

State Supreme Court Holds Causation Evidence Insufficient

August 23, 2011 by [Sean Wajert](#)

The Vermont Supreme Court recently held that a plaintiff's evidence that exposure to benzene allegedly caused his cancer was insufficient to get to the jury. [Blanchard v. Goodyear Tire & Rubber Co.](#), No. 2010-250 (Vt. 8/5/11).

Plaintiff was diagnosed with non-Hodgkin's lymphoma, and he attributed the onset of the disease to benzene exposure that allegedly occurred between 1968 and 1973 while he was a teenager playing on a ball field on the grounds of the former Goodyear rubber manufacturing plant. That plant operated in Windsor, Vermont from 1936 to 1986. He sued, alleging that the field itself was polluted and that there was a gully in the outfield that transported foul-smelling and oily stormwater discharge away from the manufacturing plant.

Defendants moved for summary judgment. The lower court concluded that plaintiff was not entitled to present his case to a jury because he had provided insufficient evidence to support an inference that he had been exposed to benzene in any amount, let alone an amount that could have caused his illness, nor sufficient expert testimony sufficient to eliminate other potential causes of his disease. On appeal, plaintiff argued that his circumstantial evidence of causation was sufficient to present his case to the jury.

The state Supreme Court noted that the plaintiff could not survive the motion for summary judgment on his toxic tort claim unless he was able to point to evidence suggesting a probability, rather than a mere possibility, that (1) he was exposed to the specified chemical at a level that could have caused his physical condition (general causation); and (2) the exposure to that chemical did in fact result in the condition (specific causation). In a toxic tort case, general causation addresses whether a substance is capable of causing a particular injury or condition in a population, while specific causation addresses whether a substance caused a particular individual's alleged injury. E.g., *King v. Burlington Northern Santa Fe Ry. Co.*, 762 N.W.2d 24, 34 (Neb. 2009). General causation is typically shown through epidemiological studies, and plaintiffs in toxic exposure cases in Vermont generally must demonstrate specific causation by submitting evidence concerning the amount, duration, intensity, and frequency of exposure. Citing *Henricksen v. ConocoPhillips Co.*, 605 F. Supp. 2d 1142, 1157 (E.D. Wash. 2009) (citing several appellate court cases holding that experts testifying as to specific causation must pay careful attention to amount, intensity, and duration of exposure).

The court recognized that in some toxic tort cases it is impossible to quantify exposure with hard proof, such as the presence of the alleged toxic substance in the plaintiff's blood or tissue and the precise amount of the toxic substance to which an individual plaintiff was exposed. *Plourde v. Gladstone*, 190 F. Supp. 2d 708, 721 (D. Vt. 2002). Therefore, expert testimony on toxic injuries may be admissible where dosage or exposure levels have been established through sufficient reliable circumstantial evidence. While it is not always necessary for a plaintiff to quantify exposure levels precisely, the courts generally preclude experts from testifying as to specific causation without having any some measurement or reasonable

estimate of a plaintiff's exposure to the allegedly harmful substance. Finally, a defendant's concession that its product contains a carcinogen, say benzene, does not excuse a plaintiff from having to show the benzene contained in defendant's product is capable of causing the illness at issue.

When direct evidence of the precise amount of exposure to a toxic substance is limited, some courts have allowed expert witnesses to use a differential diagnosis process as a method of proving specific causation. We have [posted before](#) about the mis-use and mischaracterization of [this process](#). Differential diagnosis is a scientific analysis entailing the weighing of relevant evidence, listing all likely explanations of the patient's observed symptoms or injury, then eliminating all but one. Some courts have made the leap from allowing the process designed to arrive at a diagnosis (what disease caused the symptoms) to arrive at a cause (what substance caused the disease). However, said the state court, even the courts that do recognize differential diagnosis are reluctant to admit causation testimony based on a differential diagnosis where the proffered expert possesses only weak circumstantial evidence that some exposure occurred and makes insufficient effort to scientifically evaluate or estimate the degree of exposure or dosage. Also, and significantly, standing alone, the presence of a known risk factor is not a sufficient basis for ruling out idiopathic origin in a particular case, particularly where most cases of the disease have no known cause. In such cases, analysis beyond a differential diagnosis is required.

Here, plaintiff pointed to three bits of circumstantial evidence. First, he offered statements made by himself and boyhood friends concerning their alleged exposure to chemicals from the Goodyear plant when they were teenagers playing ball on a field adjoining the plant. Second, plaintiff relied on the testimony of the project manager for an environmental firm hired by Goodyear in 2007 to conduct a site investigation in response to a clean-up agreement reached by Goodyear and the State of Vermont. The 2009 report stemming from the investigation listed contaminants of concern, including petroleum products containing benzene, that could have been released into the environment. Third, plaintiff relies upon the testimony of his two experts, who testified that occupational exposure to benzene is generally associated with a risk of non-Hodgkin's lymphoma, and that plaintiff's cancer was not caused by an immunodeficiency disorder, one of the known causes of that form of cancer.

That evidence "falls well short" of what plaintiff would be required to show in order to prevail in a jury trial. Indeed, if a jury were to find in favor of plaintiff on the evidence relied upon by plaintiff, said the court, "we would have to overturn the verdict." In the end, plaintiff's suspicion that his cancer was caused by exposure to benzene on the Goodyear ball field when he was a teenager was purely speculative. There was no way to know whether any benzene-containing product actually contaminated the ball field. And there was no evidence indicating the amount or concentration of benzene that was present, even assuming some was. Nor was there any evidence indicating plaintiff's level of exposure to any benzene that may have been present on the field. Nor was plaintiff able to point to studies indicating a risk of cancer posed by exposure to limited amounts of benzene from petroleum products in an outside environment.

Further, plaintiff could not rely upon differential diagnosis to overcome the complete lack of evidence as to the level of any exposure to benzene. A large percentage of cases of plaintiff's type of lymphoma are of unknown origin. Thus plaintiff's experts could not [rule out all other causes](#), an essential part of the differential diagnosis. E.g., *Whiting v. Boston Edison Co.*, 891 F. Supp. 12, 21 n.41 (D. Mass. 1995) (concluding that differential diagnosis cannot be used to explain disease where 90% of cases of disease are of unknown origin).