RETURNING TO *RUTHERFORD*: A CALL TO CALIFORNIA COURTS TO REJOIN THE LEGAL MAINSTREAM AND REQUIRE CAUSATION BE PROVED IN ASBESTOS CASES UNDER TRADITIONAL TORTS PRINCIPLES

Jason Litt,[a] Emily Cuatto,[b] & Jessica Di Palma[c] *

a. Jason Litt is a partner at Horvitz & Levy LLP, the largest law firm in the nation specializing exclusively in appellate litigation, where he has served as appellate counsel in toxic tort and products liability cases. In 2012, Mr. Litt had been part of the appellate team in several cases involving cutting-edge asbestos and product liability issues, including *O'Neil v. Crane Co.*, *Webb v. Special Electric Company, Inc.*, and *Ramos v. Benntag Specialties, Inc*.

b. Emily Cuatto is an associate at Horvitz & Levy LLP. She has served as appellate and trial counsel in toxic tort and products liability cases, including asbestos litigation.

c. Jessica Di Palma is a former appellate fellow at Horvitz & Levy LLP.

* The Coalition for Litigation Justice provided research support for this article. The opinions expressed are solely those of the authors.

INTRODUCTION

In the landmark case *Rutherford v. Owens-Illinois, Inc.*, the California Supreme Court declared that asbestos-injury plaintiffs—just like plaintiffs in other products liability actions—must prove causation "under traditional tort principles" by demonstrating that exposure to the defendant's product was a "substantial factor" contributing to the plaintiff's injury.[1] Thus, *Rutherford* made clear that plaintiffs must prove not merely exposure to the defendant's asbestos-containing product, but also that the exposure was of a sufficient nature and magnitude that it should be deemed a legal cause of the plaintiff's injury.[2] Yet, in the nearly two decades since *Rutherford* was decided, in *every* case where a plaintiff has established a threshold exposure to a defendant's asbestos-containing product, California appellate courts have held that the plaintiff established at least a triable issue on substantial factor causation, no matter what the evidence showed about the significance—or lack thereof—of the dose of asbestos received from that exposure.[3] In other words, once a plaintiff establishes an exposure to the defendant's asbestos-containing product, he or she is effectively exempted from proving causation under "traditional tort principles"—exactly what *Rutherford* held is *not* the law of California.

This article explores why the substantial factor causation element has been effectively read out of the law despite *Rutherford*'s mandate. Part of the answer is that courts have wrongly read *Rutherford* as endorsing the unsound theory espoused by certain plaintiffs' experts that "every exposure" contributes to plaintiff's aggregate dose of asbestos and therefore is a "substantial factor" contributing to the "risk" of developing disease. It's true

1. Rutherford v. Owens-Illinois, Inc., 941 P.2d 1203, 1206, 1213 (Cal. 1997).
2. *See id.*
3. *See infra* Part II.A.

that, to account for the scientific impossibility of tracing the actual cause of a cancerous growth to a particular asbestos exposure or series of exposures, the *Rutherford* court reconceived the nature of the injury caused by asbestos as the "*risk* of developing cancer" caused by inhalation of a toxic "*aggregate* dose" of asbestos. But the focus of the causation inquiry under that standard is not, as the experts assume, what theoretically increases risk; the focus is on whether the dose received was sufficient to be considered legally causative.

Ultimately, this article recommends that California courts reexamine their overly expansive reading of what *Rutherford* accepts as proof of legal causation. Under a proper application of *Rutherford*, a plaintiff may recover against a defendant only if his or her exposure to the defendant's product in particular caused the plaintiff to receive a dose of asbestos that was of a nature and quantity sufficient to be considered toxic to a reasonable degree of medical probability.[4] A plaintiff's general testimony that he came into contact with the defendant's asbestos-containing product at some point, followed by (unreliable and speculative) expert testimony that "every exposure" increased the plaintiff's risk of disease, is—without more—insufficient to satisfy this evidentiary burden.

Interpreting *Rutherford* as suggested would restore the fairness that the California Supreme Court was seemingly trying to bring to asbestos litigation in California, and would more closely align California law with that of the vast majority of other jurisdictions.

I. CALIFORNIA'S TWO-PRONG TEST FOR CAUSATION IN ASBESTOS CASES

A. Rutherford v. Owens-Illinois, Inc.

A proper understanding of the *Rutherford* causation standard must begin with the case itself.

Charles Rutherford contracted lung cancer in 1986, allegedly resulting from his exposure to respirable asbestos fibers at the Mare Island Naval Shipyard more than forty years earlier.[5] He and his family sued nineteen defendants, including Owens-Illinois, the manufacturer of asbestos-containing Kaylo insulation.[6] The jury found, in the first phase of a bifurcated trial, that Mr. Rutherford's cancer was caused by asbestos.[7] By

4. *See Rutherford*, 941 P.2d at 1219.
5. *Id.* at 1207.
6. *Id.* at 1207-08.
7. *Id.* at 1208.

the second phase, all defendants but Owens-Illinois had settled, so the extent of Owens-Illinois's liability was the only issue left for trial.[8]

Plaintiffs proceeded to put on testimony from Mr. Rutherford's coworkers that Kaylo had been used "extensively" throughout the shipyard, contained both amosite (more toxic) and chrysotile (less toxic) asbestos fibers,[9] and would produce visible dust when used.[10] Plaintiffs also presented medical testimony that Mr. Rutherford's cancer was "'dose-related'—i.e., that the risk of developing asbestos-related cancer increased as the total occupational dose of inhaled asbestos fibers increased."[11]

When it was time for the case to go to the jury, the superior court, using procedures it had adopted specially to deal with complex asbestos litigation, applied a burden-shifting jury instruction on the element of causation.[12] According to that instruction, once the plaintiffs had established Mr. Rutherford was exposed to Kaylo, the burden shifted to Owens-Illinois to prove that Kaylo was *not* the legal cause of Mr. Rutherford's cancer.[13] Following this instruction, the jury assigned Owens-Illinois 1.2% of the fault for plaintiffs' damages.[14]

Owens-Illinois appealed on the ground, among others, that the burden-shifting instruction was erroneous.[15] The intermediate appellate court agreed with Owens-Illinois, and the plaintiffs sought review in the California Supreme Court.[16]

In what has become the seminal California case concerning causation in asbestos injury litigation, the California Supreme Court held that burden-shifting is improper; plaintiffs in asbestos cases are required to carry their

8. *Id.*

9. The term "asbestos" refers to a group of fibrous minerals. Amosite and chrysotile are specific types of asbestos. *See* William L. Anderson et al., *The "Any Exposure" Theory Round II-Court Review of Minimal Exposure Expert Testimony in Asbestos and Toxic Tort Litigation Since 2008*, 22 KAN. J.L. & PUB. POL'Y 1, 5-7 (2012). Studies demonstrate that amosite, a long and rigid fiber of the amphibole variety, is far more toxic than chrysotile, a fiber of the serpentine variety. *Id.*; *see also* Megan A. Ceder, *A Dose of Reality: The Struggle with Causation in Toxic Tort Litigation*, 51 HOUS. L. REV. 1147, 1151-52 (2014); Joseph Sanders et al., *The Insubstantiality of the "Substantial Factor" Test for Causation*, 73 MO. L. REV. 399, 400-02 (2008).

10. *Rutherford*, 941 P.2d at 1209.

11. *Id.*

12. *Id.* at 1208.

13. *Id.*

14. *Id.* at 1209, 1225.

15. *Id.* at 1210.

16. *Id.*

burden to prove liability under "traditional tort principles" just like other plaintiffs asserting products liability claims.[17] Accordingly, the court held,

> [i]n the context of a cause of action for asbestos-related latent injuries, the plaintiff must *first* establish some threshold *exposure* to the defendant's defective asbestos-containing products, *and* must further establish in reasonable medical probability that a particular exposure or series of exposures was a "*legal cause*" of his injury, i.e., a *substantial factor* in bringing about the injury.[18]

In setting the standard for legal causation, the court approved the "substantial factor" test that derives from the "traditional tort principles" set forth in the Second Restatement of Torts.[19] Under the Second Restatement, an "actor's negligent conduct is a legal cause of harm to another if . . . his conduct is a *substantial factor* in bringing about the harm."[20] As the *Rutherford* court explained, California courts have "definitively adopted" the Second Restatement approach to legal causation.[21] California courts have said the substantial factor approach is "a clearer rule of causation"[22] than the traditional two-part rule of "but for" plus "proximate" causation,[23] and can better account for unique causation problems in which the "but for" test would result in a no-causation finding, but the defendant should nonetheless be held responsible for the plaintiff's injury.[24] As the *Rutherford* court put it, the substantial factor test "subsumes the 'but for' test" and therefore "generally produces the same results," but also "reach[es] beyond [the but for test] to satisfactorily address other situations," including where the conduct of two tortfeasors combines to produce injury (concurrent causes) or where the conduct of two tortfeasors is each sufficient to produce injury (independent causes).[25]

The *Rutherford* court believed the substantial factor approach was particularly suitable for asbestos cases because the "scientific uncertainty regarding the biological mechanisms by which inhalation of certain

17. *Id.* at 1211, 1213; *see also* Lineaweaver v. Plant Insulation Co., 37 Cal. Rptr. 2d 902, 906 (Ct. App. 1995) (rejecting plaintiff's argument that courts "should depart from traditional tort principles and shift the burden of proving causation to defendants in asbestos litigation").

18. *Rutherford*, 941 P.2d at 1223 (first & fourth emphasis added) (footnote omitted).

19. *Id.* at 1206-07, 1213.

20. RESTATEMENT (SECOND) TORTS § 431 (1965) (emphasis added); *accord Rutherford*, 941 P.2d at 1214.

21. *Rutherford*, 941 P.2d at 1214; *see also* Mitchell v. Gonzales, 819 P.2d 872, 878-79 (Cal. 1991).

22. *Rutherford*, 941 P.2d at 1214.

23. *Mitchell*, 819 P.2d at 876-78 (agreeing with commentary that "proximate" causation places undue emphasis on proximity in time and space, rather than factual causation).

24. *Rutherford*, 941 P.2d at 1214.

25. *Id.*; *see also Lineaweaver*, 37 Cal. Rptr. 2d at 905.

microscopic fibers of asbestos leads to lung cancer and mesothelioma" places such cases among those "other situations" in which the plain "but for" test is unsatisfactory.[26] Specifically, science cannot identify precisely the number of fibers needed to cause asbestos-related disease.[27] Nor can science identify which fibers among the aggregate number of inhaled fibers are responsible for causing cell mutations that lead to an individual's disease.[28] Thus, "[p]laintiffs cannot be expected to prove the scientifically unknown details of carcinogenesis, or trace the unknowable path of a given asbestos fiber."[29] The most plaintiffs can hope to prove based on existing medical knowledge is that their cancer was caused by asbestos and the risk of developing that cancer increased as their exposure to asbestos increased.[30] Accordingly, the court devised a causation rule that would "bridge this gap in the humanly knowable" by requiring asbestos-injury plaintiffs to prove no more than they realistically could prove: that their "exposure to defendant's asbestos-containing product in reasonable medical probability was a substantial factor in contributing to the aggregate *dose* of asbestos the plaintiff or decedent inhaled or ingested, and hence to the *risk* of developing asbestos-related cancer . . . ."[31]

The court then transformed its holding into a suggested jury instruction (now embodied in California Civil Jury Instruction 435)[32] to be used in future cases: "the plaintiff may meet the burden of proving that exposure to defendant's product was a substantial factor causing the illness by showing that in reasonable medical probability it was a substantial factor contributing to the plaintiff's or decedent's risk of developing cancer."[33] This instruction, the court believed, would assign the burden of proof on causation to the plaintiff, but would make clear the burden can be carried without proving that the particular "fibers from the defendant's product were a substantial factor

26. *Rutherford*, 941 P.2d at 1214, 1218.

27. *See id.* at 1219.

28. *Id.* at 1218.

29. *Id.* at 1219.

30. *Id.* at 1208-09; *see* Jane Stapleton, *The Two Explosive Proof-of-Causation Doctrines Central to Asbestos Claims*, 74 BROOK. L. REV. 1011, 1028 (2009).

31. *Rutherford*, 941 P.2d at 1219.

32. The California Civil Jury Instructions (CACI) are the standard form jury instructions approved by the Judicial Council of California for use in civil cases. CACI 435, concerning "Causation for Asbestos-Related Cancer Claims," provides: "A substantial factor in causing harm is a factor that a reasonable person would consider to have contributed to the harm. It does not have to be the only cause of the harm. . . . [*Name of plaintiff*] may prove that exposure to asbestos from [*name of defendant*]'s product was a substantial factor causing [his/her/[*name of decedent*]'s] illness by showing, through expert testimony, that there is a reasonable medical probability that the exposure was a substantial factor contributing to [his/her] risk of developing cancer."

33. *Rutherford*, 941 P.2d at 1223.

actually contributing to the development of the plaintiff's or decedent's cancer."[34]

The court acknowledged that the sufficiency of the evidence of causation would depend on the factual circumstances of each case, but made clear that some exposures would be too low to support a causation finding, even if those exposures contributed to the aggregate dose.[35] Specifically, the court directed that lower courts should take into account "the length, frequency, proximity and intensity of exposure, the peculiar properties of the individual product, any other potential causes to which the disease could be attributed (e.g., other asbestos products, cigarette smoking), and perhaps other factors affecting the assessment of comparative risk."[36] This information could guide the determination of "which exposures to asbestos-containing products contributed *significantly enough* to the total occupational dose to be considered 'substantial factors' in causing the disease."[37]

After broadly announcing the causation standard that would apply to future asbestos cases, the *Rutherford* court turned to the question of whether the incorrect allocation of the burden of proof required a new trial under the facts of the case before it.[38] The court concluded that the trial court's erroneous burden-shifting instruction was not prejudicial—the defendant was able to put on all the causation evidence it wanted to, and despite the instruction plaintiffs tried the case as if they had to prove causation.[39] The court concluded that the jury's low assessment of Owens-Illinois's comparative fault showed that the jury must have "accepted much of the defense's factual theory, concluding that exposure to Kaylo contributed a relatively small amount to decedent's cancer risk, but rejected defendant's argument that such a small contribution should be considered insubstantial."[40] The court thus affirmed the trial court's judgment.[41]

34. *Id.* at 1219.
35. *Id.* at 1206, 1220.
36. *Id.* at 1218.
37. *Id.* at 1206-07, 1220.
38. *Id.* at 1224.
39. *Id*. at 1224-25.
40. *Id.* at 1225 (emphasis omitted).
41. *Id.*

B. The Take-Away from Rutherford*: Plaintiffs Must Prove Causation with Competent Evidence Approximately Quantifying Exposure Levels Attributable to the Defendant's Product or Conduct.*

The *Rutherford* language about proving threshold exposure *and* a reasonable medical probability that the particular exposure was a "legal cause" of injury[42] boils down to a two-part test: (1) exposure at a quantifiable level, *plus* (2) substantial factor.

While the *Rutherford* court made clear that to establish the second part of the test (substantial factor) plaintiffs are not saddled with the impossible burden of showing that the particular fibers from a defendant's product actually caused the plaintiff's cancerous growth,[43] the court certainly did *not* intend to eliminate the plaintiff's burden to prove causation. To the contrary, preserving that burden was the entire point: "the plaintiff must, *in accordance with traditional tort principles*, demonstrate to a reasonable medical probability that a product or products supplied by the defendant, to which he became exposed, were *a substantial factor in causing his disease* or risk of injuries."[44] Put another way, *Rutherford* retained the concept of legal causation applicable in all products liability cases, and simply articulated a new standard for asbestos cases: a plaintiff must prove that the exposure made a substantial contribution to the plaintiff's aggregate dose of asbestos and, therefore, the plaintiff's risk of cancer, in the context of all his or her other exposures. In this way, the court balanced the plaintiff's interest in recovering for an injury (despite the practical inability to show the precise origins of cancer) against the defendant's right not to be held responsible[45]

42. *Id*. at 1223.

43. *Id.*

44. *Id.* at 1206-07 (emphases added). Notably, in *Lineaweaver v. Plant Insulation Co.*, 37 Cal. Rptr. 2d 902 (Ct. App. 1995), the Court of Appeal had reached a similar holding in an asbestosis case. Plaintiffs had generally been trying to distinguish *Lineaweaver* as inapplicable in cancer cases. By applying *Lineaweaver*'s analysis to cancer cases, *Rutherford* reinforced the importance of holding plaintiffs to their burden of proof on causation in all asbestos cases, thus indicating that the Court was dedicated to preserving that burden despite any unique difficulties of proof in such cases. *See* Herb Zarov et al., *Asbestos Litigation in California: The Creation and Retroactive Application of Special, Expansive, Asbestos-Only Rules of Liability—Part Two*, 30-14 MEALEY'S LITIG. REP.: ASBESTOS, Aug. 26, 2015, at 2 [hereinafter Mealey's Part Two] (explaining how modifications to the original *Rutherford* opinion made in response to Owens-Illinois's petition for rehearing illustrate that the court intended to preserve the requirement the exposure be substantial).

45. *See* RESTATEMENT (SECOND) OF TORTS, *supra* note 20, § 431, cmt. a ("The word 'substantial' is used to denote the fact that the defendant's conduct has such an effect in producing the harm as to lead reasonable men to regard it as a cause, using that word in the popular sense, in which there always lurks the idea of *responsibility*, rather than in the so-called 'philosophic sense,' which includes every one of the great number of events without which any happening would not have occurred.") (emphasis added).

where its contribution was not significant enough to be treated as a legal cause.

In striking that balance, the *Rutherford* court openly contemplated that there would be cases in which the plaintiff would fail to carry the burden to show the defendant's product was a legal cause. When addressing "the question of which exposures to asbestos-containing products contributed significantly enough to the total occupational dose to be considered 'substantial factors' in causing the disease," the court held that *the plaintiff* "should bear the burden of proof, *including the risk of nonpersuasion*, on that question."[46] The court noted that a plaintiff who "has proven exposure to inhalable asbestos fibers from several products" should not face an impossible challenge "in convincing a jury that a particular one of these product exposures, or several of them, were substantial factors in creating the risk of asbestos disease or latent injury."[47] Nonetheless, in order to meet the substantial factor test, the plaintiff would have to demonstrate that the exposure to a defendant's product presented more than a "negligible or theoretical" contribution to the plaintiff's risk of disease.[48]

In sum, *Rutherford*'s message is that asbestos-injury plaintiffs must carry their burden to prove legal causation; proof of "any" exposure alone is *not enough*; and, while plaintiff's burden is not insurmountable, some exposures are too insignificant to be considered legal causes.

II. CAUSATION IN CALIFORNIA ASBESTOS CASES SINCE *RUTHERFORD*: A DISAPPEARING ACT

A. The Trend Since Rutherford*: Exposure Is All That Matters.*

Despite the key takeaway from *Rutherford* that plaintiffs must prove first, exposure to a defendant's product, and second, that the exposure to the defendant's product was a substantial factor in contributing to the plaintiff's injury, courts ostensibly applying *Rutherford* consistently permit plaintiffs to equate exposure—including negligible and theoretical exposure—with

46. *Rutherford*, 941 P.2d at 1220 (emphasis added).

47. *Id.*

48. *Id.*; *see* Herb Zarov et al., *Asbestos Litigation in California: The Creation and Retroactive Application of Special, Expansive, Asbestos-Only Rules of Liability—Part One*, 30-14 MEALEY'S LITIG. REP.: ASBESTOS, Aug. 26, 2015, at 2 [hereinafter Mealey's Part One] ("*Rutherford* made clear that merely proving that exposure to the defendant's asbestos fibers was part of plaintiff's aggregate exposure would not be enough.").

causation.[49] In other words, in practice, the two parts of *Rutherford*'s causation test have merged into one.

The erosion of *Rutherford's* two-part test began with *Jones v. John Crane, Inc.*[50] There, the plaintiff, who was exposed to many asbestos-containing products, including thermal insulation, during his Navy service, developed cancer years later.[51] The plaintiff initially sued forty-six defendants, but only two remained at the time of trial, including John Crane, a valve and pump packing manufacturer.[52] The jury found the plaintiff's cancer was caused by John Crane's products.[53] On appeal, John Crane argued that the jury's causation finding was not supported by substantial evidence because the fibers released from its products, in particular, were negligible and comparable to background levels of asbestos present everywhere.[54]

The Court of Appeal rejected this argument, holding "the record amply support[ed] the jury's finding that [the plaintiff's] exposure to [the defendant's] products was a substantial factor contributing to the risk of his developing lung cancer."[55] This "ampl[e]" evidence consisted of expert testimony that "every exposure, including asbestos releases from defendant's packing and gasket products, contributed to the risk of developing lung cancer" and that "each of many separate exposures . . . constituted substantial factors contributing to [plaintiff's] risk of injury."[56] The court went on to say that even exposures no greater than background (ambient) levels that any person living in an urban setting experiences can be a substantial factor in contributing to disease under *Rutherford*.[57]

Thus, despite *Rutherford*'s statement that plaintiffs bear the burden to show that a given exposure "contributed *significantly enough* to the total occupational dose to be considered [a] 'substantial factor[]' in causing the disease" taking into account the factual circumstances of the exposure compared to other exposures,[58] the *Jones* court interpreted *Rutherford* as

49. Anderson et al., *supra* note 9, at 37; *see also* Mealey's Part One, *supra* note 48, at 3 (recent appellate decisions "completely abandon the most fundamental common law principles governing tort causation" and are even "irreconcilable with the relaxed, special rule set for in *Rutherford* itself.").

50. Jones v. John Crane, Inc., 35 Cal. Rptr. 3d 144 (Ct. App. 2005).

51. *Id.* at 148.

52. *Id.*

53. *Id.*

54. *Id.* at 150.

55. *Id.*

56. *Id.* at 151.

57. *Id.*

58. Rutherford v. Owens-Illinois, Inc., 941 P.2d 1203, 1220 (Cal. 1997).

permitting a finding of legal causation based on any exposure, including even ambient levels of asbestos.[59]

Another notable blow to *Rutherford* came in *Hernandez v. Amcord, Inc.*[60] In *Hernandez*, the plaintiff's decedent was a carpenter and construction worker who used the defendant's gun plastic cement "'[a] lot of times," although he could not state an approximate number.[61] When he opened bags of cement, it would create "visible dust around his face and clothing," and when he mixed the cement, it would create "'a little bit' of dust that got on his face and clothing."[62] The cement contained "a small amount of asbestos."[63] Based on these facts, the cement manufacturer—the last of twelve defendants in the case—moved for nonsuit on the ground the plaintiff had provided insufficient evidence the defendant's product was a substantial factor under the *Rutherford* test.[64] The trial court granted the motion, because neither of the plaintiff's expert witnesses opined that exposure to the defendant's product in particular was a substantial factor in causing the plaintiff's mesothelioma.[65]

The Court of Appeal reversed.[66] The court relied on the plaintiff's epidemiologist's testimony that if a worker was exposed to many different asbestos-containing products, "each of those products would contribute to an increased risk of asbestos-related disease"—without regard to whether any information was available from which the *amount* of exposure could be approximated.[67] The court held that "the evidence presented by appellant at trial, evaluated in a light most favorable to appellant, met the standard set forth in *Rutherford* and its progeny."[68] In so holding, the court overlooked the complete absence of any expert testimony linking *the defendant's particular product*—which contained only "a small amount of asbestos"[69]—to a significant dose of asbestos.

59. Steven D. Wasserman et al., *Asbestos Litigation in California: Can it Change for the Better?*, 34 PEPP. L. REV. 883, 898-99 (2007) (concluding that *Jones v. John Crane, Inc.*, 35 Cal. Rptr. 3d 144 (Ct. App. 2005) illustrates "how low the bar has dropped" on the substantial factor test in California).

60. 156 Cal. Rptr. 3d 90 (Ct. App. 2013).

61. *Id.* at 92-93.

62. *Id*. at 93.

63. *Id.*

64. *Id.* at 93, 95.

65. *Id*. at 95-96.

66. *Id.* at 92.

67. *Id.* at 94.

68. *Id*. at 92.

69. *Id*. at 93.

Hernandez's holding is irreconcilable with *Rutherford*'s holdings that some exposures are too insignificant to be legal causes, and that the plaintiff must prove the *defendant's product*—not just asbestos generally—was a substantial factor in the plaintiff's development of disease. If the *Hernandez* reasoning is taken at face value, a plaintiff may recover against any defendant who manufactured an asbestos-containing product the plaintiff came into contact with at some point, without regard to the significance of the dose of asbestos plaintiff received.

For instance, seizing on *Hernandez*, the Court of Appeal in *Strickland v. Union Carbide Corp.*, went even further to eliminate the plaintiff's burden of actually having to prove the defendant's particular product was a legal cause of the plaintiff's injury.[70] There, the court held "*[t]here need not be testimony specifically linking the defendant's product in isolation to the plaintiff's increased risk of developing cancer*."[71] Rather, the court concluded, plaintiffs can create a triable issue on substantial factor causation by presenting "expert testimony that there is a reasonable medical probability the defendant's product *can* cause the type of cancer at issue, and the plaintiff's (or decedent's) cumulative exposure to asbestos contributed to his or her disease."[72] *Strickland* all but ignored *Rutherford*'s requirement that there be some evidence that, to a reasonable medical *probability*, the *defendant's asbestos product* was a substantial factor in contributing to *the plaintiff's* injury.[73]

Any remaining semblance of *Rutherford*'s two-part test disappeared in *Izell v. Union Carbide Corp.*[74] In *Izell*, the plaintiff's decedent, who had owned a construction business, was exposed at construction sites to asbestos used in joint compound and gun plastic cement.[75] Union Carbide supplied asbestos to one of the joint compound manufacturers.[76] After the jury found against Union Carbide, Union Carbide appealed, arguing, among other

70. Strickland v. Union Carbide Corp., No. B234459, 2013 WL 2996570 (Cal. Ct. App. June 18, 2013).

71. *Id*. at *5 (emphasis added); *see* Donald G. Gifford, *The Challenge to the Individual Causation Requirement in Mass Products Torts*, 62 WASH. & LEE L. REV. 873, 909 (2005) (describing "the effect of the novel application of concurrent causation" in *Rutherford* as "impos[ing] liability without identification of the particular defendant that caused a particular plaintiff's injury").

72. *Strickland*, 2013 WL 2996570, at *5 (emphasis added).

73. *See* Rutherford v. Owens-Illinois, Inc., 941 P.2d 1203, 1206-07 (Cal. 1997).

74. 180 Cal. Rptr. 3d 382 (Ct. App. 2014); *see* Mealey's Part One, *supra* note 48, at 3 (*Izell*'s "holding simply eliminates any meaningful causation requirement in California asbestos litigation").

75. *Izell*, 180 Cal. Rptr. 3d at 386-87.

76. *Id*. at 387.

things, that the evidence of causation was insufficient.[77] Specifically, plaintiff's expert had testified that "'[a]ll of the asbestos together contributes to cause mesothelioma. The asbestos fibers don't come into the body labeled Union Carbide. They come in as asbestos fibers with certain physical, chemical, and biological principles. And those asbestos fibers, all of them together in total, contributed to cause this disease."[78] Union Carbide argued that this testimony could not "be squared with *Rutherford's* two-step causation test" because, under the expert's approach in which every exposure contributes to the overall increase in risk, only the first step (exposure) matters, rendering the second step (substantial factor causation) "'wholly unnecessary.'"[79]

The Court of Appeal flatly rejected Union Carbide's argument, going so far as to describe it as based on a "fallacy" that the expert's approach effectively dispensed with the substantial factor element.[80] According to the court, the expert's testimony "*is* the evidence that satisfies *Rutherford*'s second step" because "proof of exposure establishes legal causation only if the jury accepts [the] expert medical testimony that all exposures constitute a substantial factor contributing to the risk of developing mesothelioma."[81] The court continued, "[n]othing in *Rutherford* precludes a plaintiff from establishing legal causation through opinion testimony by a competent medical expert to the effect that every exposure to respirable asbestos contributes to the risk of developing mesothelioma."[82]

Thus, in the same breath as saying it was following *Rutherford*, the *Izell* court openly accepted the notion that proof of exposure alone "establishes legal causation" so long as the jury believes plaintiff's expert's testimony that "every exposure" (without respect to whether it was a significant or infinitesimal exposure) is a substantial factor that contributes to the risk of developing cancer.[83]

These cases are not outliers. All told, since *Rutherford* was decided in 1997, the California Courts of Appeal have applied *Rutherford*'s substantial factor causation test in nearly 100 published and unpublished opinions.[84] In

77. *Id*. at 394.

78. *Id*.

79. *Id*.

80. *Id.*

81. *Id*.

82. *Id*.; *see also* Davis v. Honeywell, 199 Cal. Rptr. 3d 583 (Ct. App. 2016) (holding that "every exposure" evidence is admissible under *Sargon Enterprises, Inc. v. University of Southern California*, 288 P.3d 1237 (Cal. 2014)).

83. *See Izell*, 180 Cal. Rptr. 3d at 394-95.

84. *See infra* notes 86-87 for examples of cases that have applied *Rutherford*'s substantial factor causation test. *See also* LEXISNEXIS, SHEPARD'S REPORT CONTENT ON THE APPELLATE

all of these cases, the defendants' liability turns entirely on step one of the *Rutherford* test: exposure.[85] *Not one* holds that the plaintiff failed to present sufficient evidence to create a jury question on substantial factor causation.[86]

HISTORY OF RUTHERFORD V. OWENS-ILLINOIS, INC., LEXIS (last visited Apr. 15, 2016) (showing approximately 100 published and unpublished California Court of Appeal cases applying *Rutherford*'s substantial factor test).

85. *See, e.g.*, Shiffer v. CBS Corp., 192 Cal. Rptr. 3d 346, 352 (Ct. App. 2015) (affirming summary judgment for defendant because plaintiff "did not meet his burden of producing competent and admissible evidence raising a triable issue of material fact on exposure and causation."); Collin v. Calportland Co., 176 Cal. Rptr. 3d 279, 283 (Ct. App. 2014) (affirming summary judgment for two defendants because "the evidence and reasonable inferences would preclude a reasonable trier of fact from finding (without speculating) that [plaintiff] was exposed to one of their asbestos-containing products"); Lee v. Clark Reliance Corp., No. B241656, 2013 WL 3677250, at *7 (Cal. Ct. App. July 15, 2013) ("Although [plaintiff] may have been exposed to asbestos fibers . . . plaintiff is unable to demonstrate cause-in-fact, namely a triable factual dispute that those fibers came from [defendant's] asbestos-containing product."); Scott v. Lennar Corp., No. A133890, 2013 WL 2284934, at *6 (Cal. Ct. App. May 22, 2013) (finding no causation based on medical evidence demonstrating "that plaintiffs' various ailments were neither caused nor exacerbated by exposure to asbestos, and that none of the plaintiffs suffer from asbestosis, asbestos-related lung disease, mesothelioma, or any other illness related to asbestos exposure") (footnote omitted); Smalley v. Pneumo Abex LLC, No. B223233, 2011 WL 1049506, at *1 (Cal. Ct. App. Mar. 24, 2011) (affirming summary judgment for defendant because "plaintiffs' only evidence of *exposure* to [defendant's] asbestos-containing . . . products was inadmissible hearsay") (emphasis added); Whitmire v. Ingersoll-Rand Co., 109 Cal. Rptr. 3d 371, 376 (Ct. App. 2010) (affirming summary judgment in favor of contractor because plaintiffs failed to create a triable issue that contractor exposed decedent to asbestos-containing insulation); Hall v. Warren Pumps LLC, No. B208275, 2010 WL 528489, at *1 (Cal. Ct. App. Feb. 16, 2010) (affirming trial court's finding that "defendants had no liability because they did not manufacture, sell or distribute the asbestos products that injured [plaintiff], nor did they have a duty to warn about using asbestos products with their pumps and valves"); Pollard v. Metalclad Insulation Corp., No. A112593, 2007 WL 731435, at *4 (Cal. Ct. App. Mar. 12, 2007) ("There was substantial evidence that [plaintiff] was not exposed to the [asbestos-containing product] distributed by [defendant]. And substantial evidence that [plaintiff] did not have an asbestos-related disease."); Klima *ex rel.* Prior v. Volkswagen of Am., Inc., No. A095614, 2003 WL 22172417, at *8 (Cal. Ct. App. Sept. 22, 2003) ("Plaintiff failed to produce either direct evidence that she was exposed to . . . brake dust [from defendant's product] or evidence sufficient to establish a threshold set of facts from which an inference of such exposure could logically or reasonably be drawn."); McGonnell v. Kaiser Gypsum Co., 120 Cal. Rptr. 2d 23, 25 (Ct. App. 2002) (affirming summary judgment for defendants based on decedent's deposition testimony demonstrating he had no knowledge of any exposure to defendants' products, let alone any of their products that contained asbestos).

86. *See, e.g.*, Marteney v. Union Carbide Corp., No. B252711, 2015 WL 6525311, at *1 (Cal. Ct. App. Oct. 28, 2015); Green v. CertainTeed Corp., No. A134983, 2015 WL 556407, at *2 (Cal. Ct. App. Feb. 10, 2015); *Izell*, 180 Cal. Rptr. 3d at 395; Paulus v. Crane Co., 169 Cal. Rptr. 3d 373, 375 (Ct. App. 2014); Hellam v. Crane Co., No. A138013, 2014 WL 1492725, at *6 (Cal. Ct. App. Apr. 16, 2014); Kent v. Warren Pumps, LLC, No. B243832, 2014 WL 346456, at *1 (Cal. Ct. App. Jan. 31, 2014); Hernandez v. Amcord, Inc., 156 Cal. Rptr. 3d 90, 100 (Ct. App. 2013); Strickland v. Union Carbide Corp., No. B234459, 2013 WL 2996570, at *5 (Cal. Ct. App. June 18, 2013); Bettencourt v. Hennessy Indus., Inc., 141 Cal. Rptr. 3d 167 (Ct. App. 2012); Spencer v. Supro Corp., No. B230680, 2012 WL 29788, at *1 (Cal. Ct. App. Jan. 6, 2012); Jones v. ConocoPhillips, 130 Cal. Rptr. 3d 571 (Ct. App. 2011); Galicinao v. McMaster-Carr Supply Co., No. B224915, 2011 WL 5079530, at *1 (Cal. Ct. App. Oct. 26, 2011); Saffold v. Bondex Int'l, Inc., No. B212270, 2011

In fact, in a particularly unfair development, the only time the Courts of Appeal hold that the second part of *Rutherford*'s two-step test is unsatisfied is when a *defendant* seeks to challenge a jury's failure to allocate fault to a nonparty tortfeasor.[87] Thus, in *Behshid v. Bondex*, for instance, the appellate court simultaneously held (1) that the plaintiff did not need to quantify the dose to recover from the defendant, but (2) that the defendant could not complain about the jury's failure to allocate fault to a nonparty because the defendant had not quantified the dose attributable to that nonparty.[88]

WL 3925728, at *4 (Cal. Ct. App. Sept. 8, 2011); Smith v. Pneumo Abex LLC, No. B217063, 2010 WL 3610136, at *7 (Cal. Ct. App. Sept. 17, 2010); Mahoney v. Georgia-Pac., LLC, No. A122038, 2009 WL 3451754, at *6 (Cal. Ct. App. Oct. 27, 2009) (noting "that *Rutherford* did not explicitly require that an asbestos plaintiff quantify the dosage of her exposure"); Clemmer v. Thorpe Insulation Co., No. A114714, 2009 WL 2973552, at *3 (Cal. Ct. App. Sept. 17, 2009); Walmach v. Wheeler, No. B203962, 2009 WL 2751149, at *7 (Cal. Ct. App. Sept. 1, 2009); Silvestro v. Kaiser Gypsum Co., No. B196906, 2009 WL 976820, at *5-6 (Cal. Ct. App. Apr. 13, 2009); Cunningham v. Buffalo Pumps, Inc., No. B198465, 2008 WL 4966519, at *3 (Cal. Ct. App. Nov. 24, 2008); Behshid v. Bondex Int'l, Inc., No. B194789, 2008 WL 2807226, at *6 (Cal. Ct. App. July 22, 2008); Le Sage v. Union Carbide Corp., No. A119010, 2008 WL 2516478, at *1 (Cal. Ct. App. June 20, 2008); Clemmer v. John Crane Inc., No. A114774, 2008 WL 1735879, at *5-6 (Cal. Ct. App. Apr. 16, 2008); Norris v. Crane Co., No. B196031, 2008 WL 638361, at *14 (Cal. Ct. App. Mar. 11, 2008); Morrison v. Copeland Corp., No. A115662, 2008 WL 225057, at *1 (Cal. Ct. App. Jan. 29, 2008); Bakkie v. Union Carbide Corp., No. A116231, 2007 WL 4206739, at *7 (Cal. Ct. App. Nov. 29, 2007); Sparks v. Keenan Properties, Inc., No. A115624, 2007 WL 2852569, at *12 (Cal. Ct. App. Oct. 3, 2007); Weber v. John Crane, Inc., 50 Cal. Rptr. 3d 71 (Ct. App. 2006); Quarles v. Advocate Mines Ltd., No. A110073, 2006 WL 3640022, at *12 (Cal. Ct. App. Dec. 14, 2006); Grahn v. Dillingham Const., Inc., No. A098607, 2006 WL 3262552, at *7 (Cal. Ct. App. Nov. 13, 2006); Hoeffer v. Rockwell Automation, Inc., No. A107353, 2006 WL 185479, at *3 (Cal. Ct. App. Jan. 26, 2006); Camizzi v. PRC-De Soto Int'l, Inc., No. B180039, 2006 WL 164992, at *1 (Cal. Ct. App. Jan. 24, 2006); Smith v. Viacom, Inc., No. A100867, 2005 WL 102929, at *3 (Cal. Ct. App. Jan. 19, 2005); Jones v. John Crane, Inc. 35 Cal. Rptr. 3d 144 (Ct. App. 2005); Patterson v. Keenan Properties, Inc., No. A099418, 2003 WL 22854258, at *1 (Cal. Ct. App. Dec. 3, 2003) ("We hold that the Pattersons' evidence in opposition to the motions was sufficient to create a triable issue of fact on the question of Patterson's exposure to asbestos supplied by Keenan and Slakey. Accordingly, we reverse the judgments."); McEuin v. Golden Gate Drywall, Inc., No. A100563, 2003 WL 22222202, at *1 (Cal. Ct. App. Sept. 26, 2003); Wright v. Dexter Corp., No. A100716, 2003 WL 21733537, at *1 (Cal. Ct. App. July 28, 2003); Reyes v. Ford Motor Co., No. A095207, 2003 WL 21235532, at *1 (Cal. Ct. App. May 29, 2003); Blankenship v. NACCO Materials Handling Grp., Inc., No. A098895, 2003 WL 649142 (Cal. Ct. App. Feb. 28, 2003).

87. *See, e.g.*, Pfeifer v. John Crane, Inc., 164 Cal. Rptr. 3d 112, 126 (Cal. Ct. App. 2013 ("[Defendant] offered no expert testimony that [plaintiff's] aggregate dose of asbestos from [co-defendant's] gaskets constituted a substantial factor in causing his cancer. Accordingly, the evidence did not mandate a finding that [co-defendant's] share of fault exceeded 0 percent."); *see* Mealey's Part Two, *supra* note 44, at 2-3.

88. *Compare* Behshid v. Bondex No. B194789, 2008 WL 2807226, at *7 (Cal. Ct. App. July 22, 2008) (rejecting the defendant's challenge to the plaintiff's evidence: "California does not require a specific link to a specific product demonstrating that a plaintiff used that product for a specific period of time. While the evidence with regard to the frequency of exposure, regularity of exposure, and proximity of asbestos coming directly from the use of Bondex was relevant, it was not mandated"), *with id.* at *10 (rejecting the defendant's argument that the trial court should have

As a practical matter, this trend among the appellate decisions sends a misleading message to trial courts and litigants that whenever there is exposure to a defendant's asbestos-containing product, the case should go to the jury regardless of the significance of the exposure. California trial courts have gotten the message, and are typically unwilling to grant summary judgment, nonsuit, or directed verdict so long as the plaintiff claims to remember coming into contact with the defendant's product, no matter how insignificant the defendant's apparent contribution to the plaintiff's overall toxic dose of asbestos. Moreover, once the case goes to the jury, the factual basis for a jury's finding for the plaintiff is effectively immune from review on a motion for judgment notwithstanding the verdict or on appeal.[89] As a result, defendants are now effectively required to convince a jury that its product was *not* a substantial factor if they are to avoid responsibility for the plaintiff's injury.

Thus, in practice, the law has devolved to the standard *Rutherford* expressly rejected: once the plaintiff has established an exposure to the defendant's products, the burden effectively shifts to the defendant to convince the jury that exposure to its product was *not* a substantial factor. That cannot be what *Rutherford* intended.

B. Explaining the Trend: Courts Avoid the Substantial Factor Component of the Causation Test by Incorrectly Interpreting Rutherford *as Accepting the "Every Exposure" Theory.*

As *Izell* illustrates, there are two central reasons for the irony that *Rutherford* has been interpreted to permit what *Rutherford* directly disapproved: a legal regime in which the burden is on the defense to disprove causation. The first is the California appellate courts' acceptance of the "every exposure" theory as sufficient to establish that a given exposure was a substantial factor. The second, related to the first, is the courts' misreading the *Rutherford* opinion as supporting acceptance of that theory.

Specifically, according to the "every exposure" or theory, "each and every exposure to asbestos during a person's lifetime, no matter how small

included a nonparty on the verdict form: "although all exposures to asbestos contribute to the development of asbestos-related diseases, in order for the jury to have attributed some of Dr. Behshid's disease to exposure from sanding tiles, Bondex Inc. was required to introduce substantial evidence from which a jury could conclude that the tiles were defective and were a cause of Dr. Behshid's disease. Simply providing proof that Dr. Behshid had been exposed to asbestos from the tiles was not substantial evidence").

89. *See generally, e.g.*, People v. Superior Court (Jones), 958 P.2d 393, 402 (Cal. 1998) (describing deferential substantial evidence standard of review applicable to appellate review of trial court factual findings).

or trivial" contributes to the plaintiff's risk of developing cancer.[90] As noted, California courts have held that expert testimony to this effect is sufficient evidence to establish substantial factor causation.[91] In so holding, these courts tend to recite *Rutherford*'s cautionary language that "the substantial factor test is a relatively broad one" and that "[u]ndue emphasis should not be placed on the term 'substantial.'"[92]

However, there are many reasons why *Rutherford* should not be read as permitting a theory that every exposure is a substantial factor,[93] notwithstanding its language about the "relatively broad" nature of the substantial factor test.

First, when it came to the particular question of which exposures would constitute a legal cause versus those that would not, *Rutherford* held that plaintiffs bear the burden of proving whether a particular exposure "contributed *significantly enough* to the total occupational dose to be considered [a] 'substantial factor[ ]' in causing the disease"[94] considering "the length, frequency, proximity and intensity of exposure, the peculiar properties of the individual product, any other potential causes to which the disease could be attributed (e.g., other asbestos products, cigarette smoking), and perhaps other factors affecting the assessment of comparative risk."[95] *Rutherford*'s reference to "significantly enough" and the factors relevant to that inquiry would have been superfluous if the court had intended to endorse a test under which every exposure to even a single asbestos fiber could

90. Mark A. Behrens & William L. Anderson, *The "Any Exposure" Theory: An Unsound Basis for Asbestos Causation and Expert Testimony*, 37 SW. U. L. REV. 479, 480 (2008).

91. *See, e.g.*, *Izell*, 180 Cal. Rptr. 3d at 395, n.5; *Jones*, 35 Cal. Rptr. 3d at 151; *Hernandez*, 156 Cal. Rptr. 3d at 100-01; *Paulus*, 169 Cal. Rptr. 3d at 377-78; *Smith*, 2010 WL 3610136, at *7; *Mahoney*, 2009 WL 3451754, at *2; *Norris*, 2008 WL 638361, at *14; *Hoeffer*, 2006 WL 185479, at *3; *Hellam*, 2014 WL 1492725, at *2.

92. Rutherford v. Owens-Illinois, Inc., 941 P.2d 1203, 1220 (Cal. 1997); *see, e.g.*, *Jones*, 35 Cal. Rptr. 3d 150; *Hernandez*, 156 Cal. Rptr. 3d at 100; *Paulus*, 169 Cal. Rptr. 3d at 378; Strickland v. Union Carbide Corp., No. B234459, 2013 WL 2996570, at *5 (Cal. Ct. App. June 18, 2013); *Smith*, 2010 WL 3610136, at *9; *Mahoney*, 2009 WL 3451754, at *5; *Norris*, 2008 WL 638361, at * 13; *Hoeffer*, 2006 WL 185479, at *4, *7; *Hellam*, 2014 WL 1492725, at *5.

93. Anderson et al., *supra* note 9, at 38-39; Mealey's Part Two, *supra* note 44, at 2-3 (explaining that all of the published and unpublished post-*Rutherford* California appellate court cases that have adopted the "every exposure/any risk" theory have incorrectly relied "on dictum from *Rutherford* that '[t]he substantial factor standard is a relatively broad one, requiring only that the contribution of the individual cause be more than negligible or theoretical.' . . . This reasoning confuses contribution to cause (actually participating) with contribution to risk (possibly participating) and thereby improperly conflates the traditional substantial factor test applicable in non-asbestos cases with the new, asbestos-only, *Rutherford* test.").

94. *Rutherford*, 941 P.2d at 1220 (emphasis added); *see id.* at 1218.

95. *Id.* at 1218.

constitute a "substantial factor."[96] Yet, of the California appellate courts applying *Rutherford*'s causation test, only two consider the "significantly enough" language in the context of evaluating the any exposure theory (and they appeared not to understand it).[97]

Second, relatedly, *Rutherford* observed that "a force which plays only an 'infinitesimal' or 'theoretical' part in bringing about injury, damage or loss is not a substantial factor."[98] Yet the "every exposure" theory encompasses exposures that are infinitesimal (e.g., some unquantified amount of exposure to dust from a product that contained "a small amount of asbestos" was a "substantial factor")[99] and even reaches merely "theoretical" contributions to injury (e.g., a product being deemed a substantial factor simply because it "can" cause cancer).[100] Although *Rutherford* leaves open the question of which exposures would be too insignificant to qualify as legal causes even though they exceed the "infinitesimal," it is plain that *Rutherford* intended, at the very least, that de minimis exposures would not be found to be legally causative.[101]

Third, the *Rutherford* court recognized multiple times throughout its opinion that different types of asbestos and different forms of asbestos-containing products have "*widely divergent* toxicities."[102] And it acknowledged that "'the probability that *any one* defendant is responsible for plaintiff's injury *decreases* with an increase in the number of possible

96. *See* Mealey's Part Two, *supra* note 44, at 2 (analyzing modifications the *Rutherford* Court made to its initial opinion in response to Owens-Illinois's petition for rehearing to demonstrate that the Court "did not intend to adopt the kind of meaningless 'any exposure' causation standard set forth in the *Izell* line of cases. . . .The Court modified each of the three sentences that Owens-Illinois had identified as problematic, changing the description of the plaintiff's burden of proof from showing merely that the 'exposure contributed to the plaintiff or decedent's risk of developing cancer' to proof that the exposure was 'a substantial factor contributing to the plaintiff's or decedent's risk' of disease.").

97. *Strickland*, 2013 WL 2996570, at *5 (reciting the "significantly enough" language but then ignoring it by holding that all a plaintiff needs to show is that the defendant's product "can cause the type of cancer at issue"); *Hoeffer*, 2006 WL 185479, at *3-4 (rejecting the defendant's argument that *Rutherford*'s "significantly enough" language indicates some exposures are too insignificant to be legally causative because "*Rutherford* does not require a plaintiff to prove that every exposure to a defendant's asbestos-containing product creates a cancer risk"—i.e., a non-answer to the defendant's point); *see also Izell*, 180 Cal. Rptr. 3d at 395 (endorsing expert testimony that any airborne asbestos fiber would be "significant enough to contribute to [plaintiff's] risk of contracting cancer"); *Smith*, 2010 WL 3610136, at *9, n.8 (reciting "significantly enough" language in the context of rejecting its use in a jury instruction).

98. *Rutherford*, 941 P.2d at 1214.

99. *Hernandez*, 156 Cal. Rptr. 3d at 93, 102.

100. *Strickland*, 2013 WL 2996570, at *5.

101. *See* Jonathan C. Mosher, *A Pound of Cause for a Penny of Proof: The Failed Economy of an Eroded Causation Standard in Toxic Tort Cases*, 11 N.Y.U. ENVTL. L.J. 531, 571-72 (2003).

102. *Rutherford*, 941 P.2d at 1221 (emphasis added); *see id.* at 1216, 1220.

tortfeasors.'"[103] The every exposure theory, however, treats all exposures exactly the same.[104] In *Izell*, for instance, the court found substantial evidence of causation based on "every exposure" evidence without considering the implications of the evidence that the particular asbestos-containing product at issue in the case contained only chrysotile asbestos—a form of asbestos with much less toxicity than the amosite-containing insulation at issue in *Rutherford*.[105]

Fourth, the *Rutherford* court adopted the substantial factor test because it was superior to the "but for" test, in the sense that it would ensure that defendants whose products contributed to the injury would not evade liability just because they could point to other contributors whose products alone could have caused the injury.[106] But that rationale does not suggest the court intended that *every* defendant would be liable, which is the practical result of the "every exposure" theory.[107]

Finally, *Rutherford* held that "shifting the burden of proof to asbestos defendants on the element of causation is generally unnecessary and incorrect under settled statewide principles of tort law."[108] But that is exactly what the "every exposure" theory does; it shifts the burden to the defense to show its product was *not* a substantial factor after the plaintiff has shown exposure.[109]

It is true that *Rutherford* itself mentioned the "every exposure" theory without expressly rejecting it.[110] In *Rutherford*, the plaintiffs presented expert testimony that every exposure contributes to a worker's aggregate dose of asbestos and therefore, the risk of cancer.[111] The California Supreme Court did not criticize that evidence as incapable of supporting the jury's finding of Owens-Illinois's liability, but the issue before the court in *Rutherford* was the burden of proof, not the legal validity of the "every exposure" theory. Moreover, the facts before the court involved amosite-

103. *Id.* at 1221 (emphases added).

104. *See* Anderson et al., *supra* note 9, at 38; Behrens & Anderson, *supra* note 90, at 490.

105. Izell v. Union Carbide Corp., 180 Cal. Rptr. 3d 382, 395 n.5 (Ct. App. 2014); *see* Mealey's Part Two, *supra* note 44, at 1-2.

106. *See Rutherford*, 941 P.2d at 1214; Mosher, *supra* note 101, at 572.

107. Mosher, *supra* note 101, at 572-73.

108. *Rutherford*, 941 P.2d at 1206; *see also id.* at 1222 (rejecting rule that "would require every joined defendant to exonerate itself upon nothing more than plaintiff's showing of exposure to defendants' asbestos products, some of which may have caused harm") (quoting Lineaweaver v. Plant Insulation Co., 37 Cal. Rptr. 2d 902, 908 (Ct. App. 1995)) (internal quotations omitted); *see* Mealey's Part Two, *supra* note 44, at 2.

109. Anderson et al., *supra* note 9, at 38-39.

110. *E.g.*, *Izell*, 180 Cal. Rptr. 3d at 394-95 & n.5; *see* Stapleton, *supra* note 30, at 1029 (describing *Rutherford* as "proceeding on the idea (a fiction) that every asbestos fiber was involved in the cancer mechanism").

111. *Rutherford*, 941 P.2d at 1224.

containing, friable Kaylo insulation that was used "extensively" throughout the plaintiff's worksite.[112] The court did not need to rely on the "every exposure" theory to conclude that the record raised a reasonable inference that the exposure was a substantial contributing factor to the plaintiff's toxic dose.[113] Consequently, the *Rutherford* court had no occasion to consider critically whether the "every exposure" theory would be sufficient to satisfy the substantial factor element of a plaintiff's case every time, especially in the types of cases in which it is being invoked today, many of which involve low-dose exposures to chrysotile asbestos, often on an intermittent or indirect basis.[114]

C. The Appellate Courts' Misapplication of Rutherford *Has Caused California to Be Out-of-Step with Rest of the Country.*

1. Most courts reject the "every exposure" theory as insufficient to establish substantial factor causation.

While the "every exposure" theory of causation has gained increasing traction in California in cases like *Izell*, the majority of courts elsewhere have rejected it as inherently inconsistent with the substantial factor requirement.[115] This trend includes many other jurisdictions that, like California, follow the Restatement's substantial-factor test for causation.[116]

For example, in a case in which the plaintiff alleged his mesothelioma was caused by exposure to asbestos-containing brakes and gaskets, the Pennsylvania Supreme Court rejected the notion that plaintiffs could establish causation simply by showing some exposure to the defendant's product and then presenting expert testimony that "every exposure" is a substantial factor: "[W]e do not believe that it is a viable solution to indulge

112. *See id.* at 1208-09.

113. *See* Behrens & Anderson, *supra* note 90, at 507 (arguing that while it might have been reasonable to entertain the every exposure theory in the context of in insulation cases, it is not appropriate to entertain that theory now that "most of the defendants are not asbestos companies or insulation suppliers" and are instead defendants whose products are de minimis sources of asbestos).

114. Victor E. Schwartz & Mark A. Behrens, *Asbestos Litigation: The "Endless Search for A Solvent Bystander"*, 23 WIDENER L.J. 59, 60-61, 70 & n.66 (2013); *see* Ceder, *supra* note 9, at 1152-53, 1155-56; Behrens & Anderson, *supra* note 90, at 494-95; Mealey's Part Two, *supra* note 44, at 1-2.

115. *See* Edward Slaughter et al., *A National Compendium of Causation Standards in Asbestos Litigation*, Hawkins Parnell Thakston & Young LLP (May 2015), http://www.hptylaw.com/media-publications-national-compendium-of-causation-standards-in-asbestos-litigation.html (listing California and Oregon as the only states to follow the California standard).

116. *See* Mealey's Part One, *supra* note 44, at 3 ("In the seventeen years since [*Rutherford*], no Court outside California has ever adopted it.").

in a fiction that each and every exposure to asbestos, no matter how minimal in relation to other exposures, implicates a fact issue concerning substantial-factor causation."[117]

The Texas Supreme Court reached the same conclusion.[118] In *Borg-Warner Corporation v. Flores*,[119] a mechanic claimed he developed asbestosis as a result of repeated low-dose exposures to asbestos brake pads. He won at trial merely by showing that he had inhaled some asbestos fibers from the defendant's product.[120] The Texas Supreme Court reversed, rejecting the notion that mere proof of *some* exposure alone is sufficient to establish causation: "While science has confirmed the threat posed by asbestos, we have not had the occasion to decide whether a person's exposure to 'some' respirable fibers is sufficient to show that a product containing asbestos was a substantial factor in causing asbestosis. . . . [W]e conclude that it is not."[121] The *Borg-Warner* court held that, under the Second Restatement's substantial factor test, a plaintiff in an asbestos case must provide defendant-specific evidence quantifying the approximate dose to which the plaintiff was exposed, and evidence that such a dose was a substantial factor in causing the plaintiff's disease.[122] Citing *Rutherford* with approval, the court held that the plaintiff's proof "need not be reduced to mathematical precision," but at the same time, "'[i]t is not adequate to simply establish that "some" exposure occurred.'"[123]

Most recently, the Ninth Circuit rejected the "every exposure" theory as inconsistent with the substantial factor test. In a case involving a naval worker allegedly exposed to asbestos aboard ships, the plaintiffs argued that testimony from "a medical expert who asserted that *every* exposure to asbestos above a threshold level is necessarily a substantial factor in the contraction of asbestos-related diseases" was sufficient to establish

117. Gregg v. V-J Auto Parts, Co., 943 A.2d 216, 226-27 (Pa. 2007); *see* Summers v. Certainteed Corp., 997 A.2d 1152, 1161 n.14 (Pa. 2010) (observing that the Pennsylvania Supreme Court "rejected the viability of the 'each and every exposure' . . . theory" in *Gregg*).

118. *See* Borg-Warner Corp. v. Flores, 232 S.W.3d 765, 773 (Tex. 2007).

119. *Id.* at 766.

120. *Id.* at 768.

121. *Id.* at 765-66; *see* Georgia-Pacific Corp. v. Bostic, 320 S.W.3d 588, 600 (Tex. App. 2010) (observing that "the 'each and every exposure' theory and the theory that there is no level of asbestos exposure below which the potential to develop mesothelioma is not present have been rejected"); Georgia-Pacific Corp. v. Stephens, 239 S.W.3d 304, 313, 319 (Tex. App. 2007) (evidence that plaintiff used defendant's asbestos-containing product "quite a bit" and on a "substantial" number of jobs was insufficient to show causation because plaintiff did not quantify the exposure).

122. *Borg-Warner Corp.*, 232 S.W.3d at 773.

123. *Id.* (alteration in original).

causation.[124] The Ninth Circuit disagreed. Under the substantial factor standard, "[e]vidence of only minimal exposure to asbestos is insufficient; there must be 'a high enough level of exposure that an inference that the asbestos was a substantial factor in the injury is more than conjectural.'"[125] Accepting the expert's "every exposure" testimony would create "precisely the sort of unbounded liability that the substantial factor test was developed to limit."[126]

Other jurisdictions have also precluded plaintiffs' experts from testifying about the "every exposure" theory. For example, a federal district court in Ohio held that such testimony is inadmissible because it cannot, as a matter of law, satisfy the substantial-factor test: "[Plaintiff's experts] testified that every exposure to asbestos [plaintiff] had during his working career, no matter how small, was a substantial factor in causing his peritoneal mesothelioma. . . . If an opinion such as [this] would be sufficient for plaintiff to meet his burden, the Sixth Circuit's 'substantial factor' test would be meaningless."[127] The Sixth Circuit affirmed that ruling.[128] Other courts have taken a similar approach.[129]

In moving in the opposite direction from these cases based on an incorrect reading of *Rutherford* as endorsing the "every exposure" theory, California courts have become outliers. Indeed, it should come as no surprise that plaintiffs from Texas—which, as just noted, has expressly rejected the "every exposure" theory—have "charge[d]" into California to file suit.[130]

124. McIndoe v. Huntington Ingalls Inc., Nos. 13-56762, 13-56764, 2016 WL 1253903, at *5 (9th Cir. Mar. 31, 2016).

125. *Id*. at *4 (quoting Lindstrom v. A-C Prod. Liab. Tr., 424 F.3d 488, 492 (6th Cir. 2005)).

126. *Id*. at *5.

127. Bartel v. John Crane, Inc., 316 F. Supp. 2d 603, 611 (N.D. Ohio 2004), *aff'd sub nom.* Lindstrom v. A-C Prod. Liab. Trust, 424 F.3d 488 (6th Cir. 2005).

128. *See Lindstrom*, 424 F.3d at 498 ("[Plaintiffs' argument] appears to be that a showing of any level of asbestos exposure attributable to [defendant's] products was sufficient for the court to have entered a judgment in their favor. . . . We reject [plaintiffs'] argument on this point.").

129. For instance, in *Sclafani v. Air and Liquid Systems Corp.*, the district court held that the plaintiff's "every exposure above background" theory did not satisfy *Rutherford* because it "would render the 'substantial factor' prong of the causation test meaningless." Sclafani v. Air & Liquid Sys. Corp., No. 2:12-cv-3013-SVW-PJW, 2013 WL 2477077 (C.D. Cal. May 9, 2013), at *4. The court reasoned: "If 'each and every exposure' is a substantial factor in leading to the development of mesothelioma, then all a plaintiff would have to do is prove 1) that he had mesothelioma; and 2) that he was exposed to asbestos at some time. Similar opinions have been rejected on precisely this basis." *Id*.; *see also* Sclafani v. Air & Liquid Sys. Corp., 14 F. Supp. 3d 1351, 1356 (C.D. Cal. 2014) (noting inadmissibility of "every exposure" theory); Yates v. Ford Motor Co., 113 F. Supp. 3d 841, 847 (E.D.N.C. June 29, 2015) (finding "reasoning for exclusion of evidence grounded in the 'each and every exposure' theory persuasive").

130. Justin Scheck, *Silicosis: Breathing Down on California*, The Recorder, June 6, 2005, at 1.

2. Most courts require some quantification of the dose.

Another way in which California courts, particularly those that accept the "every exposure" theory, have misinterpreted *Rutherford*, leading to a departure from how other jurisdictions approach the substantial factor issue, is by ignoring *Rutherford*'s language that the exposure must be "significant enough" to be considered a legal cause in light of factors including *"*the length, frequency, proximity and intensity of exposure."[131]

In *Lohrmann v. Pittsburgh Corning Corp*., the Fourth Circuit held that asbestos-injury plaintiffs must present "evidence of exposure to a specific product on a regular basis over some extended period of time in proximity to where the plaintiff actually worked" in order to establish causation.[132] This causation test has been widely adopted by other jurisdictions.[133]

For instance, the Nevada Supreme Court recently chose to adopt the *Lohrmann* test as striking the right balance between "the rights and interests" of manufacturers and claimants and "provid[ing] helpful evaluative guidance in distinguishing cases in which the plaintiff can demonstrate that the defendant's product likely caused his injury from those in which he cannot so show due to minimal exposure to the defendant's product."[134]

The Nevada Supreme Court adopted the *Lohrmann* test after expressly rejecting *Rutherford* as being, in the Nevada Supreme Court's perception, an undesirable alternative.[135] The Nevada Supreme Court reasoned that, in treating "every non-negligible exposure to risk as a factual cause,"[136] the *Rutherford* test does "not strike the proper balance, as its extraordinarily relaxed nature does not afford enough protection for manufacturers that may not have caused the resulting disease."[137]

The Nevada Supreme Court appropriately criticized the *Rutherford* test as interpreted by California's intermediate appellate courts. But it is not *necessary* to read *Rutherford* as striking a meaningfully different balance

131. Rutherford v. Owens-Illinois, Inc., 941 P.2d 1203, 1218 (Cal. 1997).

132. 782 F.2d 1156, 1162-63 (4th Cir. 1986).

133. *See* Edward Slaughter et al., *supra* note 115 (listing Arizona, Arkansas, Colorado, the District of Columbia, Georgia, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Utah, Washington, and Wyoming as the states that have adopted the *Lohrmann* test).

134. Holcomb v. Georgia Pacific, LLC, 289 P.3d 188, 196 (Nev. 2012).

135. *Id.* at 194-96.

136. *Id.* at 194 (quoting Stapleton, *supra* note 30, at 1029).

137. *Id.*; *see* Joseph Sanders, *The "Every Exposure" Cases and the Beginning of the Asbestos Endgame*, 88 TUL. L. REV. 1153, 1165 (2014) (describing the *Rutherford* test as unconstrained by the factors articulated in the *Lohrmann* test); *id.* at 1173 (characterizing *Rutherford* as "the infinitesimal risk test").

than *Lohrmann*. Rather, *Rutherford* was similarly concerned about striking a good balance, and agreed that the length, frequency, proximity and intensity of exposure matters.[138] Indeed, *Rutherford* went further than *Lohrmann* by considering the relative toxicity of the type of asbestos-containing product at issue,[139] an important factor in evaluating whether the defendant's product was actually causative in the types of low-dose chrysotile cases that are so prevalent today.[140]

Importantly, *Rutherford*'s phrase "contributed *significantly enough* to the total occupational dose"[141] indicates that the plaintiff's burden includes the need to connect the defendant's product to a quantifiable level of exposure that could reasonably be considered a substantial contribution to the plaintiff's cancer-causing dose.[142] Even if plaintiffs cannot always quantify the dose from a defendant's product with mathematical precision,[143] they should still be required to provide a description of their exposures with sufficient specificity and detail that an expert can reasonably and reliability estimate the quantity of the dose received by the plaintiff. Thus, requiring plaintiffs to provide at least some evidence concerning the particular qualities of the product and the circumstances of the plaintiff's exposure (i.e., length, frequency, proximity, and duration) is the bare minimum level of information needed to establish whether exposure to the defendant's product made a meaningful contribution to the plaintiff's toxic dose of asbestos.[144]

138. David E. Bernstein, *Getting to Causation in Toxic Tort Cases*, 74 BROOK. L. REV. 51, 56-57 (2008) (describing *Lorhmann* as attempting to achieve a balance that would "to reduce the evidentiary burden on plaintiffs while still absolving defendants who were not responsible for plaintiffs' injuries").

139. Rutherford v. Owens-Illinois, Inc., 941 P.2d 1203, 1216, 1220-21 (Cal. 1997).

140. *See* Lineaweaver v. Plant Insulation Co., 37 Cal. Rptr. 2d 902, 907 (Ct. App. 1995) (describing *Lohrmann* test as a "de minimis standard of causation" and explaining that "[a]dditional factors may also be significant in individual cases, such as the type of asbestos product to which plaintiff was exposed, they type of injury suffered by plaintiff, and other possible sources of plaintiff's injury").

141. *Rutherford*, 941 P.2d at 1220 (emphasis added); *see id*. at 1218.

142. Anderson et al., *supra* note 9, at 38; *see also* Robert W. Loewen, *Causation in Toxic Tort Cases: Has the Bar Been Lowered?*, 17 NAT. RESOURCES & ENV'T 228, 230 (2003) (commenting that when *Rutherford* referred to "increased risk," it was referring to "the significance of *the quantity of asbestos fibers* contributed by the defendant in proportion to the aggregate dose") (emphasis added). Although *Rutherford* "did not *explicitly* require that an asbestos plaintiff quantify the dosage of her exposure," Mahoney v. Georgia-Pacific, LLC, No. A122038, 2009 WL 3451754, at *6 (Cal. Ct. App. Oct. 27 2009) (emphasis added), that is not to say the language quoted in the text did not impose that requirement at least *implicitly*, as the only practical way to show the exposure was "significant enough."

143. *See* Borg-Warner v. Flores, 232 S.W.3d 765, 773 (Tex. 2007) (although "mathematical precision" is not required, some approximate quantification of dose is required).

144. *See* Anderson et al., *supra* note 9, at 1-2.

Some California courts have recognized in principle that a plaintiff "cannot prevail against a defendant without evidence that the plaintiff was exposed to asbestos-containing materials manufactured or furnished by the defendant *with enough frequency and regularity* as to show a reasonable medical probability that this exposure was a factor in causing the plaintiff's injuries."[145] *All* California courts should recognize that this is, indeed, what *Rutherford* requires. This would necessarily result in plaintiffs having to produce more than "every exposure" evidence, and would thereby restore some fairness for defendants[146] and mitigate California's reputation as a comparatively lenient jurisdiction attractive to forum-shopping plaintiffs whose cases unduly burden California courts and juries.[147]

III. REVISITING AND REINVIGORATING *RUTHERFORD*

As explained in Part I.B, *Rutherford* aimed at achieving a balance between plaintiffs' and defendants' interests. Under *Rutherford*, plaintiffs are not required to prove the unknowable: which fibers actually caused their cancer.[148] But, to ensure that only those defendants who can fairly be considered responsible for the plaintiff's injury are held liable, *Rutherford* still requires plaintiffs to prove the defendant's product played a significant enough role to be considered a legal cause.[149]

It is safe to assume the *Rutherford* court did not intend, when it reaffirmed the plaintiff's burden to prove causation, that the lower courts would effectively eliminate that burden altogether. There is certainly nothing

145. Weber v. John Crane, Inc., 50 Cal. Rptr. 3d 71, 75 (Ct. App. 2007) (emphasis added); *see Pfeifer*, 164 Cal. Rptr. 3d at 123-24 (holding that, as a matter of law, a jury could not allocate fault to sources of asbestos as to which "the record discloses no evidence quantifying Pfeifer's exposure"); *Whitmire*, 109 Cal. Rptr. 3d at 384 (holding that "plaintiffs have presented insufficient evidence that Whitmire was actually exposed to Bechtel-attributable asbestos . . . with sufficient frequency to create a reasonable probability that this exposure contributed to his disease"); *Lineaweaver*, 37 Cal. Rptr. 2d at 906 ("Many factors are relevant in assessing the medical probability that an exposure contributed to plaintiff's asbestos disease. Frequency of exposure, regularity of exposure, and proximity of the asbestos product to plaintiff are certainly relevant, although these considerations should not be determinative in every case. . . . Additional factors may also be significant in individual cases, such as the type of asbestos product to which plaintiff was exposed, the type of injury suffered by plaintiff, and other possible sources of plaintiff's injury.").

146. Bernstein, *supra* note 138, at 72 (permitting slight exposures to asbestos fibers to constitute causation allows plaintiffs to sue every entity that may have contributed to plaintiff's asbestos exposure, "no matter how minimal the alleged relative or absolute contribution, and then coerce settlements from them all on pains of potentially being held responsible for damages attributable primarily to other entities responsible for much greater asbestos exposure").

147. Wasserman et al., *supra* note 59, at 884-86; *see also* Anderson et al., *supra* note 9, at 3-4; CAL. CIV. PROC. CODE. § 340.2 (2006) (giving mesothelioma cases trial priority).

148. Rutherford v. Owens-Illinois, Inc., 941 P.2d 1203, 1223 (Cal. 1997).

149. *Id.* at 1218.

in *Rutherford* suggesting that the court intended to take the issue of causation off the table in cases involving low-dose exposures to chrysotile asbestos, which bears little resemblance to the amosite-containing insulation that was at issue in *Rutherford*. But through misapplication of the case and acceptance of the "every exposure" theory, that is effectively what has happened, leading "'peripheral defendants' to bear "'the majority of the costs of awards relating to decades of asbestos use.'"[150]

Going forward, there are several steps litigants and California courts should take to restore the balance *Rutherford* sought to achieve.

1. The California Supreme Court should revisit *Rutherford* and reject the "every exposure" theory.

Although the "every exposure" theory is inconsistent with *Rutherford* for the reasons described in Part II.B, as *Izell* demonstrates, the California appellate courts seem to think otherwise. Intervention by the California Supreme Court is necessary to put appellate courts back on the right path. The court has declined several opportunities to review the issue,[151] but it is ripe for the court's consideration.

2. Trial courts should exercise their gatekeeping function to keep out unreliable "every exposure" testimony.

While courts and litigants are waiting for the California Supreme Court to weigh in on the *legal* validity of the "every exposure" theory under *Rutherford*'s substantial factor test, litigants can and should still attack such expert testimony as lacking any *factual* foundation under the evidentiary rules governing the admissibility of expert testimony—rules that supply a

150. *See* Schwartz & Behrens, *supra* note 114, at 60-61 ("Most of the primary historical asbestos defendants, including virtually all manufacturers of asbestos-containing insulation products, eventually sought bankruptcy court protection, resulting in a wave of bankruptcies between 2000 and 2002. Following the bankruptcies of the traditional thermal insulation defendants, plaintiffs' attorneys shifted their focus towards 'peripheral and new defendants associated with the manufacturing and distribution of alternative asbestos-containing products such as gaskets, pumps, automotive friction products, and residential construction products.'"); *see also* Mealey's Part One, *supra* note 48, at 1-2.

151. *E.g.*, Izell v. Union Carbide Corp., 180 Cal. Rptr. 3d 382 (Ct. App. 2014), *review denied*, No. S223511, 2015 Cal. LEXIS 990 (Feb. 18, 2015); Strickland v. Union Carbide Corp., No. B234459, 2013 WL 2996570 (Cal. Ct. App. June 18, 2013), *review denied*, No. S212424, 2013 Cal. LEXIS 7464 (Sept. 11, 2013). Norris v. Cane Co., No. B196031, 2008 WL 638361 (Cal. Ct. App. Mar. 11, 2008), *review denied*, No. S162878, 2008 Cal. LEXIS 7899 (June 25, 2008).

basis for exclusion of the testimony regardless of whether the testimony is legally sufficient to prove causation.[152]

In *Sargon Enterprises, Inc. v. University of Southern California*, the California Supreme Court held that courts must exercise their substantial gatekeeping responsibility to examine the data and reasoning underlying an expert's opinions to see if colorable logic, and not mere speculation, supports those opinions.[153] Courts must further test whether the expert's methodology will allow the jury to meaningfully evaluate how the expert arrived at that opinion.[154] The court is duty-bound to exclude expert testimony that fails to show how the material relied upon logically supports the expert's opinions, that is speculative, or that does not comport with constitutional, statutory, or decisional law.[155]

As other commentators have explained, the "every exposure" theory does not satisfy these criteria for admissibility.[156]

First, in many cases, experts base their opinion that every exposure is a substantial factor on the assumption that all contributions to dose matter because asbestos-related cancers are dose-responsive diseases.[157] But the notion that every exposure is a substantial contributing factor to the cancer-causing dose defies the very concept of the disease being-dose responsive. If a disease is dose-responsive, that means it is triggered only after receipt of a *sufficient* dose above some threshold—not just any dose.[158] It is inherently illogical to claim, on the one hand, that a disease is dose-responsive and then, on the other hand, claim that *every* exposure is a substantial factor regardless of its relationship to the total dose it took to exceed the requisite threshold.[159] Simply put, the theory that every single exposure makes a substantial contribution to a dose-responsive disease makes no sense.[160]

152. *See* CAL. EVID. CODE §§ 801, 802 (2009).

153. 288 P.3d 1237 (Cal. 2014).

154. *Id.* at 1250-52.

155. *Id.*

156. Anderson et al., *supra* note 9, at 17-23.

157. *E.g.*, *Rutherford*, 941 P.2d at 1209; Anderson et al., *supra* note 9, at 12; Behrens & Anderson, *supra* note 90, at 489; Bernstein, *supra* note 138, at 67.

158. Anderson et al., *supra* note 9, at 1 n.2, 8-9; Behrens & Anderson, *supra* note 90, at 483-86.

159. *See* Anderson, *supra* note 9, at 9-10.

160. Betz v. Pneumo Abex, LLC, 44 A.3d 27, 56 (Pa. 2012) ("[O]ne cannot simultaneously maintain that a single fiber among millions is substantially causative, while also conceding that a disease is dose responsive."); *see also* Bostic v. Georgia-Pacific Corp., 439 S.W.3d 332, 356 (Tex. 2014) ("[A]n expert opinion embracing the any exposure theory while recognizing that the disease is dose-related 'is in irreconcilable conflict with itself'"); Howard *ex rel.* Estate of Ravert v. A.W. Chesterton Co., 78 A.3d 605, 608 (Pa. 2013) ("The theory that each and every exposure, no matter how small, is substantially causative of disease may not be relied upon as a basis to establish

Similarly, many experts base their "every exposure" opinion on studies and government regulations suggesting there is "no safe dose."[161] But just because there is no *known* "safe" dose does not mean every dose is therefore causative.[162] The irrationality of the "no safe dose" opinion is particularly obvious in the many cases (*Jones* excepted) where it is undisputed that ambient levels of asbestos are not causative.[163] It cannot be true that "every exposure" to the release of fibers from an asbestos-containing product, regardless of the quantity or toxicity of the fibers at issue, is a substantial factor when ambient levels of asbestos are not.[164] Also, regulatory standards setting maximum thresholds for the release of asbestos fibers are an inappropriate basis for expert causation opinions because such standards are adopted for precautionary reasons, not because a causative relationship has actually been established at everything above those levels.[165]

substantial-factor causation for diseases that are dose-responsive"); Henricksen v. ConocoPhillips Co., 605 F. Supp. 2d 1142, 1165 (E.D. Wash. 2009) ("The use of the no safe level or linear 'no threshold' model for showing unreasonable risk 'flies in the face of the toxicological law of dose-response, that is, that ''the dose makes the poison.'''")

161. Anderson et al., *supra* note 9, at 12; Behrens & Anderson, *supra* note 90, at 489-90; *see, e.g.*, Smith v. Pneumo Abex LLC, No. B217063, 2010 WL 3610136, at *7 (Cal. Ct. App. Sept. 17, 2010); Mahoney v. Georgia-Pac., LLC, No. A122038, 2009 WL 3451754, at *2-3 (Cal. Ct. App. Oct. 27, 2009); Cunningham v. Buffalo Pumps, Inc., No. B198465, 2008 WL 4966519, at *2-3 (Cal. Ct. App. Nov. 24, 2008).

162. *See* Anderson et al., *supra* note 9, at 38; Behrens & Anderson, *supra* note 90, at 499 (recognizing the "very large difference between stating that the threshold is not known and claiming that there is no threshold at all"); *see also* Bernstein, *supra* note 138, at 68; *Bostic*, 439 S.W.3d at 340-41 (rejecting plaintiffs' every exposure theory on the ground that "[j]ust because we cannot rule anything out does not mean we can rule everything in") (quoting Smith v. Ford Motor Co., No. 2:08-CV-630, 2013 WL 214378, at *3 (D. Utah Jan. 18, 2013)); Butler v. Union Carbide Corp., 712 S.E.2d 537, 551 (Ga. Ct. App. 2011) ("The claim that there is no known safe level of exposure does not mean that none exists.").

163. Behrens & Anderson, *supra* note 90, at 480, 497-98 ("[T]here is no logic that permits these experts to categorically exclude background exposure, yet, at the same time, categorically include all occupational exposures as causative."); *e.g.*, Hellam v. Crane Co., No. A138013, 2014 WL 1492725, at *6 (Cal. Ct. App. Apr. 16, 2014).

164. Many plaintiffs' experts attempt to avoid this problem by positing the exposure was "significant," "special," or "identified" based on their own *ipse dixit*. *See, e.g.*, Izell v. Union Carbide Corp., 180 Cal. Rptr. 3d 382, 395 (Ct. App. 2014). Defendants have argued that such testimony is just "every exposure" testimony by another name. Absent some sound scientific ground based on the actual quantity of asbestos involved in order to differentiate a causative exposure from a non-causative one, the testimony is arbitrary and speculative. Nevertheless, some courts have determined such testimony to be sufficiently different from "every exposure" testimony and therefore admissible at trial. Walashek v. Air Liquid Sys. Corp., No. 14CV1567 BTM(BGS), 2016 WL 614030, at *6 (S.D. Cal. Feb. 16, 2016) (holding that expert testimony concerning "significant" exposures was not "every exposure" testimony and was admissible under Daubert v. Merrell Dow Pharmaceuticals, Inc., 50 U.S. 579 (1993)).

165. *See Betz*, 44 A.3d at 47 (Regulatory standards and thresholds "do not establish legal causation given their cautionary, prophylactic nature"); Allen v. Penn. Eng'g Corp., 102 F.3d 194, 198 (5th Cir. 1996) (regulatory agencies have a "preventive perspective" and their "threshold of

Accordingly, trial courts should carefully scrutinize the material upon which experts purport to rely to reach their opinions that "every exposure" contributes and there is "no safe dose." Many of these opinions should not survive scrutiny under *Sargon*. Indeed, most experts who espouse these theories do not base their opinions on epidemiological evidence, which is widely accepted as the most reliable form of evidence for establishing that substances used in a workplace setting can cause cancer in humans.[166] Rather, they rely on insignificant, anecdotal case studies or animal studies that establish only that high doses of asbestos fibers *can* cause cancerous cells, and do not establish that small doses of asbestos fibers cause any harm, much less cancer in humans.[167]

proof is reasonably lower than that appropriate in tort law"); Mitchell v. Gencorp Inc., 165 F.3d 778, 783, n.3 (10th Cir. 1999); Parker v. Mobil Oil Corp., 857 N.E.2d 1114, 1122 (N.Y. 2006) ("[S]tandards promulgated by regulatory agencies as protective measures were inadequate to demonstrate legal causation.").

166. Epidemiology is the study of "the incidence, distribution, and etiology of disease in human populations." FED. JUDICIAL CTR., REFERENCE MANUAL ON SCI. EVIDENCE 551 (3d ed. 2011). "The purpose of epidemiology is to better understand disease causation and to prevent disease in groups of individuals." *Id.* "Epidemiologists compare control groups of unexposed individuals to groups of individuals exposed to a hypothetical cause of the disease being studied to determine whether exposed individuals have a greater risk of manifesting that disease." Hall v. Baxter Healthcare Corp., 947 F. Supp. 1387, 1403 (D. Or. 1996). It is widely accepted that epidemiological studies provide "the best evidence of general causation in a toxic tort case." Norris v. Baxter Healthcare Corp., 397 F.3d 878, 882 (10th Cir. 2005); *see also* Brock v. Merrell Dow Pharm., Inc., 874 F.2d 307, 311 (5th Cir. 1989) ("the most useful and conclusive type of evidence in a [toxic tort] case such as this is epidemiological studies"); Baker v. Chevron USA, Inc., 680 F. Supp. 2d 865, 875 (S.D. Ohio 2010) ("Epidemiology is usually the best evidence of general causation in toxic tort cases."); Siharath v. Sandoz Pharm. Corp., 131 F. Supp. 2d 1347, 1356 (N.D. Ga. 2001) ("[E]pidemiological studies provide 'the primary generally accepted methodology for demonstrating a causal relation between a chemical compound and a set of symptoms or disease.'").

167. *See generally* Bernstein, *supra* note 138, at 61-69. Case reports, which describe clinical events involving one individual or a few individuals, REFERENCE MANUAL ON SCI. EVIDENCE, *supra* note 166, at 23, "are not reliable scientific evidence of causation, because they simply describe[ ] reported phenomena without comparison to the rate at which the phenomena occur in the general population or in a defined control group; do not isolate and exclude potentially alternative causes; and do not investigate or explain the mechanism of causation," Casey v. Ohio Med. Prods., 877 F. Supp. 1380, 1385 (N.D. Cal. 1995); *see also* Allison v. McGhan Med. Corp., 184 F.3d 1300, 1316 (11th Cir. 1999) (stating that "'[c]ase reports and case studies are universally regarded as an insufficient scientific basis for a conclusion regarding causation because [they] lack controls'"); Haggerty v. Upjohn Co., 950 F. Supp. 1160, 1165 (S.D. Fla. 1996) (explaining that case reports are "no substitute for a scientifically designed and conducted inquiry"). Animal studies are unreliable because of differences among species prevent reliable extrapolation to humans and typically use much higher doses than the doses to which humans are exposed. REFERENCE MANUAL ON SCIENTIFIC EVIDENCE, *supra* note 166, 23; *see Allen*, 102 F.3d at 197 (concluding that "[r]eliance on . . . animal studies furnishes at best speculative support for [plaintiffs'] causation theory"); Lynch v. Merrell-Nat. Labs., 830 F.2d 1190, 1194 (1st Cir. 1987) (animal studies "do not have the capability of proving causation in human beings in the absence of any confirmatory epidemiological data"); *Hall*, 947 F.Supp. at 1410 ("Extrapolations of animal studies to human

The California Court of Appeal recently held in *Davis v. Honeywell*[168] that "every exposure" testimony is admissible because the scientific validity of the "every exposure" theory is currently subject to scientific debate, and under *Sargon* it is for juries rather than courts to resolve scientific controversies.[169] In so holding, the court ignored that the purported "science" upon which the "every exposure" theory rests is speculative and illogical—not the sort of scientific evidence that *Sargon* requires.

The California Supreme Court declined to review *Davis*.[170] Accordingly, for the time being, *Davis* is likely to be the leading case on admissibility of "every exposure" expert testimony. Litigants should read the decision carefully to attempt to distinguish it and challenge "every exposure" expert evidence under *Sargon* on the grounds such opinions do not rest on sufficient facts or data in the specific case at hand. Although these efforts may prove futile in the trial courts, preserving the issue for appeal is critical. The decision of one appellate court may be disagreed with by others, and generating a split of appellate decisions on this issue would encourage a much-needed Supreme Court review of the "every exposure" theory.

3. CACI 435 should be revised to focus on the nature and scope of the dose received, not merely the abstract risk created by the product.

As noted, the *Rutherford* court determined it would be unrealistic to require plaintiffs to prove any given exposure was a "but for" cause of disease because of "scientific uncertainty" concerning how asbestos exposure leads to cancer and because of difficulties of proof created by the long latency period between exposure and disease manifestation. To deal with that, the court adopted the presumption (most consistent with the weight of scientific evidence)[171] that asbestos-related cancer is dose-responsive: the larger the dose of asbestos, the greater the risk of developing cancer. The court then held, "plaintiffs may prove causation in asbestos-related cancer cases by demonstrating that the plaintiff's exposure to defendant's asbestos-containing product in reasonable medical probability was a substantial factor in contributing to the aggregate *dose* of asbestos the plaintiff or decedent

beings are generally not considered reliable in the absence of a scientific explanation of why such extrapolation is warranted.").

168. 199 Cal. Rptr. 3d 583 (Ct. App. 2016).

169. *Id.* at 585-86.

170. *Review denied*, __ P.3d __ (May 25, 2016).

171. Sanders, *supra* note 137, at 1160.

inhaled or ingested, and hence to the *risk* of developing asbestos-related cancer."[172]

Importantly, the key causal mechanism in this construct is a *dose* sufficient to cause disease, not the *risk* of developing disease (which refers to the *injurious consequence*—after all, once a plaintiff develops cancer, the "risk" has materialized into an actual injury).[173] But when devising the applicable jury instruction, the court jumped over the concept of "dose" and went straight to "risk." In so doing, the court (perhaps unintentionally) eliminated any reference to the presumed causal mechanism (i.e., the toxic dose) it had adopted in lieu of a causal mechanism dependent on proof of which fibers "*actually* produced the malignant growth."[174]

Many of the Courts of Appeal assume, as the *Rutherford* court seemingly did, that there is no material difference between the contribution-to-dose language and the contribution-to-risk language. But the language is not interchangeable.[175] Once the focus is on what substantially contributes to the risk of cancer rather than on what substantially contributes to the cancer-causing dose plaintiff received, plaintiffs too easily can establish that *any* dose—no matter how insubstantial—is causative because all asbestos is "risky."[176] That is not what *Rutherford* had in mind. *Rutherford* made clear that any causation analysis must first proceed from an estimate concerning how great a dose was received from the defendant's product (considering the length, frequency, proximity, and duration of exposure, among any other relevant factors), and that some doses are too trivial to be considered legal causes of injury even if, in the abstract, they would be considered unsafe.[177]

Thus, the jury instruction *Rutherford* proposed—now reflected in CACI 435—should be modified to reflect the clearer language from that case stating that the plaintiff meets his or her burden to establish causation by showing, to a reasonable medical probability, that his or her exposure to the

172. Rutherford v. Owens-Illinois, Inc., 941 P.2d 1203, 1219 (Cal. 1997).

173. Behrens & Anderson, *supra* note 90 at 486-87 (commenting that the causation requirement refers to dose); *see also* Sanders et al., *supra* note 9, at 414 (recognizing *Rutherford* substituted the word "risk" in place of "injury").

174. Sanders et al., *supra* note 137, at 1165 ("By substituting 'risk' for 'cause,' the [*Rutherford*] court absolves the plaintiff from showing a causal connection between the plaintiff's injury and the defendant's product."); Mosher, *supra* note 101, at 576 (instructing that "it is incorrect to interpret *Rutherford* as standing for the proposition that risk equals cause" even though the proposed jury instruction focuses on risk).

175. Wannall v. Honeywell Int'l, Inc., 292 F.R.D. 26, 41 (D.D.C. 2013) (stating that "risk" and "cause" are distinct concepts).

176. *See* Sanders et al., *supra* note 9, at 420 (explaining that *Rutherford*'s risk-based test "modified the injury from causing the harm to contributing to the risk of harm, which is true of all exposures to asbestos").

177. *Rutherford*, 941 P.2d at 1218.

defendant's product "was a substantial factor in contributing to the aggregate dose of asbestos the plaintiff or decedent inhaled or ingested, and hence to the risk of developing asbestos-related cancer."[178] This would clarify that the defendant's product must have been a substantial contributing factor to the *dose* that triggered the plaintiff's cancer, thereby reinjecting the traditional torts concept of causation back into the substantial factor test used in asbestos cases.

Additionally, trial courts should give juries further guidance on what to consider when evaluating the substantiality of the dose.

Although the *Rutherford* court noted that "[t]he term 'substantial factor' has not been judicially defined with specificity, and indeed it has been observed that it is 'neither possible nor desirable to reduce it to any lower terms,' "[179] the court did not leave courts and litigants directionless about what information is relevant to the substantial factor determination. The court suggested juries could and should "[t]ak[e] into account the length, frequency, proximity and intensity of exposure, the peculiar properties of the individual product, any other potential causes to which the disease could be attributed (e.g., other asbestos products, cigarette smoking), and perhaps other factors affecting the assessment of comparative risk" when evaluating whether a defendant's product should be considered a legal cause of the plaintiff's injury.[180]

Despite this language from *Rutherford*, courts have been reluctant to direct juries (in the form of special instructions) to consider the nature and scope of the plaintiff's exposure to the defendant's product in evaluating whether the substantial factor element has been satisfied, fearing it would put "undue emphasis on certain aspects of causation."[181] But the failure of courts to direct the juries to consider any aspects of the particular exposure has led to *no* emphasis being placed on the nature of the exposure and amount of the dose—considerations *Rutherford* plainly considered relevant and that are considered relevant in all other toxic torts cases.[182]

At the very least, in light of *Davis*' approval of "every exposure" expert opinions, litigants should consider asking trial courts to supplement CACI 435 with the language from CACI 430, which states that a substantial factor

178. *Id*. at 1219 (emphases omitted).

179. *Id*. at 1214.

180. *Id.* at 1218.

181. *See, e.g.*, Smith v. Pneumo Abex LLC, No. B217063, 2010 WL 3610136, at *9 (Cal. Ct. App. Sept. 17, 2010); *see also* Davis v. Honeywell, 199 Cal. Rptr. 3d 583, 597-99 (Ct. App. 2016) (holding trial court did not err in refusing to instruct on the *Rutherford* factors).

182. *See* Anderson et al., *supra* note 9, at 10.

"must be more than a remote or trivial factor."[183] That language follows *Rutherford*'s holding that a substantial factor must be more than a "negligible or theoretical" contribution to the plaintiff's risk of developing disease.[184] Including such language can help prevent jurors from being misled by "every exposure" expert testimony into believing trivial contributions to dose satisfy the substantial factor requirement.

4. Trial courts should require verdict forms to ensure juries make a threshold finding that the plaintiff's injuries were caused by asbestos in the first place.

As asbestos litigation enters its "third wave"[185] involving more lung cancer cases and more peripheral plaintiffs, another aspect of *Rutherford* will become increasingly important for courts and litigants to address: *Rutherford*'s assumption that the plaintiff's disease was caused by asbestos in the first place.[186]

Asbestos litigation has proceeded over the last few decades on the understanding that mesothelioma is a "signature" disease—i.e., that mesothelioma is caused by asbestos exposure and is not spontaneous.[187] Recent scientific developments have called that assumption into question; there is now better evidence that at least some cases of mesothelioma are *not* asbestos-related.[188] It is likely this evidence will become even more pronounced as the number of years that have passed since asbestos was used in industrial applications will exceed the latency period for asbestos-related cancer, revealing more information about the rate mesothelioma occurs naturally in the population.

Moreover, not all claimed "asbestos-related" cancer is mesothelioma. In fact, *Rutherford* itself involved lung cancer, not mesothelioma.[189] Lung

183. JUDICIAL COUNCIL OF CALIFORNIA CIVIL JURY INSTRUCTIONS No. 430 (JUDICIAL COUNCIL OF CALIFORNIA 2007).

184. *Rutherford*, 941 P.2d at 1220.

185. *See* Bill Wilt & Alan Zimmerman, *A Third Wave In Asbestos Liabilities Lies Ahead: Actuarial Models Are Systematically Underestimating Exposures*, LexisNexis (Feb. 19, 2014, 1:01 P.M.), https://www.lexisnexis.com/legalnewsroom/litigation/b/litigation-blog/archive/2014/02/19/a-third-wave-in-asbestos-liabilities-lies-ahead-actuarial-models-are-systematically-underestimating-exposures.aspx ("We believe the third wave [of asbestos litigation] will be dominated by lung cancer claims which are ostensibly lower quality than those of mesothelioma because the cancer was predominantly caused by smoking rather than asbestos."); *see* Behrens & Anderson, *supra* note 90, at 508; Ceder, *supra* note 9, at 1155-56.

186. *See Rutherford*, 941 P.2d at 1208.

187. Sanders, *supra* note 137, at 1159; Ceder, *supra* note 9, at 1152.

188. Anderson et al., *supra* note 9, at 3-4.

189. *Rutherford*, 941 P.2d at 1208.

cancer is obviously not a signature disease for asbestos exposure, and can be caused by any number of other things.[190]

It is therefore likely there will be more cases in which asbestos is not the cause of the plaintiff's disease *at all*. In such cases, courts and litigants must recall *Rutherford*'s procedural posture. Specifically, *Rutherford* came to the California Supreme Court after phase two of a bifurcated trial in which the plaintiff had already prevailed in the first phase of the trial on the threshold issue of whether his lung cancer was caused by asbestos.[191] Thus, courts and litigants should ensure *Rutherford*'s modified causation standard is invoked and applied only *after* the jury answers "yes" to the question of whether competent medical evidence establishes the predicate fact that the plaintiff's disease was caused by asbestos.

CONCLUSION

The landmark *Rutherford* decision struck an important balance between plaintiffs' and defendants' interests. But that balance has been lost through intermediate appellate interpretations of *Rutherford* that have effectively read the causation requirement mandated by the California Supreme Court in that case out of the law. It is essential that courts applying *Rutherford* understand and respect the balance in order to avoid expanding the scope of liability for asbestos injuries beyond what *Rutherford* contemplated, to reach defendants who cannot and should not be considered legally responsible for the plaintiff's injury. This is particularly important now, when the search for solvent defendants has resulted in litigation against entities only peripherally involved with asbestos use, and when a greater of percentage of asbestos cases involve lung cancer, not asbestosis or mesothelioma. Interpreting *Rutherford* properly—to require plaintiffs to prove more than just exposure in order to get to a jury—not only ensures fairness to defendants, but also ensures that courts will not continue expending disproportionate resources on complex, costly asbestos litigation involving numerous parties who played no substantial role in causing disease.

190. Sanders, *supra* note 137, at 1159.

191. *Rutherford*, 941 P.2d at 1207-08.