

very similar (OR = 1.9 (0.9–4.0) at <50 m from a VHV-HVOL); 'In that age group, living within 50 m of the closest VHV-HVOL was significantly associated with AL (OR = 2.6 (1.0–7.0)); and 'Sensitivity analyses restricted to the best geocoded subjects (uncertainty ≤ 20 m) generated slightly stronger results (OR = 2.1 (0.9–4.7) for living within 50 m of a VHV-HVOL'. Inasmuch as all these confidence intervals intersect the 1.0 null value, they must not be interpreted as significant ones. Therefore, the conclusion that 'living <50 m from a 225 or 400 kV HVOL may be associated with an increased incidence of childhood AL' is biased by this statistical concern. This situation contains a strong potential to generate confusion, distorts the knowledge, and hampers the understanding of the acute leukaemia aetiology.

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Reply: Comment on 'Childhood leukaemia close to high-voltage power lines – the Geocap study, 2002–2007' – Odds ratio and confidence interval

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Sir,

Magaña Torres and Gonzalez Garcia (2013) expressed their concern about what they call 'a strong potential (of our conclusions) to generate confusion'. However, we provided the reader all the keys to understand our results and make proper statistical inferences. We reported the details of our analyses, the estimates and their 95% confidence intervals (CIs), the results of the sensitivity analyses, and our own conclusions were factual. The question we formulated was one-sided ('Is there an increase in childhood AL risk close to HVOL?'), and we let the readers decide whether two-sided tests should be the most relevant for statistical inference, and whether the 95% CIs should be used for this purpose. In the specific phrases emphasised, we basically commented on the main figures: OR of 1.7 (0.9–3.6) and 1.9 (0.9–4.0) are close, 2.6 (1.0–7.0) is a significant association at the 0.05 level of significance (two-sided), 2.1 is slightly higher than 1.7. We think that Magaña Torres and Gonzalez Garcia (2013) overvalue the CIs by using them for decision rules while they are given to quantify the precision of the ORs, whatever the power of the study, the number

of tests, the weight of the literature that may influence the actual tests. Given the results, our statement 'In conclusion, the present study has generated additional findings, based on a recent nationwide unselected population-based study, that support the hypothesis that living <50 m from a 225 or 400 kV HVOL may be associated with an increased incidence of childhood AL' seems a balanced conclusion.

REFERENCE

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