



**PRESS RELEASE v2 – Embargoed until Friday 7<sup>th</sup> February 2014 00:01 hours**

## Powerlines and risk of childhood leukaemia British Journal Cancer PR spin is misleading

In an embargoed Press release (to Fri.7<sup>th</sup> Feb 00:01 hrs) the BJC have a headline claiming “OVERHEAD POWERLINES DON’T RAISE LEUKAEMIA RISK IN CHILDREN”.

Their important new paper by Bunch, et al<sup>1</sup>, does **not** show this. The authors have analysed a great deal of data for all high-voltage powerlines of 132,000 volts (132 kV) and above. The main association of electrical power and incidence of child leukaemia (CL) has been the magnetic fields (EMFs) from all sources that are associated with our use of electricity. A recent large meta-analysis by Zhao, et al,<sup>2</sup> has confirmed an approximate doubling at 0.4 microteslas, as does the new EC SCENIHR draft report<sup>3</sup>.

An earlier paper by the same research centre (CCRG) by Draper, et al<sup>4</sup>, showed an association of childhood leukaemia CL with proximity to 275 kV and 400 kV lines. The CCRG later reported that the EMFs had fallen off within 100 metres from the powerlines to levels below those produced by other electrical causes (including underground cables running under our pavements and house wiring)<sup>5</sup>.

In this new study the CCRG researchers added more cases and a large number of lower-powered 132 kV powerlines (which often pass over or very close to homes), when according to Dr John Swanson (a senior National Grid employee and co-author of this new study) EMFs typically fall off to “background levels from other sources” (less than 0.05 microteslas) within 50 metres of the powerline.

As there is little evidence that the risk of childhood leukaemia is increased at magnetic field (EMF) levels below 0.2 microteslas, it is vital to analyse cases and controls living within 0-49 metres in order to test whether proximity to overhead HV powerlines increase the risk<sup>6</sup>. The first analysis band in the published paper is 0-199 metres and is of little use to determine if living close to an overhead high voltage powerline can increase the risk of childhood leukaemia, as well over 75% of the children will be exposed to higher EMFs from other sources which will greatly reduce any effect of magnetic fields from the powerlines.

Another recent important study on powerlines and childhood leukaemia by a team at INSERM published in the BJC last year (and not Press Released with a positive association message) found an increased risk within 50 metres of a high-voltage overhead line, but not further away<sup>7</sup>. This is cited and briefly mentioned in the new paper, but the very important implications of the 50 metre distance limit finding are not discussed.

The New BJC paper is an important contribution to the “high-voltage powerline and increased incidence of childhood leukaemia debate” and we will be issuing a news story with an analysis about what their interesting results might indicate.

**However, the BJC Press Release headline and the dismissive comments by the lead author and by Cancer Research UK’s head of health information that claim the study indicates that overhead powerlines don’t cause leukaemia or other cancers in children are misleading. The supplementary data tables (not in the actual paper) do show a relative risk of about 1.5-fold up to 199 metres over 4 decades 1962 – 2000 for 132 kV powerlines – the type generally close to residential housing.**

Most of the cases analysed will be living in higher EMFs produced by other sources, which will reduce the apparent effect of the fields from the powerlines

Alasdair Philips (Director of Powerwatch, [www.powerwatch.org.uk](http://www.powerwatch.org.uk)) is available on 01353 778422 for professional media reporters on Thursday 6<sup>th</sup> and Friday 7<sup>th</sup> February for comments/interviews.

1. Bunch, K.J. et al Residential distance at birth from overhead high-voltage powerlines: childhood cancer risk in Britain 1962-2008 British Journal of Cancer (2014)
2. Zhao et al. 2013: Magnetic fields exposure and childhood leukemia risk: A meta-analysis based on 11,699 cases and 13,194 controls. Leukemia Research (In press)
3. [http://ec.europa.eu/health/scientific\\_committees/consultations/public\\_consultations/scenihir\\_consultation\\_19\\_en.htm](http://ec.europa.eu/health/scientific_committees/consultations/public_consultations/scenihir_consultation_19_en.htm)
4. Draper G, Vincent T, Kroll ME, Swanson J (2005) Childhood cancer in relation to distance from high voltage power lines in England and Wales: a case-control study. BMJ 330(7503): 1290–1294.
5. Kroll ME, Swanson J, Vincent TJ, Draper GJ (2010) Childhood cancer and magnetic fields from high-voltage power lines in England and Wales: a case-control study. Br J Cancer 103(7): 1122–1127.
6. Philips A View author details et al, (2013) Adult cancers near high-voltage power lines - commentary, Epidemiology 2013 Sep;24(5):782-3
7. Sermage-Faure C, et al, 2013, Childhood leukaemia close to high-voltage power lines - the Geocap study, 2002-2007. Br J Cancer 108(9): 1899–1906

Version 2, 16:35, 6<sup>th</sup> February 2014. Revised after seeing the supplementary data tables (not in the paper).