

1. Arch Environ Health. 1996 Jul-Aug;51(4):266-74.

Adult leukemia and proximity-based surrogates for exposure to Pilgrim plant's nuclear emissions.

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Possible associations between adult leukemia incidence and proximity-based surrogate measures of potential for exposure to radioactive emissions from the Pilgrim nuclear power plant in Plymouth, Massachusetts, were investigated.

Included in this study were 105 nonchronic lymphocytic leukemia cases, diagnosed between 1978 and 1986 at age 13 y or older, that occurred in 22 towns near Pilgrim; population controls numbered 208. Residence within 4 mi (6.4 km) of Pilgrim during "high-emissions" years was related to case-control status (adjusted odds ratio [OR] = 3.88, 95% confidence interval [95% CI] = 0.81-10.64).

A high "exposure" score (i.e., a value that accounted for downwind time) was also related to case-control status (OR = 3.46, 95% CI = 1.50-7.96). Some statistically significant dose-response trends were found. Cautious interpretation of associations is warranted in light of the low levels of reported emissions.

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