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## Chromosomal Aberrations in Radiation Waste Repository Workers Detected by Fish Painting and Giemsa Staining

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**Abstract:** We aimed to assess chromosomal aberration frequency by means of FISH chromosome painting and conventional Giemsa staining in peripheral blood lymphocytes of workers at a nuclear waste repository. The results obtained from the exposed group were compared with those from a control group from the administrative staff of the company. Data on health and social status were collected using a questionnaire. Conventional chromosomal analysis after Giemsa staining did not indicate any significant difference between radiation exposed and control workers. Analysis after FISH chromosome painting revealed a 2-fold increased in genomic frequency of stable chromosomal translocations in the exposed group over the control group. The difference is of marginal statistical significance.

**Key Words:** Occupational radiation exposure, Human lymphocytes, Chromosomal aberrations, Fluorescent in situ hybridization

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