In 1999, the U.S. National Institute of Environmental Health Sciences (NIEHS) found the strongest associations between EMFs and negative health were for two forms of leukemia: childhood leukemia and white blood cell leukemia in adults exposed to EMFs on the job. They also reported that epidemiological (population health and illness) studies demonstrate a consistent pattern of increased risk with increasing EMF exposure for both childhood leukemia and white blood cell leukemia.

Greenland et al. (2000) pooled the results of 12 studies and found the risk of leukemia in children exposed to EMF levels similar to those near high voltage power lines to be anywhere from 1.4 to 4.4 times greater than in children exposed to normal levels. Ahlbom et al. (2000) pooled results of 9 studies, and obtained similar results.

The World Health Organization International Agency for Research on Cancer (2001) classified EMFs as “possibly carcinogenic to humans” based on a consistent statistical association between EMFs and a doubling of risk of childhood leukemia (as reported by the Electric and Magnetic Fields Research and Public Information Dissemination Program [EMFRAPID] 2002).

Many other U.S. reports have concluded that some studies provide evidence for an association between EMF exposure and increased risk of leukemia (e.g., EMFRAPID 2002; U.S. National Academy of Sciences 1997; American Cancer Society 1996).

A broad-ranging 1993 study in Sweden reported a link between the increased risk of white blood cell leukemia and EMFs. More than 1,600 people in 169 different occupations and in over 1,000 different workplaces were assessed (EMFRAPID 2002).

An association exists between childhood leukemia and distance of home at birth from high voltage power lines, and the risk extends up to 600m, a greater distance than would have been expected from previous studies. This risk could be causing about 1% of childhood leukemia in England and Wales (Draper et al. 2005).