



## **Mobile Manufacturers Forum**

### **Mobile manufacturers respond to IARC Classification of RF energy**

The International Agency for Research on Cancer (IARC) assessment, published on 31 May 2011, has classified exposure to radio frequency (RF) electromagnetic fields, which are emitted by mobile phones, wireless devices, radar and radio and television broadcasts as possibly carcinogenic to humans (IARC Group 2B).

“After reviewing the available scientific evidence, it is significant that IARC has concluded that RF electromagnetic fields are not a definite nor a probable human carcinogen. Rather, IARC has only concluded that it may still be possible that RF fields are carcinogenic and has identified areas for further research”, said Michael Milligan, Secretary General of the Mobile Manufacturers Forum (MMF).

“IARC have only assessed the possibility of risk not the likelihood of risk in normal use. Their assessment will now be considered by health authorities who will determine its overall impact” Mr. Milligan continued.

“While there is still further long-term epidemiology research to be done to clarify this possibility, if people are concerned they can easily reduce their exposure to mobile phone radio signals. For example the World Health Organization provides the following information on how to effectively reduce mobile phone exposure:

*In addition to using "hands-free" devices, which keep mobile phones away from the head and body during phone calls, exposure is also reduced by limiting the number and length of calls. Using the phone in areas of good reception also decreases exposure as it allows the phone to transmit at reduced power.”*

IARC explained the results as follows:

*The evidence was reviewed critically, and overall evaluated as being limited<sup>1</sup> among users of wireless telephones for glioma and acoustic neuroma, and inadequate<sup>2</sup> to draw conclusions for other types of cancers. The evidence from the occupational and environmental exposures mentioned above was similarly judged inadequate.*

The mobile communications industry will continue to support well-conducted and independent research which will help to clarify any uncertainty identified by the IARC evaluation, Mr. Milligan said.

“In understanding the implications of this assessment, it should be remembered that wireless communications equipment are designed to operate within international and national exposure limits which already have substantial safety margins built into them,” Michael Milligan explained.

Around the world, mobile phones are labelled with national regulatory approval marks – such as the EU’s ‘CE’ or the US’s FCC mark – to show they meet, amongst other things, relevant exposure standards.

“In addition to operating within exposure limits, mobile phone handsets are designed to ensure they always operate at the minimum level to make a quality phone call,” Mr. Milligan concluded.

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<sup>1</sup> **'Limited evidence of carcinogenicity'**: A positive association has been observed between exposure to the agent and cancer for which a causal interpretation is considered by the Working Group to be credible, but chance, bias or confounding could not be ruled out with reasonable confidence.

<sup>2</sup> **'Inadequate evidence of carcinogenicity'**: The available studies are of insufficient quality, consistency or statistical power to permit a conclusion regarding the presence or absence of a causal association between exposure and cancer, or no data on cancer in humans are available.



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## Background – IARC Monographs

IARC regularly runs assessments by panels of independent experts of the carcinogenic hazards posed to humans by a variety of agents, mixtures and exposures, in order to provide advice to health authorities around the world.

Since 1971, IARC has evaluated 941 agents, including:

<b>Group 1 Carcinogenic to Humans</b>	<b>Group 2A Probably Carcinogenic to Humans</b>	<b>Group 2B Possibly Carcinogenic to Humans</b>	<b>Group 3 Not Classifiable</b>	<b>Group 4 Probably not Carcinogenic to Humans</b>
Evidence that an agent is “proven” to be associated with human cancer	Limited evidence of an association with cancer in humans, but sufficient evidence of cancer in experimental animals	Limited evidence of an association with cancer in humans, but insufficient evidence of cancer in experimental animals	Evidence indicates that it is not possible to classify an agent based on the available information	Evidence to prove agent is “not associated” with human cancer
<b>107 Agents including:</b> <ul style="list-style-type: none"> <li>• Alcoholic Beverages</li> <li>• Asbestos (all forms)</li> <li>• Arsenic</li> <li>• Benzene</li> <li>• Formaldehyde</li> <li>• Ionizing Radiation (all types)</li> <li>• Tobacco smoking, smoke and smokeless</li> <li>• Painter (occupational exposure)</li> <li>• Sunlight (solar radiation)</li> </ul>	<b>59 Agents including:</b> <ul style="list-style-type: none"> <li>• Hairdresser or barber (occupational exposure)</li> <li>• Petroleum refining (occupational exposure)</li> <li>• Shift work that involves circadian disruption (disruption to normal sleep patterns)</li> </ul>	<b>266 Agents including:</b> <ul style="list-style-type: none"> <li>• Coffee (urinary bladder)</li> <li>• Diesel fuel, marine</li> <li>• Dry cleaning</li> <li>• (occupational exposure)</li> <li>• Firefighter (occupational exposure)</li> <li>• Styrene</li> <li>• Textile manufacturing industry (work in)</li> <li>• Magnetic Fields (ELF)</li> <li>• Pickled Vegetables</li> </ul>	<b>508 Agents including:</b> <ul style="list-style-type: none"> <li>• Acrylic acid</li> <li>• Chlorinated drinking water</li> <li>• Hair coloring products (personal use of)</li> <li>• Fluorescent lighting</li> <li>• Electric Fields (ELF)</li> </ul>	<b>1 Agent:</b> <ul style="list-style-type: none"> <li>• Caprolactam</li> </ul> <p><i>Note: Caprolactam is toxic although not carcinogenic.</i></p>

A full list of previous classifications can be found at: <http://monographs.iarc.fr/ENG/Classification/index.php>

IARC’s preamble also explains how the scientific evidence is evaluated for both human and animal studies: <http://monographs.iarc.fr/ENG/Preamble/index.php>