and the general public at organizations such as the International Commission on Radiological Protection (ICRP) and the International Atomic Energy Agency (IAEA).

Additional information is expected to be forthcoming about risk assessments of people exposed at young ages among the A-bomb survivors from health-effects studies related to A-bomb radiation, leading to the expectation that the importance of such work will increase further.