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
Epidemiologic Evidence on Mobile Phones and Tumor Risk
A Review

Anders Ahlbom, Maria Feychting, Adele Green, Leeka Kheifets, David A. Savitz, and Anthony J. Swerdlow; 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

OR (95% CI)

Inskip 2001,
Hardell 2005,
Schuz 2006,
Hours 2007,
Takebayashi 2008,
Larkola 2008,
Auvinen 2002.

* UL=12

Pooled estimate
Meningioma: long term use
Acoustic neuroma: short term use

A

OR (95% CI)

Pooled estimate

*UL=69
Acoustic neuroma: long term use
Time Trends in Brain Tumor Incidence Rates in Denmark, Finland, Norway, and Sweden, 1974–2003

Isabelle Deltour, Christoffer Johansen, Anssi Auvinen, Maria Feychting, Lars Klaebøe, 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
Mobile Phone Use and Risk of Tumors: A Meta-Analysis

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