

No association seen between exposure to extremely low frequency magnetic fields and risk of relapse or overall survival in children with acute lymphoblastic leukaemia

In a collaborative study led by [IARC's Section of Environment and Radiation](#) and the [Danish Cancer Society Research Center](#), published online in [Blood Cancer Journal](#) today, researchers investigated whether exposure to extremely low frequency (ELF) magnetic fields (50/60 Hz), as occurs for instance in the vicinity of high-voltage power lines, increases the risk of relapse in children with acute lymphoblastic leukaemia (ALL) or has an impact on their survival probability.

The study population was derived from studies from Canada, Denmark, Germany, New Zealand, Sweden, the UK, and two from the USA, including a total of more than 3000 children with ALL.

No association was seen between exposure to ELF magnetic fields and risk of relapse or overall survival; the hazard ratios by 0.1 μT increases were 1.00 for event-free survival analysis and 1.04 for overall survival, and the hazard ratios for both types of survival analyses were <1.00 for exposures $>0.3 \mu\text{T}$.

In conclusion, no impact of exposure to ELF magnetic fields was seen on the survival probability or risk of relapse in children with ALL.

Work is also under way to gauge whether some of the risk factors that are established in the causation of leukaemia also show a relationship with survival.

J Schüz, K Grell, S Kinsey, MS Linet, MP Link, G Mezei, BH Pollock, E Roman, et al. Extremely low-frequency magnetic fields and survival from childhood acute lymphoblastic leukemia: an international Q1 follow-up study. *Blood Cancer Journal* (2012) 2, e98; doi:10.1038/bcj.2012.43; published online 21 December 2012