Q2). Perspective: individual, patient, caregiver to loved ones

Intro

I have been following developments concerning radiofrequency radiation (RFR) safety concerns for more than a dozen years and support Environmental Health Trust in the court case Environmental Health Trust v. FCC.

I have been impressed with the credentials and accomplishments of the good-hearted scientists who are advocating for more precaution.

A highly esteemed and prolific immunologist, the late Dr. Ronald Herberman, founding director of the University of Pittsburgh Cancer Institute, was founding chairman of Environmental Health Trust. Dr. Herberman got attention in 2008 when he wrote a memo encouraging UPCI staff to take precautions with cell phones.

Scientist, doctor and founding board member of Doctors Without Borders David Servan-Schreiber in 2007 wrote the international bestseller *AntiCancer: A New Way of Living* and included a section "Cell Phones: Be Careful." He died from a brain tumor he attributed in part to his cell phone use but his work, including his message about the risks of wireless radiation, is continued by Anticancer Lifestyle, which involves physicians from major institutions— MD Anderson and Dana Farber.

I find it notable that engineers and emeritus professors James Lin and Frank Barnes, two peer reviewers on the technical reports for the National Toxicology Program study of RFR (clear evidence of cancer found), both are working for scientific truths and appropriate precautions as well as former NIEHS director and public servant Dr. Linda Birnbaum.

Dale E. Bredesen, MD, a pioneer in the field of neurodegenerative research who wrote *The End of Alzheimers,* says in his newer book *The Ageless Brain : How to Sharpen and Protect Your Mind for a*

Lifetime “So as skeptical as I was initially about sensitivity to EMFs I could no longer ignore the pattern that emerged. The sheer number of people who have reported sensitivity to EMFs demands we take this possibility seriously. Furthermore there are deep parallels between the “connection to protection” mode switch that the bodies and brains of sensitive patients simply can’t turn off when exposed to insults that others might not even notice. “ (p. 334, large print version)

Q3) Sharing experiences, leaking microwave oven, sensitivities , magnetite research

I have had vestibular difficulties for a third of my life and one doctor felt I had migraine associated vertigo

Brief pre-syncope falling over feelings are the worst part as well as the more rare times when the room appears to be actually moving. For the last dozen years I have understood that avoiding exposure to wireless radiation gives me a better chance to have a better moment and a better day. This seems to be akin to having a concussion and RFR is another input to process. The onset was mysterious: was it bumping my head, was it coughing with flu a few weeks prior to onset? Or was it the waves I was feeling go through my brain when I cooked at the stove while simultaneously running the over-the-range microwave oven level with my head? The repairman scolded that one must carefully shut a microwave oven door, don’t slam it. The times that I have checked hotel microwave ovens with a RF meter (Acoustimeter AM-10) I have seen that the were emitting at a very high level, leaking microwave radiation. I no longer use a microwave oven, have a corded landline phone, pay a monthly fee to opt out of a smart meter, bought one of the few non-smart TVs at the store, and generally practice safe tech.

Research shows that metals in air pollution can lodge in the human brain. This includes magnetite which is ferrimagnetic. Is this a connection to some of the cases of electrosensitivities? I am curious about this because of my own exposures to automobile pollution and coal ash and others of the sources noted.

In 2016, responding to the study “Magnetite pollution nanoparticles in the human brain,” University of Pennsylvania Earth and Environmental Science professor Reto Giere wrote: ”…magnetite can be released into the environment through human activities. In PNAS, Maher et al, describe the abundant presence in the human brain of magnetite nanoparticles, some of which they attribute to air pollution. This finding could have major implications.”

Giere goes on list ways magnetite can impact human health including “possible biological disorders linked to the weak magnetic fields generated by cellular phones, electric power lines, and appliances or the high-field saturation effects from exposure to strong magnetic fields during MRI procedures.” See also Zhang W et al (2026) Brain Accumulation of Airborne Magnetite Nanoparticles under EarPhone/Smartphone-embedded Magnetic Fields Triggers Neurotoxicity, ACS Nano. This 2026 published study by Zhang et al in ACS Nano found that when mice were exposed to magnetite nanoparticles as well as emissions from cellphones and Bluetooth earbuds there was increased accumulation of nanoparticles in the brain and neurotoxic effects.

Iris Udasin (Rutgers) and Yael Stein (Hebrew University) in their 2020 research article “Electric hypersensitivity (EHS, microwave syndrome)- Review of Mechanisms” say magnetic crystals “could have an important role in brain effects of EMF.” They make some fitting recommendations such as favoring use of wired networks over wireless and ensuring that public places are made accessible for sensitive people.

Q 10 f) Occupational Monitoring

Yes, this is necessary. I remember a back to school night when the teacher asked the parents to go easy on her since she suffered from migraines. Besides a monitor installed directly over her head there was a box for collecting all 30 or so classmate cellphones and, since I understood from my own kids that the teens kept them on, that, it seemed to me could well be one of her triggers.

Q 11). Exposure assessments and risk evaluations and Q 16) highest priority research gaps

Children should be our highest priority and, if use of body phantoms for SAR compliance continues, we need sizes from fetus on up, unless, for instance, pregnant women are educated about device precautions, i.e. The BabySafe Project.

See an interesting 2025 paper on electronic article surveillance systems in the Journal of Radiological Protection, Schneeweiss et al.

Q5, p) Classification system for exposure-related characteristics

Yes, account for real world types of exposures and simultaneous exposures in a classification system.

Get measurements at real life locations and scenarios and also do device and antenna testings in places, natural or created, otherwise clear of RF.

There are already peer-reviewed studies to review. Quite frankly we have more than enough peer-reviewed studies indicating it is way past time to reduce and manage exposures. While I would advocate for the return of public pay phones on landlines, mobile connectivity obviously has its place in society. Are there frequencies that are more biocompatible? Other futuristic means of voice and data transmission?

9) Consumer disclosures

It is ridiculous that these 1996 FCC exposure guidelines still in use are only based on heating and exposure timespans of 6 min and 30 minutes. It's ironic that these standards are based on animal experiments yet the industry spokespeople undermine the impact of animal studies finding bioeffects. People need to know how out of

date and out of step FCC exposure limits are and understand the necessity to limit exposures.

These days pregnant women rest their wireless devices on their bellies, infants teethe on smartphones, kids sleep with their phone under their pillow, and some people carry multiple RF emitting devices on their person.

Medical caregivers wearing smartwatches move their hands over patients including those with implantable devices. Could this interfere with operation of implanted technology like pacemakers? We have studies showing an RFR effect on bacteria. Do we need to make sure the presence of RFR is not confounding various lab results?

There are patient populations more at risk, such as those with cardiovascular disease or autoimmune conditions i.e. inflammatory bowel diseases or psoriasis.

I would be thrilled to see public information campaigns and laws/ regulations related to tech hygiene. We could help break the spell of smartphone addiction leading to greater productivity, fertility, health and prosperity. As Environmental Health Trust General Counsel Joe Sandri says, industry needs to compete on safety.

This applies to the gamut: cell towers, WiFi networks and devices and internet of things appliances.

Device manufacturers can take needed steps and preserve customer choice. We have seen in settings that, upon receiving an Apple update, the Bluetooth we had switched off was switched back on by Apple. This did not happen the update we did this week— good!

Many offices have PCs or printers that came from the factory with WiFi and Bluetooth settings switched on even though the units are on an ethernet connection. These factory settings when on and not in use are needlessly adding to energy usage and electric bills, besides adding to the RFR exposure burden. Our nation could better

conserve energy and battery life/minerals if people were managing their device settings. I have seen it proposed that simple software updates could lessen RF exposure by, for example ,decreasing the constant handshakes the phone makes to the tower even when idle.

There is concern among cancer patients and their loved ones. The recent WHO-commissioned review of animal studies concludes "there is evidence that RF EMF exposure increases the incidence of cancer in experimental animals." That study was the most downloaded in Environment International in 2025.

While RFR may not have caused ignition in all cases, it could be fanning the cancer flames.

The American Cancer Society maintains webpages about cell towers, cell phones, smart meters and electromagnetic fields.

A dear friend had cancer. Tumor fields grew rapidly around her neck — externally! She suffered greatly until the tumors killed her. Industry and policymakers need to understand the depth of the pain and act now.

Paradigm shifts in thinking have pivoted on far less weighty of an axis of evidence than we have with wireless radiation already. Industry has drifted far from the maxim Safety First.

17) I**mproving coordination of EMF and RF research. Potential roles for public health agencies.**

Since human life is intertwined with the environment for food, clean air and water and since we, at times, find within the natural world therapies for human diseases I feel that HHS can, rightly so, assert itself among sister agencies like Interior and Agriculture and EPA for coordinated attention to this critical issue.

DARPA and the military have knowledge in this EMF realm, i.e .DARPA's Iceman Project to assess the cockpit EMF milieu. FAA comes to mind since there is a faraday cage-type concentration of

RFR in airplanes. (It is not unreasonable to wonder if some of the aggression and agitation we have seen occurring inflight relates to RFR intolerances. Perhaps airlines could compete by offering flight options where battery operated tech is sealed in fire-safe shielded bags or boxes during the duration of transport.)

The U.S. Fish and Wildlife Service could involve field biologists who use RF-emitting collars for wildlife tracking in collecting data on any observed damage to the animals that wore the devices. (See papers by Albert Manville, formerly with the U.S. Fish and Wildlife Service.)

18) Additional information:

Involving experts in academia is important. Also I recommend HHS look internationally, such as at limits and monitoring systems in other nations and projects like the European Union's Clue-H Cluster on Electromagnetic Fields and Health.

Thank you for this opportunity to share thoughts and observations. HHS is asking many of the right questions in this request for information. Your efforts are greatly appreciated.