

Talk 9.3

Low dose rate radiation exposure effects among medical workers from the knowledge of epidemiologic studies

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In medicine ionizing radiation is used for therapeutic and diagnostic purposes, it inevitably leads to inadvertent exposure of medical workers to a certain level, especially in the earlier years when equipment was less sophisticated and radiation protection was not stringent so the dose received by the medical staff has been greater.

Many people are or have been exposed to ionizing radiation in the course of their work, and epidemiological studies of occupationally exposed populations provide an important opportunity to supplement estimates of the health risks of radiation exposure. In addition, radiation exposure in the workplace often involves exposure conditions directly related to the main problem of radiation protection: prolonged exposure to low-level of radiation. Medical workers who are occupationally exposed to low levels of radiation also provide an opportunity to investigate possible physical health consequences other than cancer, which are currently the subject of much discussion [1].

Epidemiological studies of populations occupationally exposed to ionizing radiation provide important information on radiation-related health risks [2]. The studies that were made on medical workers cover exposure circumstances of the importance for radiation protection, and we should continue to review the risk estimated on which ICRP the International Commission on Radiological Protection are based [3]. In this paper we will provide an overview of recent epidemiological results and ongoing research in the era of non-cancer diseases related to ionizing radiation exposure.

References

- [1] Berrington, A., Darby, S.C., Weiss, H.A, Doll, R., Br J Radiol. 2001;507-19.
- [2] Yoshinaga, S., Mabuchi, K., Sigurdson, A. J., Doody, M.M., Ron, E., Radiology. 2004, 313-21.
- [3] International Commission on Radiological Protection. ICRP publication 103. Ann ICRP. 2007, 1-332.