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This Week's Double Feature

Exposure Does Not Equal Causation: Defeating Claims that a Given Product Contributed to a Plaintiff's Injury

by *Scott J. Wilkov, Tucker Ellis & West LLP, Cleveland, Ohio*

Exposure does not equal causation. Sounds obvious, right? Yet, all too often, plaintiffs in toxic exposure cases try to build a case solely upon product identification coupled with evidence of a disease process which the offending chemical may cause. The defense bar even accepts this at times. Perhaps this is why the Kentucky Supreme Court recently noted the frequent “confusion between exposure (*i.e.*, the opportunity for causation) and evidence of causation itself (*i.e.*, that the exposure was the legal cause of the plaintiff’s injury). Though evidence of exposure may be related to causation (*e.g.*, testimony about the length and intensity of exposure), it is not exactly what we mean when we require a plaintiff to prove causation.” *Certaineed Corp. v. Ava Nell Dexter, et al.*, KY Sup Ct 2008-SC-000886-DG (Dec. 16, 2010) (establishing criteria for apportionment of liability among empty-chair defendants in an asbestos case).

The Elements of Causation

Two significant federal courts of appeals decisions during recent months serve as reminders of the critical distinction between general and specific causation. See *Myers v. Illinois Central Railroad Company*, Case No. 10-1279 (7th Cir. Dec. 15, 2010); *Tamraz v. Lincoln Elec. Co.*, 620 F.3d 665 (6th Cir. 2010). Although not a toxic exposure case, *Myers* addressed the quality of evidence required for a plaintiff to attribute cumulative trauma to his work on the railroad and limited the scope of his expert testimony in that regard. The court harkened to “a scenario similar to what many plaintiffs face in toxic tort cases: an expert can testify that a chemical can cause the plaintiff’s malady but he may not be qualified to testify that *this* chemical caused *this* particular plaintiff’s malady.” *Myers* at *9.

The ruling in *Tamraz v. Lincoln Electric* underscores this distinction. *Tamraz* arose out of the welding fume multi-district litigation; there, the Sixth Circuit vacated a trial court ruling rejecting a *Daubert* challenge to plaintiff’s treating doctor’s testimony. *Tamraz*, 620 F.3d at 667. Finding error in the trial court’s allowing a doctor to

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attribute plaintiff's Parkinson's disease to manganese exposure, the Sixth Circuit ruled: "Tamraz conflates diagnosis with etiology, eliding the distinction between Tamraz's disease and what caused it. Diagnosis and etiology, however, both were in play in this case." *Id.* at 673. The Sixth Circuit found that *Daubert* only permitted the treating neurologist to testify to the diagnosis of Parkinson's disease, but not its etiology. *Id.* at 677.

Proof of a disease is an entirely different question from what caused it. Understanding the distinction between the concepts of general causation and specific causation allows the defense lawyer in toxic exposure cases to focus his attacks. "To prove causation in a toxic tort case, a plaintiff must show both that the alleged toxin is capable of causing injuries like that suffered by the plaintiff in human beings subjected to the same level of exposure as the plaintiff, and that the toxin was the cause of the plaintiff's injury. In other words, the plaintiff must put forth sufficient evidence for a jury to conclude that the product was capable of causing her injuries, and that it did." *Bonner v. ISP Technologies, Inc.*, 259 F. 3d 924, 928 (8th Cir. 2001) (cited with approval by *In re Hanford Nuclear Reservation Litigation*, 292 F. 3d 1124 (9th Cir. 2002))

Challenging Plaintiff's Causation Evidence

The *Tamraz* decision provides a useful reminder of the many avenues by which to defeat plaintiff's specific causation case, among them a strong *Daubert* challenge to limit an expert's opinions. With this decision as a guide, this article shall suggest ways for the defense to avail itself of the many tools available to challenge plaintiff's specific causation evidence. While best known for establishing criteria for the admissibility of expert testimony, the *Daubert* court noted: "Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 586, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993).

The Devastating Cross-Examination

The most obvious angle from which to attack specific causation is by cross-examination of plaintiff's expert at trial. The causation expert's misinformation, assumptions, and reliance on facts only supplied by plaintiff or his counsel are all likely to impact the weight a jury accords the opinion testimony more so than its admissibility.

In that case, the doctor can easily be made to appear ignorant, biased, or both. If the plaintiff is truly held to his burden to prove by a preponderance of the evidence that the product at issue was a cause-in-fact of plaintiff's disease, counsel should inquire about all of the alternative general causes which the doctor ruled out for no apparent reason. For example, in an asbestos personal injury case brought by a mesothelioma plaintiff, published medical literature provides the good faith basis to ask a series of questions regarding radiation

exposure. See generally, J. Goodman, et al., "Ionizing Radiation: A Risk Factor for Mesothelioma," *Cancer Causes & Control*, Vol. 20, pp. 1237-1254 (2009). A small part of the cross-examination might sound something like this:

Therapeutic radiation is a recognized cause of mesothelioma, right?

Did you review plaintiff's records of medical care and treatment to ascertain whether he had any radiation treatment when he was in his 30s?

How about his in 40s? In his 50s? In his 60s?

In fact, you didn't review any medical records pre-dating plaintiff's first symptoms? Did you ask plaintiff's counsel for them?

The proverbial "one question too many" would be: "So, you cannot rule out exposure to excessive doses of therapeutic radiation as a cause of plaintiff's disease?" This point must be reserved for argument. One need not worry about how this testimony will come across, however, if plaintiff never gets to offer it. With greater forethought and the good fortune of a judge willing to exercise her gate-keeping responsibilities, one can mount a credible challenge to the full scope of the expert's testimony.

Exploiting *Daubert's* Full Potential

The expert's methodology is unreliable where it is based on insufficient facts or data. See *General Electric Co. v. Joiner*, 522 U.S. 136, 146 (1997) (no abuse of discretion in finding proffered animal studies failed to show increased risk of cancer from PCB exposure). While that case arose in the context of a general causation analysis, its guidance is equally applicable to specific causation. The *Tamraz* court distinguished a differential diagnosis from a differential etiology and emphasized the requirement that the expert employ a reliable methodology for attributing a cause to the injury and not just a label to plaintiff's symptoms. *Tamraz*, 620 F.3d at 674-675.

Consider again the example of an asbestos plaintiff diagnosed with mesothelioma. While asbestos may be widely accepted as capable of causing this lung disease, plaintiff's medical expert must have a sufficient basis to attribute the condition to a specific defendant's product. Therefore, the deposition of this expert should inquire into his unfamiliarity with the product and work practices associated with it, his failure to examine this product or any of its specifications, and his lack of knowledge of any testing of the product for its potential to release asbestos fibers. In the usual case, plaintiff's medical expert will blame a plaintiff's mesothelioma on any product plaintiff said he worked with which he believed contained asbestos. But, this testimony is devoid of any reliable foundation. Therefore, it is fertile ground for a *Daubert* challenge. In such a case, defense lawyers should routinely move to preclude plaintiff's expert from offering the ultimate opinion that the defendant's product at issue caused plaintiff's disease.

The appellate courts should provide a receptive audience

to this type of challenge, even if it falls on deaf ears at the trial level. In a recent Washington case, plaintiff sued the contractor operating a nuclear power plant for injuries stemming from exposure to radioactive materials. Because plaintiff's treating doctor could not attribute plaintiff's symptoms to his exposure to a reasonable degree of medical certainty, the court sustained summary judgment for the contractor. The Ninth Circuit justified the decision as follows: "An assumption made for purposes of treatment doesn't establish causation. In prescribing treatment, physicians err on the side of caution and consider potential causes—even if they are remote—because a failure to treat may risk permanent injury or death. That Golden's physician considered a potential cause in prescribing treatment doesn't mean that Golden's exposure in fact caused his injuries." *Golden v. CH2M Hill Hanford Group, Inc.*, 528 F.3d 681, 683 (9th Cir. 2008)

Golden and *Tamraz* make clear that just because differential diagnosis is a generally accepted methodology for treating patients in a clinical setting, that does not remove it from the rigors of a *Daubert* analysis. The Sixth Circuit explained in *Tamraz*: "Calling something a 'differential diagnosis' or 'differential etiology' does not by itself answer the reliability question but prompts three more: (1) Did the expert make an accurate diagnosis of the nature of the disease? (2) Did the expert reliably rule in the possible causes of it? (3) Did the expert reliably rule out the rejected causes? If the court answers 'no' to any of these questions, the court must exclude the ultimate conclusion reached." *Tamraz*, 620 F.3d at 674.

Plaintiff's expert must have sufficient facts or data to justify his conclusion regarding the etiology of plaintiff's symptoms. Courts have made clear that a medical expert is not required to rule out all potential alternate causes of a plaintiff's injury, but for the testimony to be reliable, where a plausible alternative is suggested there must be a valid justification for excluding it. See *Heller v. Shaw Industries, Inc.*, 167 F.3d 146, 156 (3rd Cir. 1999) (permitting testimony that volatile organic compounds from new carpet installation caused the illness based on the temporal relationship between the event and the symptoms). Therefore, defense lawyers should routinely challenge plaintiff's experts to provide the basis for ruling out other potential etiologies.

Affirmative Proof of Alternate Causes

Defense attorneys need not limit their specific causation challenges to simply probing the basis for plaintiff's experts' opinions. A little research may yield fruit which is worth presenting in the defense case-in-chief. Even in cases where a plaintiff's diagnosis is confirmed, counsel should discuss the symptoms revealed in medical records with an occupational medicine physician, industrial hygiene expert, and perhaps toxicologist. They may be able to suggest alternative contributing factors. For example, while tobacco smoke may be a leading form of lung cancer, countless other possibilities exist.

The defense team can learn a great deal from an hour's

worth of internet research. Relevant to the lung cancer example above, in recent weeks, *The Washington Post* reported on a study showing concerning levels of hexavalent chromium in the water supplies of 31 cities across the country ("Study Finds Probable Carcinogen in Tap Water of 31 U.S. Cities," *The Washington Post*, Dec. 20, 2010). While it has long been known that inhaling so-called Chromium VI can lead to lung cancer, the reported study followed up on animal research showing that ingestion of the chemical may be equally as cancerous. This shows that in every toxic exposure case, defense counsel should ask what other contaminants could plaintiff could have been exposed to in the water he drank. How about in the air around his home? How about in the air or water at work?

While one never knows what exposures might be reported in the local newspaper, defense lawyers can conduct more efficient research through government documents and publications. In asbestos litigation, counsel frequently request records of worksite inspections from the Occupational Safety and Health Administration. But, many similar resources exist. Many states have their own agencies devoted to occupational or environmental safety; they may have inspected plaintiff's worksite. Likewise the National Institute for Occupational Safety and Health routinely conducts health hazard evaluations based on reports of an excess number of injuries or illnesses at worksites around the country.

There are also countless sources of information regarding environmental exposures in the vicinity of a plaintiff's home. The Environmental Protection Agency and Centers for Disease Control both have robust websites allowing for inquiries concerning a specific locality. By the same token, state public health departments may conduct inspections or analyze data which provides information on the air, ground, or water contamination around plaintiff's home.

Once counsel identifies all of the other potential exposures, one must consider how to them into evidence. Certified copies of reports of a public agency easily come into evidence under Federal Rule of Evidence 803(8). Many states have equivalent rules which except from the definition of hearsay, "Records... or data compilations, in any form, of public offices or agencies, setting forth ... matters observed pursuant to duty imposed by law as to which matters there was a duty to report." Fed. R. Evid. 803(8). Even if the evidence of alternative exposure packaged nicely in a government report, an expert may well be able to testify to it. "If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted." Fed. R. Evid. 703. The creative practitioner can use this rule to justify the offer of expert testimony on all sorts of relevant facts that may not be independently admissible.

By way of example, industrial hygienists routinely refer to material safety data sheets (MSDS) for guidance on the hazards presented by different routes of exposure to a

given chemical substance. Plaintiff's deposition might reveal that he worked in an occupational setting which required him to handle countless materials whose risks were unknown to him. Any one of those materials might also be a risk factor for the very injury or illness at issue. In a recent case this author defended, plaintiff claimed excessive exposure to silica dust caused his lung cancer. We could not confirm a smoking history or underlying asbestosis. But, we learned plaintiff also worked in a pulp and paper mill. Industrial hygiene literature reported on the risk of various cancers developing in mill workers potentially exposed to toxic substances used in paper processing. We seized on the MSDS for those chemicals which listed lung cancer as a hazard. This provided an effective alternate causation theory for the defense to advance in its case.

Pitfalls

The savvy defense lawyer must always consider how the other side will react to his evidence. Therefore, in the presentation of evidence on alternate causes, one must anticipate the potential *Daubert* challenge. After all, what's good for the goose is good for the gander. To that end, be selective in the method you choose for presenting your evidence. Will a *Daubert* motion against plaintiff's experts backfire on the defense? Can the defense epidemiology or occupational medicine expert support your alternative causation theory?

A Texas Supreme Court decision which can be a powerful weapon for attacking a plaintiff's causation case might also prove to be the defense's Achilles heel. See *Merrell Dow Pharmaceuticals, Inc. v. Havner*, 953 SW 2d 706 (Tex. 1997) (excluding epidemiological studies as causation evidence where relative risk of the injury from exposure is less than 2.0). "To raise a fact issue on causation and thus to survive legal sufficiency review, a claimant must do more than simply introduce into evidence epidemiological studies that show a substantially elevated risk. A claimant must show that he or she is similar to those in the studies. This would include proof that the injured person was exposed to the same substance, that the exposure or dose levels were comparable to or greater than those in the studies, that the exposure occurred before the onset of injury, and that the timing of the onset of injury was consistent with that experienced by those in the study." *Id.* at 720.

The *Havner* case involved a challenge to plaintiff's use of expert testimony relying on an epidemiological study to establish that the Bendectin drug caused a limb reduction birth defect. *Id.* at 708. Noting that epidemiological studies can only show an association and not the actual cause of an individual's condition, the court described the issue as one of general causation. *Id.* at 715. Nevertheless, the analysis is pertinent here because a defendant's proof of alternate causes must survive the same scrutiny of its reliability as do plaintiff's claims.

Conclusion

Whether it is the epidemiology, facts, or other data which is lacking in plaintiff's case, defense counsel should

consider the many alternative approaches to challenging plaintiff's specific causation evidence. And, the defense may present its own proof of alternate causes. Practitioners will do well to remember that toxic exposure plaintiffs must do more than prove that a product is capable of causing the condition diagnosed; they must prove that the toxic agent, in fact, caused the illness or injury claimed. Exposure does not equal causation.

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