

Regarding the enormous spread of mobile phones we must continue, however, to especially investigate the long-term, intensive use of handys [mobile phones] to be able to quantify possible risks and to recommend pragmatic precautionary measures.

Otmar D. Wiestler

Chairman of the German Cancer Research Center (DKFZ)

German radiation protection offside

The WHO's International Agency for Research on Cancer thinks
that cancer from mobile phone radiation is 'possible'

Franz Adlkofer

In the end of May 2011 the WHO's International Agency for Research on Cancer (IARC) in Lyon classified radiofrequency electromagnetic fields, to which mobile phone radiation belongs, as "possibly carcinogenic"¹. The decision is based on the vote of 30 scientists from 14 countries that had been invited by the IARC to gather between May 24 and 31, 2011, in Lyon and to assess the carcinogenic risk of humans exposed to this radiation. The Working Group considered a) the occupational exposure to radar and microwaves, b) the environmental radiation from radio and television stations as well as wireless telecommunication, and c) the individual exposure while using a mobile phone. The classification was effected with only one dissenting vote which was delivered by a member of the German Commission on Radiological Protection (SSK). The other representative from Germany who was not a member of the SSK joined the majority vote. Before the meeting, participation of Prof. Alexander Lerchl, being the head of the Committee Non-ionizing Radiation in the SSK and, thus, Germany's highest-ranking radiation protector, was rejected by the IARC on grounds that his closeness to industry and his pre-conceived position in this area of research would not contribute to a balanced search for consensus.²

Reasons for the classification

According to participants, recent results of epidemiological studies, especially parts of the IARC-coordinated INTERPHONE study and studies by Lennart Hardell from the Swedish university at Orebro, had been decisive for the "possibly carcinogenic" classification. These studies observed an increased risk for glioma (malignant brain tumours) and acoustic neuroma (benign tumours of the hearing nerve) after long-term (>10 years) and intensive use of mobile phones. Results from animal experiments, although of minor significance, were considered supportive of a carcinogenic effect. However, results from basic research that showed changes in structure and functions of genes after the exposure of isolated human and animal cells, but also in cells from exposed animals, and that would have lend weight to the epidemiological observations were not at all taken into account. Had these have been done according to their relevance in toxicology the classification would not have been "possibly carcinogenic" but rather "probably carcinogenic". Such a step, although asked for by a few participants, did not seem appropriate in front of the many mobile communication-friendly governments that pay the WHO and of the powerful mobile communication industry's impact on the economy that should not be harmed. Up to now, politics and industry claimed that mobile phone radiation is harmless, and probably they will continue to do this further. For this purpose they certainly need scientists such as Prof. Lerchl whose activities like the smear campaign against the REFLEX study although outdated by facts^{3,4} can be used for the conservation of the status quo at least for some to come.

Evaluation of the classification

A consensus in science does as a rule not quote correctly the state of the art in science. Consensus is the mean of the opinions expressed by selected experts with more or less understanding of the scientific matter and more or less dependency on matters outside science. Numerous of the latter can be found in mobile phone radiation research. Thus, the result of the voting in Lyon was to a great extent anticipated through the IARC's selection of experts and, therefore, the final classification "possibly carcinogenic" did not come as a surprise. However, this classification of radiofrequency radiation is a warning shot for politics and industry, should they continue to trust in their experts' advice any further. Quite obvious their in decades erected bulwarks in international organisations (WHO, ICNIRP) and national committees (SSK IEEEE) that were to defend their interests have been damaged by IARC's decision in a way that the final collapse seems just to be a matter of time. If politics do not want to completely losse the faith of the people, the demands they are confronted with are the following: 1) To take and get through precautionary measures that protect the people, 2) to lower the present extremely high safety limits to a minimum just high enough to guarantee the functioning of the technique, 3) to ensure qualified

mobile phone research by funding of independent working groups, and 4) to get rid of the industry-presented “experts” in national and international committees on radiation protection. Otherwise the society may have to pay for the present irresponsibility of the authorities if - just as after the classification of extremely low-frequency radiation in 2002 in the same group as the radiofrequency radiation now - the necessary steps regarding radiation protection are not taken. The classification of radiofrequency radiation in “probably carcinogenic” within a foreseeable time, and then in “carcinogenic for humans” in the not too distant future is already written on the walls.

Results of the classification

IARC classifies in four groups:

- Group 1 - The agent is carcinogenic to humans
- Group 2A - The agent is probably carcinogenic to humans
- Group 2B - The agent is possibly carcinogenic to humans
- Group 3 - The agent is not classifiable as to its carcinogenicity to humans
- Group 4 - The agent is probably not carcinogenic to humans

The vote for 2B shows that in the eyes of the IARC a causal link between exposure and cancer development is plausible. This classification requires precautionary measures as well as independent research. Precautionary measures include first of all the correct information of the public regarding possible health risks and the appropriate protection. The impact of electromagnetic fields on the brain can be considerably reduced with car kits/head sets. Messages cannot only be voiced but also written. Fixed lines are preferable, whenever available. Utmost restraint is justified for children using mobile phones. The present state of knowledge is still rather poor mainly due to the lacking of financial support for independent scientists in the decades before. Based on what we already know research should aim at the long-term effects of mobile phone use and especially the impact on children. Furthermore, research should not be limited to cancer development. More and more suspicion focuses upon the contribution of electromagnetic radiation to the pathogenesis of neurodegenerative disorders such as Alzheimer’s disease. It is well known that environmental factors decisively contribute to the development of these diseases. Although the carcinogenic risk of mobile phone radiation has not been proven yet, it is for sure that its probability exceeds by far the IARC compromise. To substitute the necessary research by risk communication playing down the possible risk of mobile phone radiation - which has already been started immediately after the IARC classification by the mobile communication industry - would certainly not be rewarded in the future. And beyond that it is to be assumed that people alarmed by the IARC decision will in the long run certainly not accept this mockery at the expense of their health.

¹ International Agency for Research on Cancer (Mai 2011) IARC classifies radiofrequency electromagnetic fields as possibly carcinogenic to humans. Press Release No. 208. http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf

² Diagnose Funk: Brennpunkt WHO takes distance from Prof. Lerchl. <http://www.diagnose-funk.org/infoformate/brennpunkt/who-lehnt-prof-a-lerchl-als-mitarbeiter-ab.php>

³ Adlkofer F & Richter K (2011) About the Handling of Scientific Findings Regarding Mobile Phone Research at the Medical University of Vienna – Part I. http://www.pandora-foundation.eu/downloads/vienna---part-i_booklet.pdf

⁴ Adlkofer F & Richter K (2011) About the Handling of Scientific Findings Regarding Mobile Phone Research at the Medical University of Vienna – Part II. http://www.pandora-foundation.eu/downloads/vienna---part-ii_booklet.pdf