Appeals Court Upholds Summary Judgment Based on Daubert in Benzene Case

May 25, 2011 by Sean Wajert

The Sixth Circuit last week upheld the dismissal of a plaintiff"s claim that benzene exposure caused her cancer. Pluck v. BP Oil Pipeline Co., No. 09-4572 (6th Cir., 5/12/11). The central issue was the exclusion of plaintiff's causation expert's opinion based on a "differential diagnosis" that failed to reliably rule in benzene exposure as a potential cause of plaintiff's cancer, and to rule out some other potential exposures.

This case arose from benzene contamination allegedly caused by gas-pipeline releases allegedly resulting in the seepage of gasoline into the surrounding soil and groundwater. Benzene, a component of gasoline, is a known carcinogen in sufficient doses under certain exposure circumstances, and is also ubiquitous in the ambient air and is a component or constituent of vehicle exhaust and cigarette smoke, said the court. Plaintiffs purchased a home in the area, and used well water to drink, wash, shower, and irrigate their yard and garden. In October, 1996, plaintiffs say they noticed a gasoline odor in their home and water, and benzene was first detected in the well on their property in the amount of 3.6 parts per billion ("ppb"). They began drinking bottled water in lieu of tap water, although they claim to have resumed drinking tap water upon the drilling of a new, deeper well. Between 1997 and May 2002, the new well tested negative for benzene twenty-two times.

Mrs. Pluck was diagnosed with Non-Hodgkins lymphoma ("NHL") in 2002 at age forty-eight. She filed suit, alleging claims of strict liability for hazardous activity, negligence, and loss of consortium. To support their claims, plaintiff and spouse retained Drs. Joseph Landolph and James Dahlgren as experts on causation to demonstrate that benzene is generally capable of causing NHL and specifically caused Mrs. Pluck's NHL. Defendant filed motions in limine to exclude the testimony of Dahlgren and Landolph on the grounds that their testimony failed to satisfy the standard for reliability set forth in *Daubert*. In particular, BP argued that Dr. Dahlgren's testimony on specific causation was unreliable because he formulated a specific causation opinion without evidence of dose, and subsequently performed an unreliable dose reconstruction in an attempt to support his opinion. Dahlgren then submitted a supplemental declaration in which he evaluated Mrs. Pluck's illness under a "differential-diagnosis" methodology. The district court granted the motions, and plaintiff appealed.

In a toxic tort case, as here, the plaintiff must establish both general and specific causation through proof that the toxic substance is capable of causing, and did cause, the plaintiff's alleged injury. As to specific causation, the plaintiff must show that she was exposed to the toxic substance and that the level of exposure was sufficient to induce the complained-of medical condition (based on a dose-response relationship). Both causation inquiries involve scientific assessments that must be established through the testimony of a medical expert. Without this testimony, a plaintiff's toxic tort claim will fail.

The Plucks had to concede that the expert Dr. Dahlgren did not establish dose; they instead argued that Dahlgren used differential diagnosis to determine specific causation. Defendant argued that Dr. Dahlgren did not apply differential diagnosis in either his expert opinion or his deposition, but did so only in an untimely supplemental declaration filed five months after the deadline for expert reports. And in any event, his approach was flawed. The Sixth Circuit has recognized differential diagnosis, properly done, as an appropriate method for making a determination of causation for an individual instance of disease. Differential diagnosis -- originally a standard technique for determining what disease caused a patient's symptoms -- has been adapted in some courts as an acceptable scientific technique for identifying the cause of a medical problem by eliminating the likely causes until the most probable one is isolated. A physician who applies differential diagnosis to determine causation considers all ("rules in") relevant potential causes of the symptoms and then eliminates ("rules out") alternative causes based on a physical examination, clinical tests, and a thorough case history.

Even in courts that accept this adapted method, not every opinion that is reached via a differential-diagnosis method will meet the standard of reliability required by *Daubert.* Calling something a “differential diagnosis” or “differential etiology” does not by itself answer the reliability question but prompts at least 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.

Here the court agreed that Dahlgren could not reliably “rule in” benzene exposure as the cause of Mrs. Pluck’s NHL. In recognition of the fact that benzene poses a health concern at certain levels of exposure, the EPA has stated that the maximum permissible contaminant level for benzene in drinking water is 5 ppb. 40 C.F.R. § 141.61(a)(2). Dahlgren, however, did not ascertain Mrs. Pluck’s level of benzene exposure, nor did he determine even whether she was exposed to quantities of benzene exceeding the EPA’s safety regulations. The levels of benzene in the Plucks’ wells never exceeded the maximum permissible contaminant level of 5 ppb designated by the EPA.

Dahlgren’s opinion that Mrs. Pluck’s “low-level exposure” to benzene caused her NHL was thus not grounded in “sufficient facts or data,” nor did it reflect the “reliable principles and methods” required by Rule 702. It was, instead, pure conjecture. Although the Plucks argued that the district court required too much specificity regarding Mrs. Pluck’s dose, this argument was also without merit. The mere existence of a toxin in the environment is insufficient to establish causation without proof that the level of exposure incurred could cause the plaintiff’s symptoms. See also *McClain v. Metabolife Int’l, Inc.,* 401 F.3d 1233, 1242 (11th Cir. 2005)

(causation "requires not simply proof of exposure to the substance, but proof of enough exposure to cause the plaintiff's specific illness").

Finally, even if Dr. Dahlgren had properly "ruled in" benzene exposure as the cause plaintiff's NHL, he failed to "rule out" alternative causes of her illness, as is required under the differential-diagnosis methodology. See also *Wills v. Amerada Hess Corp*., 379 F.3d 32, 50 (2d Cir. 2004) (expert's opinion suffered from a "fatal flaw" when he acknowledged that cigarettes and alcohol were risk factors for developing squamous-cell carcinoma but failed to account for these variables in concluding that decedent's cancer was caused by exposure to toxic chemicals such as benzene and PAHs). In this case, Dahlgren acknowledged in his deposition that Mrs. Pluck was exposed to other sources of benzene, from her extensive smoking habit and from other organic solvents. Yet, Dr. Dahlgren neither identified these other solvents nor determined Mrs. Pluck's potential level of exposure to these other possible sources of benzene. Thus, Dahlgren failed to "rule out" alternative causes of Mrs. Pluck's NHL.

The court of appeals determined that the district court did not abuse its discretion in concluding that the expert did not perform a reliable differential diagnosis. And summary judgment properly followed.