Letters to the Editor

RE: “A POOLED ANALYSIS OF EXTREMELY LOW-FREQUENCY MAGNETIC FIELDS AND CHILDHOOD BRAIN TUMORS”

In their recent article, “A Pooled Analysis of Extremely Low-Frequency Magnetic Fields and Childhood Brain Tumors,” Kheifets et al. (1) concluded, “These results provide little evidence for an association between [extremely low-frequency magnetic field] exposure and childhood brain tumors.” If extremely low-frequency magnetic fields have no effect on childhood brain tumor incidence as the authors claimed, there should have been as many odds ratios >1.0 as there were <1.0 in Table 4 of their article. Excluding the 2 odds ratios that were exactly 1.0, only 3 of the 28 odds ratios in the exposure groups ≤0.4 uT were >1.0, but 12 of 15 odds ratios were >1.0 in the >0.4 uT exposure group (Table 1). This result suggests that at exposures ≤0.4 uT, extremely low-frequency magnetic fields protect against childhood brain tumors, whereas at exposures >0.4 uT, there is a positive association between these exposures and childhood brain tumors.

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REFERENCES


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Table 1. Summary of Table 4 in the article by Kheifets et al

<table>
<thead>
<tr>
<th>Exposure Group</th>
<th>≤0.4 uT</th>
<th>&gt;0.4 uT</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of odds ratios</td>
<td>28</td>
<td>15</td>
</tr>
<tr>
<td>No. of odds ratios &gt;1.0</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>P value (2)</td>
<td>0.0000137(^a)</td>
<td>0.0175(^b)</td>
</tr>
</tbody>
</table>

\(^a\) Exact binomial probability of ≤3 odds ratios >1.0 out of 28.
\(^b\) Exact binomial probability of ≥12 odds ratios >1.0 out of 15.