

Does Exposure to Plutonium Affect Workers' Longevity?

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The United States Transuranium and Uranium Registries (USTUR) is a human tissue research program studying actinide elements deposited within the body in persons with known, documented exposures to those elements. Voluntary tissue donors allow access to their employment and occupational exposure histories, and medical records. That information, together with an autopsy report, and the results of radiochemical analyses of the radionuclide content of major body organs, enables USTUR to compile and maintain a unique and comprehensive collection of scientific data tracing the human experience of accidental exposures to plutonium, americium and uranium over the history of U.S. nuclear materials production. During the past fourteen years, the death rates for USTUR registrants have been significantly lower than expected from U.S. general life table data. Over this period, registrant longevity has exceeded "life table" expectation by an average of 10.4 y. Is exposure to plutonium incidental to this observation? A retrospective cohort study has been designed to compare the longevity of USTUR's plutonium-exposed Registrants with that of matched "non-plutonium exposed" nuclear workers drawn from DOE's Comprehensive Epidemiologic Data Resource (CEDR) database. This paper presents preliminary results.

USTUR-0228-07