

Cohort profile of the Japanese epidemiological study on low-dose radiation effects (J-EPISODE)

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ABSTRACT

The Institute of Radiation Epidemiology of the Radiation Effects Association has examined radiation epidemiological study among Japanese nuclear workers since 1990. A new study was designed with a background of that incidence data were needed in addition to mortality data and so on. The new study has been conducted during 2015 to 2019 to obtain new informed consent and information of confounding factors by lifestyle questionnaire survey. For those expressed agreement to informed consent were requested to answer the lifestyle questionnaire simultaneously. The questionnaire was the self-administered and included questions about lifestyle such as smoking and occupation, etc. The documents were distributed in two ways. The first was distributing by mail to those included in the previous cohort whose their name, addresses and dose records were identified. The second was distributing to those currently working through the organization of nuclear facilities such as nuclear power plants, research institute, and fuel processing companies. The worker who replied in the second way, data linkage with database which is maintained by Radiation Dose Registration Center by using their name, date of birth and address have performed to link their dose records. Based on these surveys, a new cohort which was comprised by 77,993 male workers was established. The mean cumulative dose was 15.4 mSv and the mean age was 59.4 years at the end of March, 2019. The workers who had exposed less than 5 mSv or who were over 60 years old occupied half and over. Duration of work, type of employer, job category, years of education, smoking status and body mass index showed correlation with cumulative dose. Alcohol consumption did not show the correlation. These results suggest that the estimated excess relative risks per sievert will reduce by adjustment for them as same with the previous analysis¹⁾. The characteristics of new cohort denoted that adjustment for lifestyle or socioeconomic status should be needed in future analysis.

Keywords: Epidemiology, Cohort study, Nuclear worker

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Reference

- 1) S. Kudo, J. Ishida, K. Yoshimoto, S. Mizuno, S. Ohshima, H. Furuta and F. Kasagi; Direct adjustment for confounding by smoking reduces radiation-related cancer risk estimates of mortality among male nuclear workers in Japan, 1999-2010., J. Radiol. Prot., 38, 357-371 (2018).