Studies on Cell Phone Radiofrequency Radiation

Comments to the Board of Scientific Counselors

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The opinions expressed in this talk are solely those of the speaker (AJS) and should not be considered as official positions of the Inserm, the University or the IARC-WHO
Who am I?

- I am a physician having spent the past 35 years working as a cancer epidemiologist.
- An MD and 3 Harvard degrees (MPH, SM Bio-Epi, DrPH Epi, Bio, Evaluation).
- Former Director of Research at the INSERM (French NIH).
- Former Unit Chief of Epidemiology for Cancer Prevention at IARC-WHO.
- Former Acting Chief of Programme for Cancer Control at WHO.
- Over the decades switching from behavioral and life-style risk factors to environmental ones.
Summary of evidence at the time of the IARC Monograph meeting (2011) on RFR and cancer

- Limited evidence in humans
  - At that time, 5 case-referent studies and 1 cohort study had been published and were evaluated.
  - Mostly the evidence came from the Nordic studies and INTERPHONE study on glioma and acoustic neuroma
- Limited evidence in experimental animals
  - The experimental studies covered quite a range of types of studies, species of animals and studied outcomes with somewhat discordant results (some positive, some negative).
- Other relevant studies did provide inconclusive evidence on potential mechanisms of carcinogenicity.
- Evaluation: Group 2B
What did we learn since 2011?

- Epidemiology
- More studies (CERENAT, Cephalo) confirmed the increased risk among the most heavily exposed
- Experimental studies
- NTP study: at the March external review 7 evaluations were upgraded for the study in rats (2 from *some* evidence to *clear* evidence, 3 from *equivocal* to *some* evidence and 2 from *no evidence* to *equivocal*). This happened for male rats, except for the last two being seen in females
- Ramazzini study: increases in the same tumours than in the NTP study were seen for rats exposed to much lower levels of exposure to RFR
- This provides argument for a future re-evaluation by IARC (after publication of the MOBI-KIDS results)
What to do next?

• Need for **further experimental studies on other RFR before new equipment is launched** (5G)

• Need to increase the size of studies, in particular the unexposed group

• Need to consider other analyses, such as considering all exposed as one group *versus* unexposed and also analysis of the overall tumor burden with correction for survival if needed
To be pragmatic

- Absolute need to keep on having independent agencies conducting valid, thorough evaluations
- Need to keep on funding agencies such as NIEHS and IARC, as well as other institutions dealing with the health of populations.