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Radio frequencies and cancer risk

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There is total agreement in the international scientific community about the public health relevance concerning any possible association between mobile phone use and adverse health effects including cancer. Indeed, hundreds of millions of people are exposed to radio frequencies (RF) generated while making or receiving a phone call on their mobile (cell) phone. RF fields do not have sufficient energy to break chemical bonds or damage DNA, and alternative biological mechanisms to those acknowledged to ionising radiation and to chemical carcinogenesis are evoked and investigated in laboratory experimental studies.

Nowadays, considering that mobile telecommunication has become available to the general population during the last decade, and the epidemiological evidence that most cancers require several years since exposure to develop and to be diagnosed (latency time), the chances of epidemiologic studies to efficiently detect any association between RF exposure from mobile use and site specific cancer, is likely to be very limited.

Most of the epidemiologic studies conducted during the last decade have investigated the association between mobile phone use as a source of RF exposure and the occurrence of brain tumours (e.g, glioma, astrocytoma, meningioma, acoustic neuroma) in European and North American populations. One common limitation is the lack of a sufficient number of long term mobile users (e.g., > 10) that frequently precluded meaningful latency analyses. It follows that although study findings do not generally support increased risks for short term mobile phone users, they suggest, quite consistently higher risk

in long term users, specifically for reported phone use ipsilater to the tumor, and when a sufficient number of observation is available. The available epidemiologic evidence suggest that an increased risk may exist after long term users of mobile phones.

As stated by the Standing Committee on Epidemiology of the International Commission for Non-Ionizing Radiation Protection (ICNIRP), research is needed to address long-term exposure and to fill the gap in children research, who are increasingly heavy users of mobile phones and will accumulate many years of exposure during their lives.