

March 9, 2009

***Professor Bruce Armstrong's Keynote Address:  
"Interphone Results"***

*Reproduced below are Prof. Bruce Armstrong's conclusions taken from the slides of his keynote address presented at Science and Wireless 2008 (SW2008), held in Melbourne, Australia, on November 12, 2008, under the auspices of the Australian Centre for RF Bioeffects Research.*

*A video of his 45-minute talk is at:*

<http://acrbr.org.au/SW2008/SW08.aspx?section=Keynote>

**Conclusion 1**

- There is no evidence of an increased risk of any tumor with use, longer use of greater use of a mobile phone.
- Relative risks for the different tumor types tend to be below 1.
- This tendency appears to be less for glioma than for the other tumors.

**Conclusion 2**

- Relative risk of glioma is apparently less in regular mobile phone users.
- As amount of use increases relative risk of glioma increases and may exceed one with high levels of use begun a long time ago.
- Participation bias may explain some of the apparent fall in relative risk in mobile phone users.
- Differential recall bias may have contributed to the apparent increase in risk with increasing use of a mobile phone.

### **Conclusion 3**

- Relative risk of glioma and possibly parotid gland tumors appears to be increased on the side of the brain nearest to the ear at which mobile phone is usually used.
- It does not appear that this increase can be explained by differential bias in recall of side of use.

### **Conclusion 4**

There is some suggestion that relative risks with mobile phone use is greater for gliomas in the temporal lobe than for glioma in the frontal or parietal lobes.

### **Conclusion 5**

There is no persuasive evidence that risk of a brain tumor is different between users of analog phones and users of digital phones.

### **Conclusion 6**

- There is nothing in brain cancer incidence in Australia to suggest that increasing mobile phone use has cause an increase in brain cancer incidence.

### **Bottom Line**

- Suggestions of an increased risk of glioma on the side of use of a mobile phone, and weaker suggestions of a higher risk of glioma with long-continued high mobile phone use and an excess risk of glioma in the temporal lobes of mobile phone use are a cause for concern.
- However inaccurate recall of mobile phone use and other largely unavoidable biases in the relevant epidemiological studies prevent any certain conclusions regarding cancer causing effects of mobile phone use.
- Brain cancer trends are also “reassuring.”

### **What should we do?**

Human exposure to mobile phone frequency electromagnetic energy should be kept as low as is reasonably achievable, especially in children, while not unduly restricting access to the undoubted benefits of mobile telephony.

Research into the possible adverse effects of RF energy should continue.