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- Past IARC-WHO Unit Chief, with international teaching responsibilities, and international expert on EMF and Cancer

# IARC Classifies Cell Phone Radiation and other wireless radiation as a Possible Human Carcinogen, 2011

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*The opinions expressed in this talk are solely those of the speaker (AJS) and should not be  
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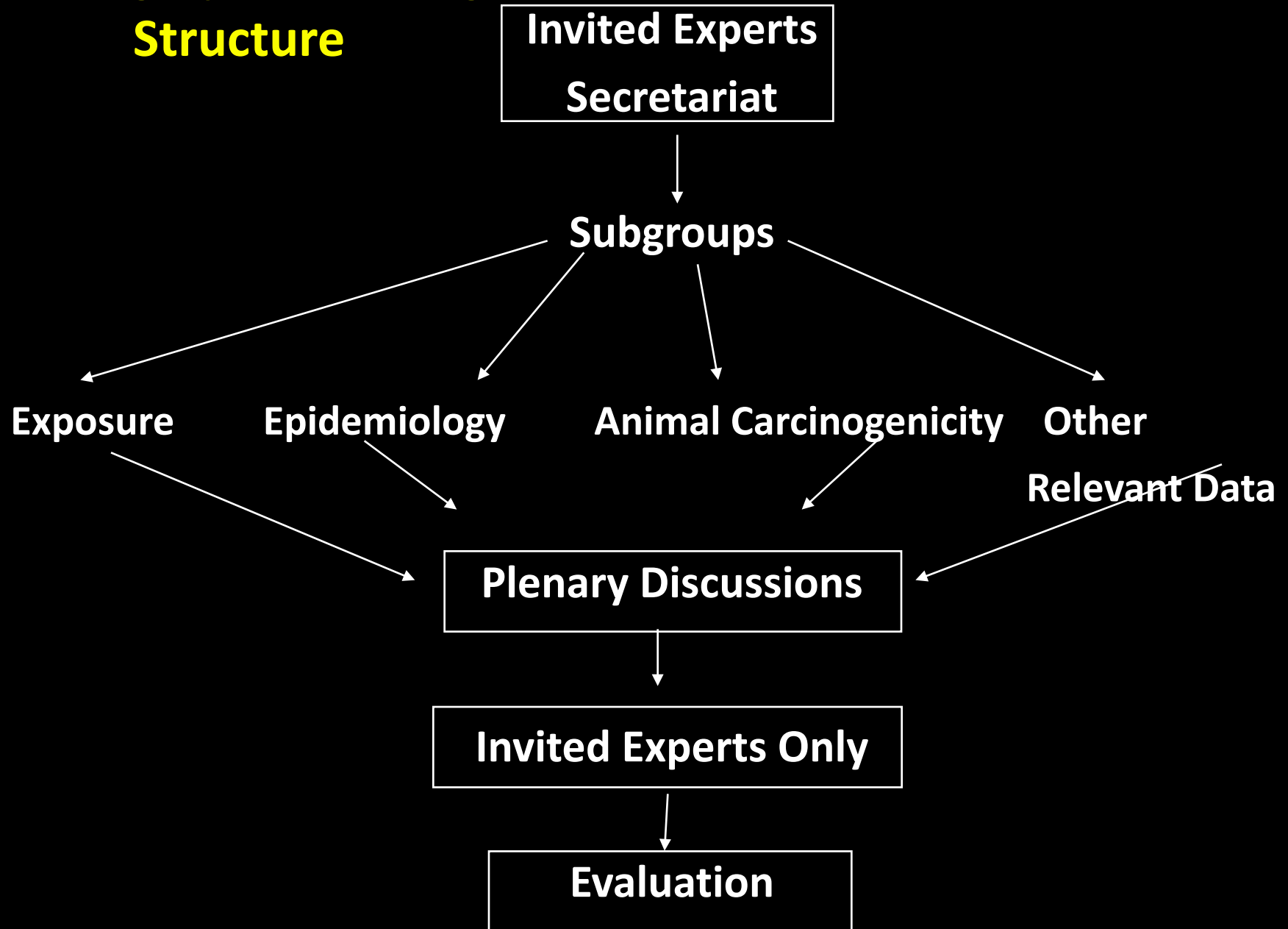
# International Agency for Research on Cancer (IARC)

- Part of the World Health Organization (WHO) as the specialized cancer agency
- Coordinates and conducts both epidemiological and laboratory research into the causes of human cancer.
- Goal: study cancer with an aim at prevention

# The IARC program of Monographs on the evaluation of carcinogenic risks to humans

- Initiated in 1969 at IARC, by Dr. Tomatis and with support of the NCI (United States of America) and the European Commission
- **Objective:** To prepare, with the help of international working groups of experts, and to publish in the form of monographs :
  - Critical reviews of the literature
  - Evaluation of evidence on the carcinogenicity of a wide range of human exposures

# Monographs Meeting Structure



# Summary of Reported Data

- a. Exposure data
- b. Carcinogenicity for humans data
  - results from epidemiological data
  - sometimes, case reports and correlation studies
- c. Carcinogenicity from experimental animal data
- d. Other data which can be used for the evaluation of carcinogenicity and its mechanism

# Summary of evidence required for classification

## Group 1- Carcinogenic to humans

Sufficient evidence in humans

## Group 2A - Probably carcinogenic to humans

Limited evidence in humans and sufficient evidence in animals

## Group 2B - Possibly carcinogenic to humans

Limited evidence in humans, less than sufficient evidence in animals or inadequate evidence in humans, sufficient evidence in animals or inadequate evidence in humans, limited evidence in animals, with other relevant supporting data

## Group 3 - Not classifiable

Inadequate evidence in humans and less than sufficient evidence in experimental animals

## Group 4 - Probably not carcinogenic to humans

# 2011 IARC Classified Cell Phones and Other Radiofrequency Radiation as *Possibly Carcinogenic*

Interphone Study: Increased glioma risk occurred with the heaviest phone users (at least 1640 hours). This increase is clearer for tumors on the side of the head where the phone was usually held, *i.e.* the risk is found exactly where it was expected.

Swedish Studies: Pooled analysis showed increased risk for malignant brain tumors and use of cell or cordless phones. The risk increased with latency time and cumulative use. Highest risks found in those that first used a wireless phone before 20 years of age.



# What does it mean ?

- There is an increased risk for the heaviest cell phone users (at least 1640 hours). This increase is clearer for gliomas on the side of the head where phone was usually held, *i.e.* the risk is found exactly where it was expected
- Further analyses confirm an increased risk (around 2) for the most exposed as Dr Miller will now show us.

Results for EMF – May 2011

Group 2B

# 2A / 2B – Why do we care?

- 2A: Probable human carcinogen
- 2B: Possible human carcinogen
- Almost the same words
- BUT
- Very different implications:
- For several countries, 2A automatically leads to **action being taken**: listing as carcinogen, legislation or regulation, compensation, warnings, *etc*
- For 2B: usually **nothing**

# Cell Phone Campaign Lyons France, 2008

