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## **Cancer in fifty-four nuclear workers: Preliminary findings**

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We constructed job-exposure profiles and assessed quality of health care in 54 current and ex-workers from a nuclear installation in the Negev who referred themselves to us for assessment of the possible work-relatedness of their tumors. The workers, mostly male, (av age: 49.3; range 39-69) began employment at varying times from onset of the reactor's construction, and were engaged in varying tasks in laboratory research, construction, maintenance and services. It was possible to provide a partial picture of past exposures to radiation and chemical agents from interviews, chart reviews, Geiger and dosimeter records and radionuclide examinations. Most of the workers reported up to three job settings during their employment, and described a trend toward progress in exposure control, personal protection, information delivery and medical surveillance, especially in the mid-80's, although there appeared to be less than full understanding of the risks for cancer from low exposures to radiation and the zero-threshold principle. In 26 of the 54 workers, latency between onset of exposure and first appearance of illness from tumor was 24.6 y (r 9-31). In the 54 workers, the tumor distribution was: gastrointestinal, 14; pulmonary, 10 (5 known smokers); brain, 3; bone, 2; skin, 3; renal-urogenital, 7; hematolymphatic, 5; breast, 2 (one male); unspecified, 8. Many of the patients first became clinically ill after 1989, the last year of follow-up for tumor risk of a previously reported study. Interviews and clinical records indicated that patients found by their own doctors to have gross hematuria and diagnosed as having urogenital cancer shortly after being told that their urine assays were negative for microscopic hematuria. The findings suggest the need for external quality control of the internal surveillance of nuclear workers and improvements in information delivery.