Prospective defendants should still be advised to prepare for litigation, although actual liability is unlikely to result.


Given the IARC classification and the headlines that followed, the public will understandably feel alarm. News reports could turn the 10-year trickle of litiga-
tiffs’ attorneys can establish a causal relationship between cell phone radiofrequency electromagnetic field exposure and adverse health effects, regardless of the IARC’s alarming classification. Courts previously evaluated the science underlying claims of personal injury caused by electromagnetic fields and found it wanting. See, e.g., San Diego Gas & Elec. Co. v. Superior Court, 920 P.2d 669 (Cal. 1996). The science on the supposed danger associated with electromagnetic fields has not materially advanced since the 1990s, and only limited evidence supports the IARC’s finding, which ranked radiofrequency electromagnetic fields emitted from cell phones in the same cancer-risk classification group as pickles, coffee, and insecticides.

Second, even if a particular plaintiff could establish specific causation—a Daubert-proof causal link between radiation from radiofrequency electromagnetic fields and his or her particular disease—science has not linked radiofrequency electromagnetic field exposure to a “signature disease,” such as asbestosis for asbestos exposure or silicosis for silica exposure. Without a “signature disease,” plaintiffs’ attorneys, even the most experienced advocates, will find the burden of proof and expense of establishing specific causation between an exposure and a disease exceptionally daunting.

Third, as most of the appellate courts to address the matter have held, federal law probably preempts lawsuits of this kind. The Federal Communications Commission (FCC) has set standards, including standards for radiofrequency electromagnetic field emissions, to which all cell phones must conform, and federal law establishing these standards likely trumps contrary state law.

Thus, while the recent reporting on the alleged hazards of cell phone radiation will likely lead to litigation, and while prospective defendants should take steps to prepare themselves for this scenario, this litigation is unlikely to result in much actual liability.

**Cellular Phones and Radiofrequency Electromagnetic Fields**

Electromagnetic fields are a type of radiation emitted from all electric currents, natural or manmade. Radiofrequency electromagnetic fields are a particular category of electromagnetic fields, specifically those occupying the radio portion of the electromagnetic spectrum.

All cell phones emit radiofrequency electromagnetic fields. Cell phones operate by transmitting information between a low powered radio transmitter in a phone and a base station, usually a tower with a large antenna. When a cell phone is charged, it emits a low level of nonionizing radiation, radiofrequency electromagnetic fields. Ionizing radiation, such as x-rays and gamma rays, can strip electrons from atoms and molecules, changing cellular makeup and causing, at times, tumors. On the other hand, science has not determined whether nonionizing radiation, particularly in the levels emitted by cell phones, can directly affect genetic material, and radiofrequency electromagnetic field emission litigation will likely address this question in the future.
specific facilities that it licensed. See 100 FCC 2d 543 (1985). Excluded from this regulation were “relatively low-powered communications systems” such as cell phones. 2 FCC Rcd. 2064, 2065 ¶ 14 (1987). In 1993, prompted by the adoption of guidelines that set limits on these exposures by industry consortia, the FCC began the rulemaking process to set federal standards for

radiation from cell phones. 8 FCC Rcd. 2849 (1993).

While the FCC proceeded with rulemaking, Congress enacted the Telecommunications Act of 1996, which directed the FCC to complete federal standards within six months and to “make effective rules regarding the environmental effects of radiofrequency emissions[.]” Pub. L. No. 104-104, §704(b), 110 Stat. 56, 152 (1996); see 47 U.S.C. §332(c). The goals of this directive, according to the House Commerce Committee, which drafted this portion of the Telecommunications Act, were two-fold: (1) to safeguard cell phone users from potential hazards; and (2) to ensure that a hodgepodge of conflicting state standards did not retard the development of a nationwide wireless communications network. See H.R. Rep. No. 204, 104th Cong., 1st Sess. Pt. 1, at 94–95 (1995). As the committee report noted, “[a] high quality national wireless telecommunications network cannot exist if each of its component[s] must meet different [radiofrequency] standards in each community[.]” Id.

In August 1996, the FCC completed the rulemaking and issued an order setting the maximum radiofrequency electromagnetic field that a cell phone could emit. See 11 FCC Rcd. 15123, 15127 ¶ 9 (1996). All phones sold in the United States fall under that limit, though some popular phones come close. Additionally, under these standards, the FCC must authorize the sale of cell phones, and the manufacturer of a phone must certify that the equipment will not expose humans to levels of radiofrequency radiation in excess of the established limits. See Murray v. Motorola, Inc., 982 A.2d 764, 775–776 (D.C. 2009).

Previous Electromagnetic Field Radiation Litigation Led to Insignificant Liability

Commentators began to express concern about a link between electromagnetic field exposure and adverse health effects in the late 1980s, and it reached a peak in the 1990s. After widespread publicity about these potential hazards, plaintiffs initiated a number of lawsuits, a large majority of which courts dismissed.

As mentioned, Paul Brodeur, a well-known investigative reporter and author, published several articles in The New Yorker magazine in 1989 regarding potential hazards of electromagnetic field exposure. See, e.g., Paul Brodeur, The Hazards of Electromagnetic Fields I—Power Lines, The New Yorker (June 12, 1989). Brodeur’s previous articles on environmental hazards and health risks, including asbestos, had set off media frenzies that led to entire industries of litigation, and his writing on the hazards of electromagnetic fields drew the attention of many, including some plaintiffs’ attorneys.

According to the 1989 articles, the previous decades saw a marked increase in the number of electric power lines across the country, and these power lines emitted radiation in the form of electromagnetic fields. Citing epidemiological studies, the articles indicated that exposure to these electromagnetic fields was associated with adverse health effects, such as cancer and birth defects. Brodeur further suggested that various levels of government conspired with the utility industry to cover up and discredit evidence of an association between electromagnetic field exposure and adverse health effects.

Follow-up pieces by others in the media resulted in what one commentator called an “atmosphere of suspicion” concerning electromagnetic field exposure. Harold R. Piety, What We Don’t Know About EMF, 128 Pub. Util. Fort. 14, 16 (Nov. 15, 1991). That Brodeur did not have a motive to disclose the potential dangers of electromagnetic field exposure lent credibility to his arguments in the eyes of many commentators and readers. In contrast, the utility industry employed most of those who offered different views of the science at the time, a fact that led some to discount statements that proof of adverse health effects did not exist.


At one point in the early 1990s, it appeared that these predictions would prove correct, as plaintiffs’ attorneys filed lawsuits arising from electromagnetic field exposure as frequently as once a month. However, plaintiffs did not win verdicts in any of these lawsuits. In fact, courts dismissed nearly all the claims before trials. Plaintiffs had a difficult time proving causation, as the science underlying their claims never established a causal link between exposure and adverse health effect.
Neither the IARC Report nor Its Cited Studies Prove Causation

Plaintiffs alleging that they have suffered adverse health due to cell phone radiation will have difficulty proving causation. As discussed above, previous electromagnetic field-related litigation failed largely because the science available at the time did not establish credible general causation paradigms between exposure to electromagnetic fields and adverse health effects. While the May 31, 2011, IARC press statement classifying radiofrequency electromagnetic fields emitted by cellular phones as “possibly” carcinogenic to humans grabbed headlines, the report released shortly afterward describing the work on which that classification rested neither proffered nor relied on new science establishing such carcinogenicity.

Robert Baan, et al., Carcinogenicity of Radiofrequency Electromagnetic Fields, 12 The Lancet Oncology 624–626 (July 2011). Consequently, regardless of the uproar caused by the press release and the report, cell phone litigation plaintiffs probably will not succeed relying on the report or the studies that it cites.

In May 2011, an IARC working group consisting of 30 scientists from 14 countries met to assess the carcinogenicity of radiation from radiofrequency electromagnetic fields. While the IARC working group most extensively considered exposure through cell phones, radiofrequency electromagnetic fields also emanate from occupational sources such as industrial equipment, broadcast antennas, and medical devices. However, as the IARC working group acknowledged, most human exposure to radiofrequency electromagnetic fields stems from devices, such as cell phones, held close to someone’s body. Baan, supra, at 624.

The IARC had asked the working group members to classify various particles, materials, and radiation into categories that corresponded to the agents’ carcinogenicity to humans and the quantum of evidence indicating that degree of carcinogenicity. The classifications range from “carcinogenic to humans” to “probably not carcinogenic to humans.” Press Release No. 208, IARC Classifies, supra, at 4–6 (defining the possible classifications).

In performing the assessment, the IARC working group reviewed hundreds of past scientific articles but did not indepen-...
commonly associated with radiofrequency electromagnetic field exposure, glioma and acoustic neuroma, fall well short of meeting the standard for “signature diseases,” as evidenced by the fact that the IARC working group report did not list those conditions specifically as among the diseases that may be linked to radiofrequency electromagnetic field exposure, and the press release simply stated that the evidence of an association between the two diseases and cell phone use was “limited.” Press Release No. 208, IARC Classifies, supra, at 2.

The lack of a signature disease will likely prove an impediment to cell phone radiation litigation. Once a toxin is associated with a signature disease, plaintiffs’ attorneys can conduct screenings for that disease to find new clients more easily. Plaintiffs’ counsel also can invest heavily in developing the science of causation for just a single disease, rather than many, and could encounter difficulty finding appropriate experts to establish causation for the particular disease at issue in a case. Without a signature disease, plaintiffs’ attorneys will have difficulty identifying potential clients suitable for pursuing cell phone radiation claims. These attorneys will also need to find and demonstrate that experts qualify as experts to establish causation for whatever diseases plaintiffs allege that they developed in their cases, which will increase the attorneys’ expenses. These impediments promise to reduce the number of cell phone radiation-related lawsuits.

**FCC Standards Probably Preempt Cell Phone Radiation Litigation**

Under federal law, the FCC is charged with, among other things, promulgating standards for emissions from cell phones. Most, but not all, courts addressing the issue have ruled that this federal law conflicts with lawsuits that seek to impose liability for emissions from cell phones in compliance with all applicable FCC standards, and the federal law preempts such lawsuits. Courts adjudicating cell phone radiation claims henceforth likely will adopt this position as well.

Cell phone radiation lawsuits to date have not alleged that the cell phones at issue failed to comply with FCC standards for radiation, but, rather, that such standards are inadequate. See *Farina v. Nokia, Inc.*, 625 F.3d. 97, 122 (3d Cir 2010); *Murray v. Motorola, Inc.*, 982 A.2d 764, 775 (D.C. 2009). The circuits have split, therefore, on whether federal law preempts these lawsuits.

The *Farina* case illustrates the view that federal law preempts cell phone radiation litigation. There, a putative class consisting of Pennsylvania cell phone purchasers and lessees alleged that cell phones expose users to unsafe levels of radiofrequency electromagnetic fields when they hold their phones to their heads and that phones should not have been sold or leased without headsets. The putative class further alleged that this fact rendered untrue statements that cell phone manufacturers and others in the mobile phone industry made in advertisements, and, in that respect, those advertisements were deceptive. The U.S. District Court for the Eastern District of Pennsylvania ruled that federal law preempted the plaintiffs’ claims. On appeal, the United States Court of Appeals for the Third Circuit affirmed. The plaintiffs’ claims would “erect an obstacle to the accomplishment of the objectives of Congress[,]” specifically “protecting the health and safety of the public, [and] ensuring the rapid development of an efficient and uniform network, one that provides effective and widely accessible service at a reasonable cost.” *Farina*, 625 F.3d. at 105–107, 124–127; accord *Bennett v. T-Mobile USA, Inc.*, 597 F. Supp. 2d 1050, 1053 (C.D. Cal. 2008) (“a jury verdict finding cell phones unsafe because of the [radiofrequency electromagnetic fields that] they emit would “unequivocally trample upon the FCC’s authority to determine the maximum standard for RF emissions[,]”). The plaintiffs have petitioned the Supreme Court of the United States for a writ of certiorari. The Court, however, seems unlikely to grant the writ, judging by the fact that it requested the view of the United States on the writ petition, and the United States opposes granting the writ.


**Conclusion**

Though cell phone radiation litigation probably will not succeed, attorneys representing defendants and potential defendants can and should nonetheless recommend the following two measures to reduce exposure.

First, recommend that potential defendants continue to follow the science on the hazards of radiofrequency electromagnetic field exposure as it develops, to stay on the cutting edge of consumer safety. And recommend that potential defendants also document their consumer safety efforts informed by the science. While this science now does not appear to establish a link between radiofrequency electromagnetic field exposure and adverse health effects, conceivably the prevailing scientific view could change. In that event, defendants that could point to a record of inquiry into and adherence to state-of-the-art safety standards would have a potent defense during trials.

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Second, when representing defendants in state courts, defense attorneys should consider removal. Some states have more lenient standards for the admission of expert testimony, raising the possibility that a court could admit as evidence the questionable science cited in the IARC report. The IARC does plan to release a longer version of the report, although it probably will not include anything that would make the IARC cell phone findings more credible evidence. See Press Release 208, IARC Classifies, supra, at 1; Baan, et al., supra, at 624.

Also, federal courts tend to rule on issues of preemption more frequently than state courts. Given federal courts’ relative familiarity with preemption doctrine, it is more probable that they will rule that federal law preempts a radiofrequency electromagnetic field lawsuit. In sum, although it appears unlikely at this point that those involved in mobile telephony will incur significant liability for personal injuries caused by radiofrequency electromagnetic field emissions, defense attorneys advising those parties would do well by those clients by preparing them to defend themselves on the general causation front, given the potential number of claimants.