



## ACRBR review of Lakhola *et al*: Mobile phone use and risk of glioma in 5 North European countries.

For paper abstract see [PubMed Entry](#)

### What is this study?

This investigation is part of the larger Interphone study, which is a case-control study examining the association between mobile phone use of up to 10 years and brain tumours. In this study participants were recruited from Finland, Denmark, Norway, Sweden and the South-Eastern region of the United Kingdom. This amounted to 1,522 subjects suffering from a particular brain cancer known as glioma (cases), who were recruited from national cancer registries and hospitals, and 3,301 healthy subjects (controls), who were recruited at random from national population registers or other publicly available lists of wide cross-sections of the community. To reduce systematic differences between the two groups, control subject were chosen to match case subjects in terms of age, gender, and region of residence. The researchers then compared differences in mobile phone usage patterns between the cases and controls to determine whether there was any association between their disease status (case or control) and their mobile phone use.

### What were the findings?

No indication was found of increased glioma risk with mobile phone use for categories of 'regular phone use' (defined as use at least once a week for six months), duration of use, years since first use, number of calls or cumulative hours of phone use. Results were similar for men and women, for analogue and digital phones, and across the five countries. The authors report a marginally significant increase in the risk of glioma for greater than ten years of use, where the use is reported on the same side of the head as the tumour was diagnosed (ipsilateral). However, they also report a corresponding decrease in the risk of glioma where phone use occurred on the opposite side of the head as the tumour (contralateral). This is widely regarded as indicating recall bias in the results, meaning a skew in results due to inaccurate reporting of phone use by participants. The authors note this limitation in the particular finding and suggest that more research is needed to clarify this result.

### How should the results be interpreted?

The overall results of this study, based on a large number of cases and controls, provide strong evidence of no increased risk of glioma associated with mobile phone use of up to 10 years. Results for the sub-category of ipsilateral/contralateral phone use of longer than ten years are drawn from far fewer subjects, providing far less certainty in those results. Additionally, the ipsilateral and contralateral results are contradictory, and the authors caution that such findings are "...difficult to interpret and lend themselves to...non-causal (artefactual) explanations." In particular, it is worth noting that when the researchers restrict the data contributing to this result to only that which they consider to be of "good or very good" quality, the association reported is no longer evident.

### What conclusions can we draw?

Overall, the only strong conclusion that can be drawn is that this study provides no evidence of an increased risk of glioma associated with mobile phone use up to 10 years. Firm results cannot be drawn regarding phone use of longer than 10 years, but it is hoped that the upcoming results from the full Interphone analysis from 13 countries will provide more information.