

Information Sheet, National Cancer Institute Study of Ft. Calhoun Area

A National Cancer Institute (NCI) survey published in the Journal of the American Medical Association, March 20, 1991, showed no general increased risk of death from cancer for people living in 107 U.S. counties containing or closely adjacent to 62 nuclear facilities. The facilities in the survey had all begun operation before 1982. The NCI survey showed that, in comparison with the control counties, some of the study counties had higher rates of certain cancers and some had lower rates, either before or after the facilities came into service. None of the differences that were observed could be linked with the presence of nuclear facilities.

The Fort Calhoun nuclear power station, a single unit 478 MW pressurized-water reactor, began operations in 1973. The utility is located in Washington County, Nebraska, on the Missouri River directly across from Harrison County, Iowa. Approximately 9,300 people reside within five miles of the Fort Calhoun nuclear power station based on 2010 census data. Harrison County is included in the area covered by the Iowa tumor registry, part of the National Cancer Institute's Surveillance, Epidemiology and End Results (SEER) program, so that cancer incidence data was available in addition to data concerning cancer mortality, but only for Harrison County. Therefore, the mortality data, which pertain to both counties, are not directly comparable to the incidence data.

Mortality Data

The number of cancer-related deaths in Washington and Harrison counties after the startup of the facility (from 1973-1984) was not large. There was not a single relative risk (RR) comparing the study and control counties after startup that was significantly high in any age group or for any kind of cancer. There were only two deaths attributed to leukemia in children below age 10, and none in those age 10-19. For all ages, combined there were only 36 deaths from leukemia and 618 from other malignant cancers. For no form of cancer, for any age group, was the relative risk of cancer significantly large or small.

Cancer Incidence Data

After startup, there were four cases of leukemia registered in children below age 10 in Harrison County, Iowa, and only one in the control area. For children ages 10 to 19, there were no cases of leukemia in Harrison County and three cases in the control area. NCI concluded there was no increase in the occurrence of leukemia in children living in Harrison County. Before startup (1973) registration data was sparse; there was but a single case of leukemia registered in Harrison County. For all cancer except leukemia in children under 10, the relative risk of cancer incidence comparing the Harrison and control counties was low (0.75) but this, too, was not significant.

There were no significant differences between Harrison County and its control counties for any other form of cancer. No relative risks comparing Harrison County and control counties after startup significantly exceed unity and only one was significantly low; for bladder cancer at ages 40-59, where no cases were registered, while there were 18 in the control counties. For all ages together, the RRs comparing the Harrison County and control counties after startup were 0.80 for leukemia and 0.95 for all other cancers.

Enclosure

National Academies Review of Cancer near Commercial Nuclear Power Plants

The Nuclear Regulatory Commission requested the National Academies to conduct a pilot study to review cancer incidence and cancer mortality near several commercial nuclear power stations in the United States to reaffirm the findings of the 1991 National Cancer Institute study. The NRC also is interested in having National Academies evaluate cancer diagnosis rates, as well as exploring how to divide the study areas around the facilities into geographical units smaller than the counties used in the NCI report. A review of the cancer rates in the vicinity of the Fort Calhoun or Cooper nuclear stations is not being considered as part of this pilot study.