IARC Will Soon Reassess RF Cancer Risk — Or Maybe Not

Director Sends Mixed Signals

December 12, 2022
Last updated April 13, 2024

On November 23, Elisabete Weiderpass, the Director of the International Agency for Research on Cancer (IARC), revealed that a new assessment of the evidence linking radiofrequency (RF) radiation to cancer would likely take place in early 2024. A formal decision could come within a few months.

Calls for a new IARC evaluation have been mounting for some years following the release of two large animal studies showing elevated tumor counts after lifelong exposure to RF radiation. Many believe that the animal experiments leave the Agency little choice but to increase the cancer risk classification at least one notch to "probable" from the current "possible," or perhaps to its highest classification, a known human carcinogen.[1]

But, as Weiderpass made clear on making the announcement at a conference in Paris,[2] the RF–cancer risk might instead be downgraded and the "possible" classification removed.

The stakes are high. RF health concerns have long been on the back burner, a situation made possible by industry-friendly exposure standards that discount cancer risk. An upgrade would most probably change all that. The ongoing siting of hundreds of thousands of new 5G antennas would add fuel to the fire.

This would be IARC's second RF evaluation at what's called a "Monograph Meeting," a process widely considered the gold standard for classifying cancer risks from chemical and physical agents. The first was held in May 2011 when two dozen specialists from 14 countries agreed, almost unanimously, that RF is a Group 2B (possible) human carcinogen. Their detailed review of the literature was published in a 400+-page report, the 102nd volume in IARC's Monographs Program.

Search

Microwave News The Web

Return to Main Article Archive

VIEW ARTICLES BY YEAR

2026 Articles 2014 Articles
2025 Articles 2013 Articles
2024 Articles 2012 Articles
2023 Articles 2011 Articles
2022 Articles 2010 Articles
2021 Articles 2009 Articles
2020 Articles 2008 Articles
2019 Articles 2007 Articles
2018 Articles 2006 Articles
2017 Articles 2005 Articles
2016 Articles 2004 Articles
2015 Articles

Help Support *Microwave News*

In 2019, an IARC advisory group, taking a cue from the new animal data, urged the Agency to reassess RF radiation by 2024, calling it a “high priority.”[3]



Elisabete Weiderpass at the podium in Paris

IARC had been silent on if and when it would schedule a new monograph meeting. Then Weiderpass made it appear all but certain. “I think it’s more likely that it will take place at the beginning of 2024” than in 2023, she said in Paris.

Yet, the following day, when asked by *Microwave News* for confirmation, Weiderpass demurred. In an email exchange, she would only say, “We have not yet scheduled a date for any reevaluation of RF-EMF exposure.”

Monograph meetings are planned a year in advance and are usually held in March, June and October. An early 2024 assessment would mean a declaration from IARC in the next few months —by March 2023.

Support for New Assessment

The animal studies driving the calls for a new monograph meeting were carried out by the U.S. National Toxicology Program (NTP) and the Ramazzini Institute in Bologna, Italy. Each was a multimillion-dollar effort taking more than a decade. In the end, they showed strikingly similar increases of a rare type of tumor in the heart.

The leaders of both projects anticipate a new assessment and an upgrade. In an April 2019 open letter to the Italian government, Linda Birnbaum, the former director of the NTP, predicted that an IARC reassessment “will certainly” raise the RF–cancer risk “to at least a ‘probable’ and possibly a ‘proven human carcinogen’.” Fiorella Belpoggi, the research director of the Ramazzini Institute, was one of the first to call for an upgrade.

In a recent email exchange, Birnbaum, now a scholar in residence at Duke University, reaffirmed those views. She said that she hoped —“absolutely”— that IARC would schedule a meeting in 2024.

Jonathan Samet, who served as the chairman of IARC's first RF working group and is the dean of the Colorado School of Public Health, believes the time is right. "Given continued concern and the ambiguity of the 2B classification, another review seems warranted," he told me last week. He too cited those "major" animal studies.

"It's extremely important to have the IARC meeting, and the sooner the better," Joel Moskowitz, the director of the Center for Family and Community Health at UC Berkeley Public Health, said in a telephone interview. Moskowitz, who runs the Electromagnetic Radiation Safety website, also signed the open letter to the Italian government.

Last year, Michèle Rivasi, a member of the European Parliament from France, called on IARC to take action. "It is time for IARC to reevaluate the impact of RF radiation on health," she said. Rivasi was formerly a member of the Parliament's Committee on the Environment, Public Health and Food Safety.

Others are less impressed by the animal work. For instance, members of ICNIRP, the International Commission on Non-Ionizing Radiation Protection, have concluded that the two studies are unconvincing and insufficient to revise exposure limits.

Still, Eric van Rongen, ICNIRP's vice chair, told me that he would favor convening a new working group once the systematic reviews on RF and cancer commissioned by the World Health Organization (WHO) are completed. Van Rongen said he expects them to be ready "in a couple of months." (More on the WHO systematic reviews here.)

Japanese-Korean 'Validation' Study

Weiderpass's announcement came in reply to a question from the audience at the closing session of the Paris conference. But, right after she put March 2024 on IARC's agenda, she left the door open for a possible delay.

Weiderpass cited two Asian studies which she was keen on having an RF working group review. "It's very important for those results to be published before we can assess the literature," she said, adding that they "are going to be published in two-to-four months."

But here again, when Weiderpass was asked for confirmation, the timeline got hazy. Those studies "will not be ready in two-to-four months," she told me by email, "but in a couple of years."

Weiderpass closed our exchange by stating that IARC meetings are announced on its Monographs website: "I can give you no further details on when any meeting for RF-EMF would be scheduled," she wrote.

In Paris, Weiderpass did not specify the upcoming Asian studies. She wants to wait for the International NTP Validation Project. The project, being run simultaneously in Japan and Korea, is a sharply scaled-down version of the original $30 million NTP experiment.[4]

The two-year RF exposures in Japan and Korea are scheduled to end before the end of the month. How long it will take to complete the data analysis and to write up the results is not clear, but one source said that a paper would probably not be published until 2024.

Is the Asian work sufficient to validate or invalidate the NTP results? I wanted to ask Michael Wyde, the current head of the ongoing NTP project and one of seven members of the Japanese-Korean international advisory committee. But he declined to be interviewed.

I turned to Ron Melnick, who was the lead designer of the NTP protocol. “I have too many concerns that need to be addressed before I would consider this project to represent a replica of the NTP study,” he told me from his home in Utah. Melnick, who retired from the NTP in 2009, was a member of the 2011 RF working group

Validation or not, “There’s no need to wait,” says Kurt Straif, the former head of the IARC Monograph Section. IARC’s guidebook for classifying cancer agents —known as the Preamble— is “crystal clear,” Straif told me via Zoom from Freiberg, Germany. “You don’t need further validation when you have two informative studies. They should be enough.”[5] Straif helped run the 2011 RF meeting. He left IARC in late 2018 on reaching the mandatory retirement age and is now a research professor at Boston College.

Where Does Schüz Stand?

A key unknown is what Joachim Schüz thinks about assembling a new working group. Schüz is the head of IARC’s environment section and has spent much of his career doing EMF and RF epidemiology. There is little question that Weiderpass will seek his opinion about the meeting, as well as that of the head of the Monographs Program, Mary Schubauer-Berigan.

I asked Schüz where he stood on the meeting. He wouldn’t say.

Schüz makes no secret of his skepticism that RF can lead to cancer —this opinion has become stronger since 2011. He might endorse a meeting if he believes that the working group would remove the 2B label. Even so, he would likely ask Weiderpass to wait for both the Asian animal results and the WHO systematic reviews. (As a member of the IARC staff, Schüz could attend the working group meeting but would not have a vote.)

At last month’s meeting in Paris, Schüz presented an overview of the RF–cancer literature. The NTP and Ramazzini studies “confirmed” the “possibility” that RF radiation is carcinogenic, he said. He was far more dubious, however, about the Interphone and Lennart Hardell epidemiological studies, which showed relatively consistent increases in brain tumors among long-term cell phone

users and were the basis for IARC's 2B decision.

Joachim Schüz at the Paris conference

Schüz relies on two large cohort studies that show no apparent brain tumor risk: the Danish Cohort Study and the U.K. Million Women Study. He is a senior author on both. The problem with them is the dearth of exposure information. Their estimates of the cancer risk are based on the answers to just one or two questions about a decade or two of cell phone use.

The exposure assessment in the Danish Cohort Study is so unreliable that most other epidemiologists consider the results to be meaningless.[6] Those on the 2011 IARC working group judged it uninformative and set it aside. They ignored it. The flaws are structural, and no amount of refined analysis can resolve them.

One critic wondered aloud how Schüz can discount the failings of the cohort studies and, in the next sentence, stress the potential biases of the Interphone and Hardell case-control studies.

When will Director Weiderpass schedule a second RF working group meeting? We'll find out soon.

Talc & Acrylonitrile Monograph Meeting, June 2024

April 17, 2023

Today, IARC announced that a Monograph meeting will be held on Talc and Acrylonitrile June 11-18, 2024, in Lyon.

A couple of weeks ago, the Agency announced that its Advisory Group to recommend priotities for IARC Monographs 2025-229 will be held March 26-29, 2024, also in Lyon.

The next possible slot for an RF Monograph meeting is now October 2024.

Weiderpass on Schüz's Projects

April 21, 2023

In a talk presented in February at the IARC scientific council meeting in Lyon, Director Elisabete Weiderpass devoted a slide to three RF projects being carried out by IARC's section on environment and lifestyle epidemiology, headed by Joachim Schüz.

With these notes:

Schüz described these three IARC projects in a presentation to the German Office of Radiation Protection (BfS) last year:

October 25, 2023

IARC Declines To Review RF in 2024

IARC announced today that it will review the cancer risks associated with three medications in November 2024. They are Hydrochlorothiazide, Voriconazole, and Tacrolimus.

This means that the earliest a second review of RF could be held is in 2025.

January 19, 2024

No RF Review in Early 2025

IARC has announced that the agency will evaluate the cancer risks of “automotive gasoline and some oxygenated additives” from February 25 to March 4, 2025.

No word on plans for an RF review.

April 13, 2024

IARC Again Asked to Review RF Cancer Risk, Just Not Right Away

An IARC advisory group has —once again— recommended a new assessment of the cancer risk posed by RF radiation. RF is one of about a hundred agents listed as “high priority” for evaluation over the next five years, 2025-2029.

The cycle is repeating itself. Details in our new story.

FOOTNOTES

1. Details of the IARC cancer classifications from J. Samet, et al., *Journal of the National Cancer Institute (JNCI), Vol.112,* p.36, 2020 (open access).

2. Videos of the talks and exchanges at the November 2022 Paris meeting are available in both French and in English.

3. *Report of the Advisory Group to Recommend Priorities for the IARC Monographs During 2020-2024,* pp.148-149. A brief summary was published in *Lancet Oncology*.

4. The Japanese-Korean project is exposing only male rats. (The NTP found the most significant effects among male rats.) It's also using only one carrier frequency (900 MHz) with one type of modulation (CDMA). NTP used both 900 MHz and 1.9 GHz radiation, each with both CDMA or GSM modulation. Some have dubbed the Asian project "NTP-Lite." Below is a side-by-side comparison of the two projects from Y.H. Ahn et al., *Bioelectromagnetics, Vol.43,* p.221, 2022 (open access).

5. The 2019 *Preamble* to IARC Monographs on the Identification of Carcinogenic Hazards to Humans states (p.32):

6. The exposure assessment in the U.K. Women's study has also come under fire. See Joel Moskowitz's critique in *JNCI*.

IARC, RF, cancer, Elisabete Weiderpass, Joachim Schüz, NTP, NTP Lite, Ramazzini Institute, Linda Birnbaum, Fiorella Belpoggi, Jonathan Samet, Joel Moskowitz, Michele Rivasi, Michael Wyde, Ron Melnick, Danish cohort study, Japan, Korea,

© Copyright Microwave News 2003-2026. All Rights Reserved.