positive association. While these results may be interpreted as failing to indicate an excess of cancer mortality from radar or microwave exposure, they neither prove nor disprove prolonged exposures to RF and microwave radiation from wireless communication technology pose a risk to human health. An urgent need of epidemiological studies of RF effects on mobile telephone users is better dosimetry and exposure assessment.

Table 13. Recent epidemiological studies of human exposure to RF and microwave radiation

Spectrum CW/Pulse	Study Endpoint	Study Population	Results	Author Year
RF	Mortality (Cancer)	Amateur Radio Op.	SS	Milham [1988]
Microwave	Cancer	Children Near Tower	NS	Selvin et al [1992]
RF (Radio)	Cancer Leukemia	Children Near Tower	SS	Mascarinec & Cooper [1993]
Microwave/ RF(Pulse)	Brain Tumors	U.S.A.F. Personnel	SS	Grayson [1996]
RF (Cell-phone)	Mortality (Brain Tumors)	Mobile Telephone User	NS	Rothman et al [1996]

SS - Statistically significant; NS - Statistically nonsignificant

SUMMARY AND CONCLUSIONS

It is noteworthy that there is agreement in studies where higher SARs are induced by microwave exposure. Several studies have demonstrated that when the SAR is sufficiently high (CW or pulse-modulated at 165 W/kg or more) that it raises the temperature of the brain to 42°C or higher, BBB permeability increases for substances normally excluded from brain parenchyma.