





# Mobile Phones and Cancer

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# Outline

- Motivation for research
- Methodological issues
- Results of studies
- Conclusions

# Motivation

- Public's concern
- Post-marketing surveillance

Not biophysical hypothesis, nor seminal study

# Methodological issues

Almost all studies have been case-control studies, utilizing study subjects as source of phone use information

Two issues appear:

- Selection bias due to non-response
- Information bias due to mis-reporting

# Results

REVIEW ARTICLE

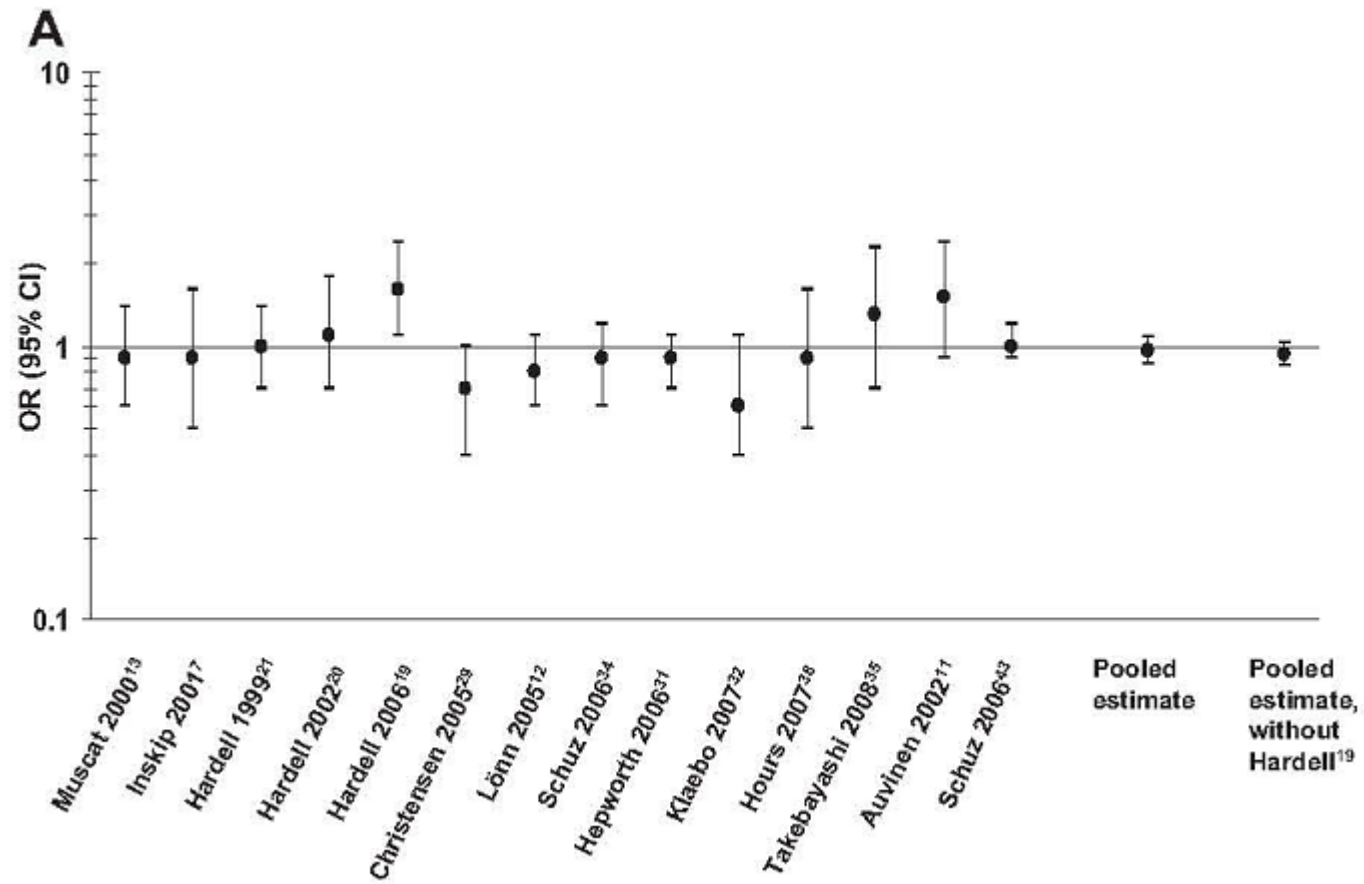
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# Epidemiologic Evidence on Mobile Phones and Tumor Risk

## *A Review*

*Anders Ahlbom,<sup>a</sup> Maria Feychting,<sup>a</sup> Adele Green,<sup>b</sup> Leeka Kheifets,<sup>c</sup> David A. Savitz,<sup>d</sup>  
and Anthony J. Swerdlow<sup>e</sup>; ICNIRP (International Commission for Non-Ionizing Radiation Protection)  
Standing Committee on Epidemiology*

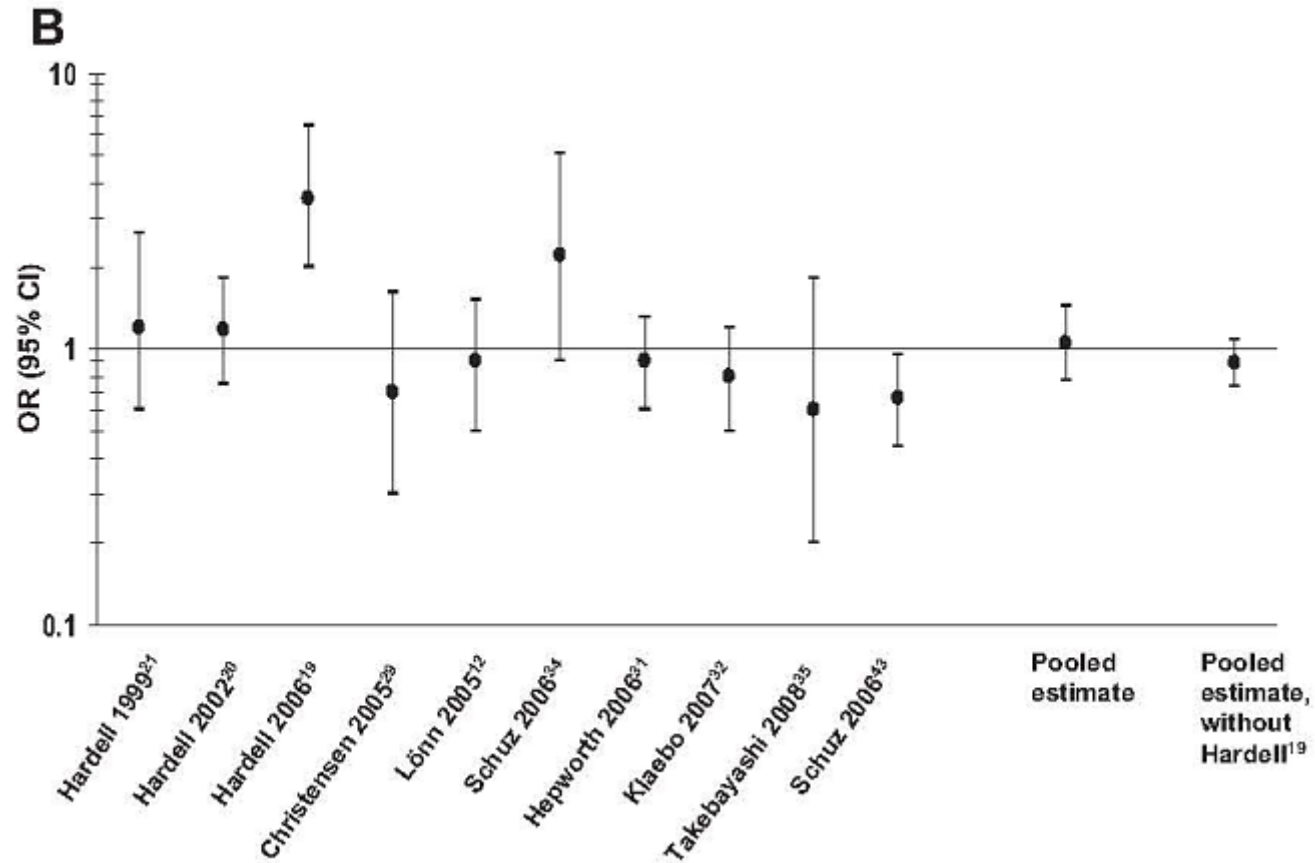
# Glioma: short term use



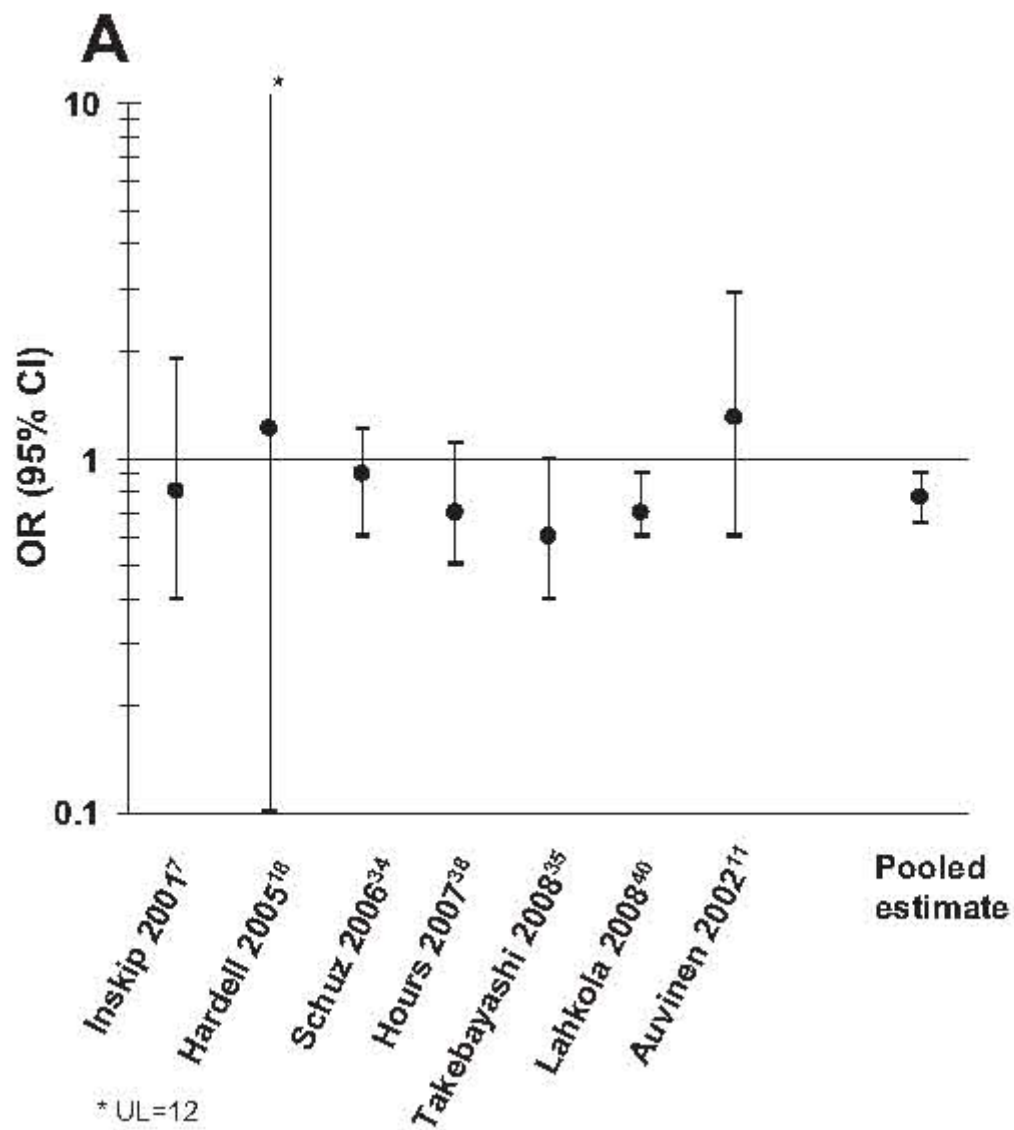


# Glioma: long term use

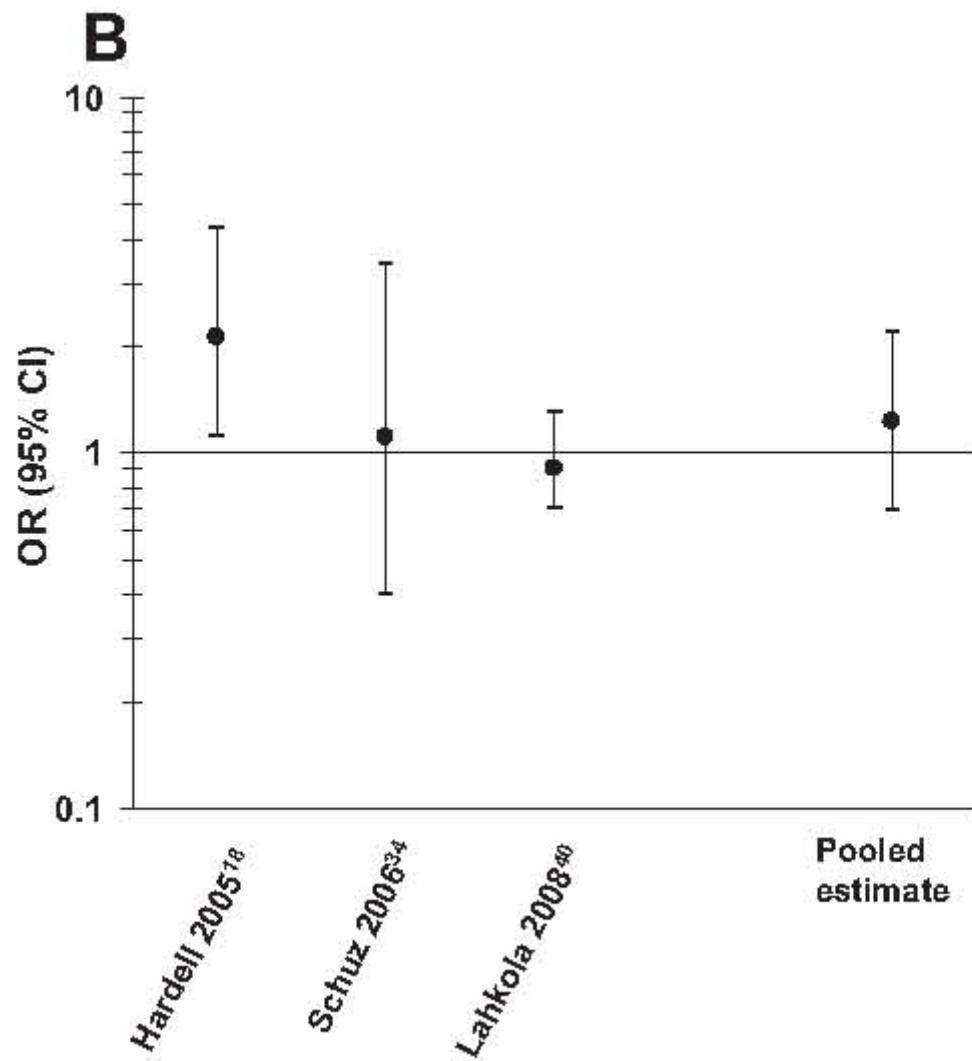
P-homogeneity = 0.001; without Hardell 2006 = 0.3



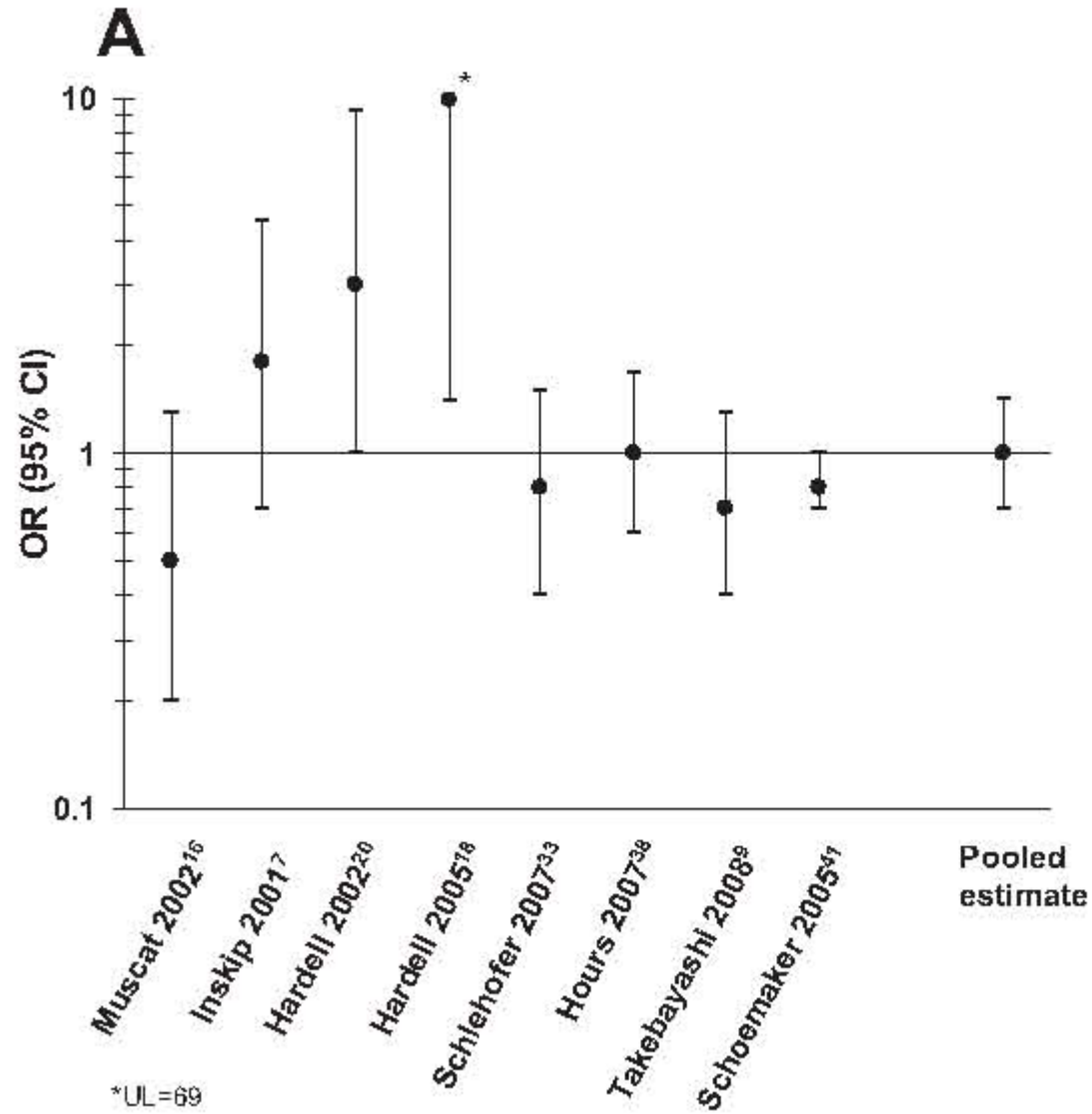
# Meningioma: short term use



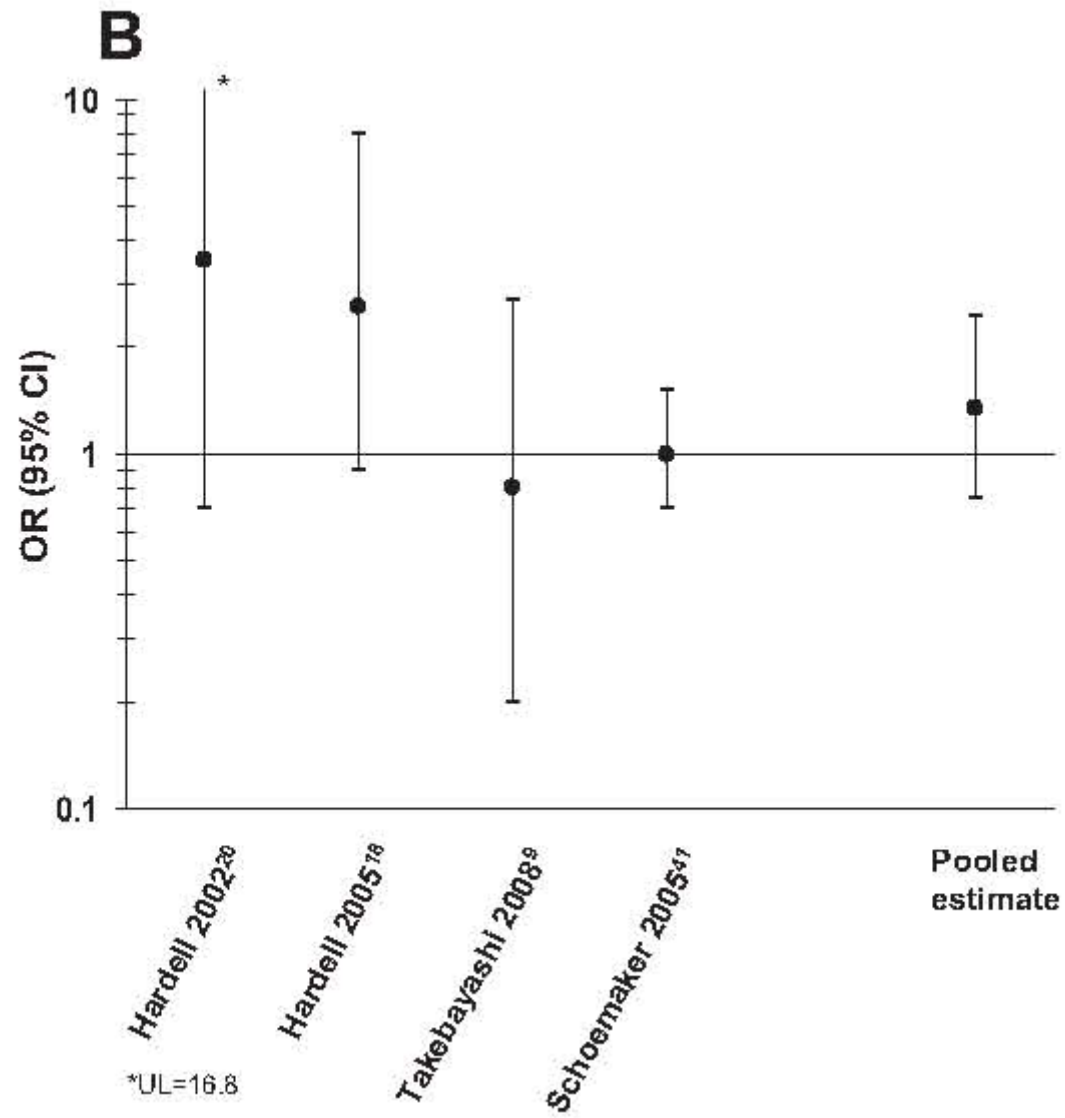
# Meningioma: long term use



# Acoustic neuroma: short term use



# Acoustic neuroma: long term use



JNCI Journal of the National Cancer Institute Advance Access published December 3, 2009

**BRIEF COMMUNICATIONS** | 

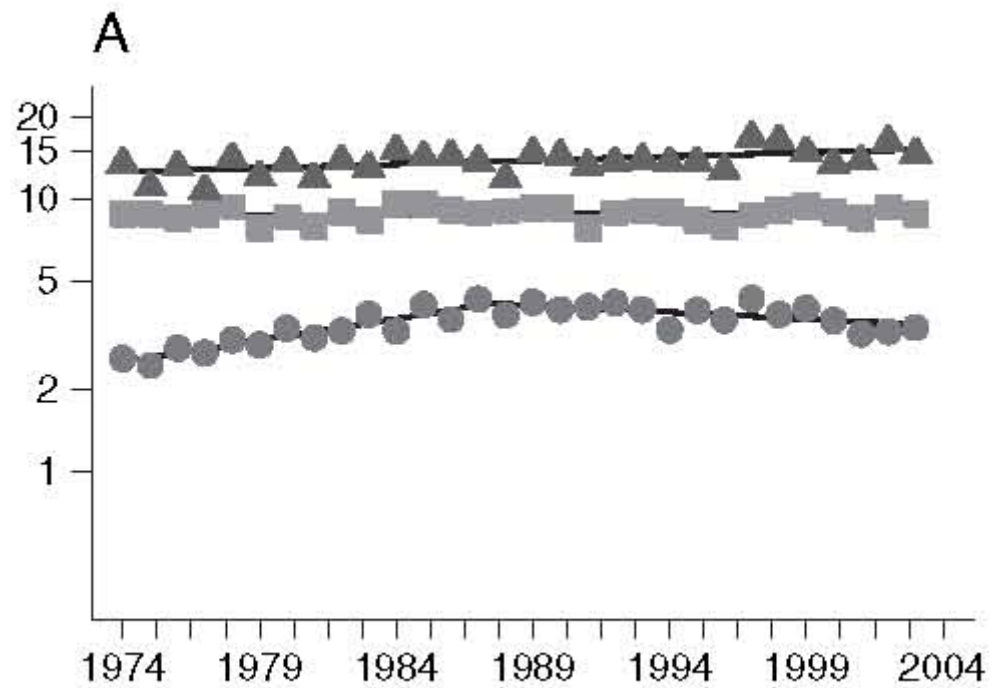
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**Time Trends in Brain Tumor Incidence  
Rates in Denmark, Finland, Norway, and  
Sweden, 1974–2003**

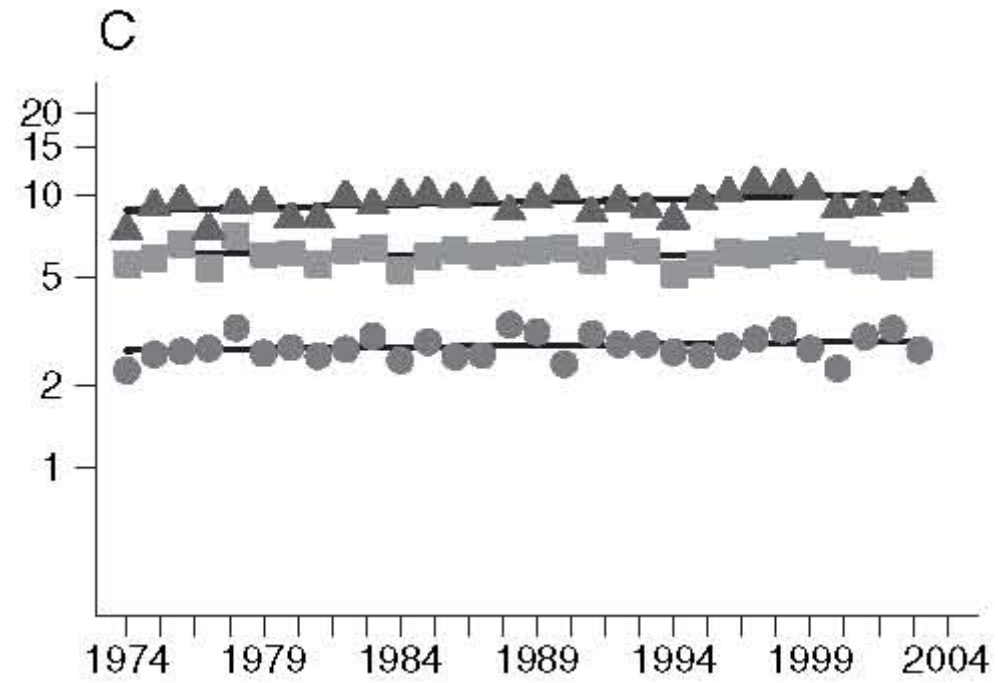
Isabelle Deltour, Christoffer Johansen, Anssi Auvinen, Maria Feychting,  
Lars Klæboe, Joachim Schüz



Glioma, males: 20- 39, 40-79, and 60-79



# Glioma, females



# Conclusions

- For up to about ten years of use data do not demonstrate raised risk for any tumor
- Evidence do not suggest a causal association at least for fast growing tumors
- For slow growing tumors the absence of an association is less conclusive
- Results for children are totally lacking

Commissioned by the Swedish Radiation Protection Agency, SSM

## Recent Research on EMF and Health Risks

*Sixth annual report from the Independent Expert Group on  
Electromagnetic Fields, 2009*

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## Mobile Phone Use and Risk of Tumors: A Meta-Analysis

*Seung-Kwon Myung, Woong Ju, Diana D. McDonnell, Yeon Ji Lee, Gene Kazinets, Chih-Tao Cheng,  
and Joel M. Moskowitz*