United States Court of Appeals
Fifth Circuit
F I L E D
March 19, 2007
Charles R. Fulbruge III
Clerk

REVISED April 4, 2007

IN THE UNITED STATES COURT OF APPEALS

FOR THE FIFTH CIRCUIT

No. 06-60134

HEATH KNIGHT; ET AL

Plaintiffs

HEATH KNIGHT,
THOMAS DAVID INGERMAN,

Plaintiffs-Appellants,

versus

KIRBY INLAND MARINE INC; KIRBY INLAND MARINE INC OF TEXAS, also known as Dixie Marine Inc; HOLLYWOOD MARINE INC; KIRBY INLAND MARINE INC OF MISSISSIPPI

Defendants-Appellees.

Appeal from the United States District Court
for the Northern District of Mississippi

Before DAVIS and STEWART, Circuit Judges, and CRONE, District Judge.[*]

CARL E. STEWART, Circuit Judge:

Appellants Heath Knight and Thomas Ingerman appeal the district court's summary judgment ruling for appellees Kirby Inland Marine and related companies. For the following reasons, we affirm.

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[*]District Judge for the Eastern District of Texas, sitting by designation.

I. FACTUAL AND PROCEDURAL BACKGROUND

Heath Knight began working for Kirby Inland Marine ("Kirby") in 1993. Knight worked as a tankerman between 1993 and 1994. During his time as a tankerman with Kirby, he was exposed to various toxic chemicals, including benzene. Knight learned that he had Hodgkins lymphoma in 1998. He underwent chemotherapy and made a full recovery. His cancer has been in remission since 1998, and his primary physician opined that it is unlikely to recur.

Thomas Ingerman began working for one of the defendants, Hollywood Marine, Kirby's predecessor-in-interest, in 1987. Ingerman worked as a tankerman for Hollywood Marine during the years 1987-1995. During his time as a tankerman for Hollywood Marine, Ingerman was exposed to various toxic chemicals, including benzene. During this time, Ingerman underwent routine benzene physicals. The tests never revealed an abnormal buildup of benzene. In 1999, Ingerman was diagnosed with bladder cancer following a persistent bladder infection.

Knight and Ingerman ("appellants") filed a toxic tort suit in 2001 in federal district court under the Jones Act. 46 U.S.C. § 688. Pursuant to their suit, appellants hired Dr. Barry Levy, a highly qualified epidemiologist and physician. In 2005, the district court held a *Daubert* hearing to determine whether Dr. Levy's testimony was admissible on the issue of whether appellants' exposure to chemicals while working as tankermen for defendants caused Knight's Hodgkin's lymphoma and Ingerman's bladder cancer.

Dr. Levy testified that benzene was the cause of Knight's and Ingerman's cancers, and he relied on over fifty studies for this conclusion. For various reasons, the district court excluded all of the studies offered by Dr. Levy. The court found that most of the studies relied on by Dr. Levy failed to isolate benzene as a cause of cancer. The court found other studies statistically insignificant,

concluding that Dr. Levy's testimony failed to satisfy *Daubert*. Later, the court granted summary judgment in favor of defendants.

Subsequently, appellants filed a motion for cost reimbursement under FED. R. CIV. P. 26(b)(4)(A) and (C), which allows a party to recover discovery costs relating to expert witnesses. The district court refused to grant all of appellants' requested costs. The district court also denied appellants' request that defendants pay for all expenses they incurred in securing Dr. Levy's testimony at the *Daubert* hearing, totaling $63,853.91, holding that no right to reimbursement for *Daubert* costs existed under 26(b)(4)(C).

Appellants appeal the district court's summary judgment ruling, which resulted from the exclusion of Dr. Levy's testimony, as well as its determinations regarding discovery and *Daubert* costs.

II. STANDARD OF REVIEW

We review the district court's determination of admissibility of expert evidence under *Daubert* for abuse of discretion. *Pipitone v. Biomatrix, Inc.*, 288 F.3d 239, 243 (5th Cir. 2002) (citing *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999)). "A trial court abuses its discretion when its ruling is based on an erroneous view of the law or a clearly erroneous assessment of the evidence." *Bocanegra v. Vicmar Servs., Inc.*, 320 F.3d 581, 584 (5th Cir. 2003). If this court finds an abuse of discretion in admitting or excluding evidence, we "review the error under the harmless error doctrine, affirming the judgment, unless the ruling affected substantial rights of the complaining party." *Id*.

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), the Supreme Court delineated certain factors to assist courts in evaluating the foundation of a given expert's testimony, though the Court carefully emphasized the nonexhaustive nature of the listing. *Daubert*, 509 U.S. at

593. *Daubert* suggested that a trial judge consider: whether the theory or technique the expert employs is generally accepted; whether the theory has been subjected to peer review and publication; whether the theory can and has been tested; whether the known or potential rate of error is acceptable; and whether there are standards controlling the technique's operation. *Id*.

The district court based its exclusion of Dr. Levy's testimony on several findings. The district court acknowledged that Dr. Levy's methodology was "unassailable," but found deficiencies in the underlying data, namely the various studies and articles Dr. Levy relied upon for his research conclusions.

III. DISCUSSION

A. Causation

"General causation is whether a substance is capable of causing a particular injury or condition in the general population, while specific causation is whether a substance caused a particular individual's injury." *Merrell Dow Pharm., Inc. v. Havner*, 953 S.W.2d 706, 714 (Tex. 1997). Evidence concerning specific causation in toxic tort cases is admissible only as a follow-up to admissible general-causation evidence. *See Raynor v. Merrell Pharm.*, 104 F.3d 1371, 1376 (D.C. Cir. 1997). Thus, there is a two-step process in examining the admissibility of causation evidence in toxic tort cases. First, the district court must determine whether there is general causation. Second, if it concludes that there is admissible general-causation evidence, the district court must determine whether there is admissible specific-causation evidence. *See Cano v. Everest Minerals Corp.*, 362 F. Supp. 2d 814, 824 (W.D. Tex. 2005).

Appellants hired Dr. Levy to provide testimony as to both general causation and specific causation. Finding that Dr. Levy's testimony regarding general causation lacked the necessary

foundation to withstand *Daubert* scrutiny, the district court concluded it was unnecessary to determine whether his specific causation testimony was admissible. Appellants challenge and we review the district court's determination regarding general causation for abuse of discretion.

Therefore, the fundamental question underlying Dr. Levy's testimony and our assessment of the district court's determination is whether the chemicals Knight and Ingerman were exposed to and the type of exposures they experienced cause Hodgkin's lymphoma and bladder cancer (general causation). If the district court properly determined that Dr. Levy's testimony regarding general causation was inadmissible under *Daubert* and FED. R. EVID. 702, then there would be no need to consider whether Knight and Ingerman's exposures actually caused their respective illnesses (specific causation). *See Miller v. Pfizer, Inc.*, 356 F.3d 1326, 1329 (10th Cir. 2004).

Appellants argue that the district court set too high a bar for their general causation evidence. Specifically, appellants take issue with the district court's exclusion of all the case-control,[1] cohort,[2] and nonspecific studies relied on by Dr. Levy.

Appellants point to the Olsson study, which concluded that "exposure to organic solvents may constitute an occupational risk with regard to Hodgkins'" as an example of reliable and admissible

[1]The district court defined case-control studies as studies that "identify individuals with a particular disease (cases) and match them with a control group without the disease. The researcher then performs a comparison of past exposures. Where a particular exposure is associated with a disease, one should expect a higher proportion of past exposure among cases than among the controls."

[2]The district court defined cohort studies as studies that "involve the identification of two groups of individuals: 1) individuals exposed to a substance that is considered a possible cause of disease; and 2) individuals who have not been exposed. The study takes place over a specified period; researchers determine the proportion of individuals in each group who develop the disease of interest. Where a particular agent causes the disease, one should expect a higher proportion of exposed individuals to develop the disease as compared to those who had no exposure."

evidence for general causation. *See* Hakan Olsson and Lars Brandt, *Occupational Exposure and Hodgkin's Disease in Men*, SCAND. J. W. ENVIRON. HEALTH 6, 302 (1980).

The *Daubert* standard ensures that the proffered evidence is both "reliable" and "relevant." *Daubert*, 509 U.S. at 589. Reliability is determined by assessing "whether the reasoning or methodology underlying the testimony is scientifically valid." *Id*. at 592-93. Relevance depends upon "whether [that] reasoning or methodology properly can be applied to the facts in issue." *Id*. at 593. Here, appellants focus on the district court's determination regarding the "relevant" prong.

Case-control studies are not per se inadmissible evidence on general causation. *See McNeil v. Wyeth*, 462 F.3d 364, 370 (5th Cir. 2006). Nonetheless, we cannot say that it was an abuse of discretion for the district court to conclude that the reasoning and methodology of the case-control studies relied on for Dr. Levy's general causation testimony could not be applied to the facts at issue here. For example, the Olsson study, which Dr. Levy relied on for his testimony on Hodgkin's lymphoma, measured exposure to organic solvents among twenty-five men diagnosed with the disease. The men were employed in over ten different occupations, including painting, photography, and wood-making. Additionally, the study contained a fifty-person control group of non-cancer patients, which was composed of referents selected from the Swedish census. Although the control group did include three "shipyard workers," those three workers were exposed, on average, for ten years to a variety of organic solvents, including many Knight was not exposed to, and none of the three developed Hodgkin's lymphoma. Knight, who worked as a tankerman for only one year, does not allege the type of exposure, either in terms of the chemicals involved or the length of exposure, experienced by "shipyard workers" in the Olsson study. Thus, the Olsson study does not appear to be very relevant to Knight's claim. We cannot say that the district court's evaluation of the evidence

in this instance was clearly erroneous nor can we conclude that there was an abuse of discretion in the district court's determination that the study was unreliable as support for the conclusion that the chemicals Knight alleges caused his injury would cause the same particular injury in the general population in similar circumstances. *See Havner*, 953 S.W.2d at 714.

The other case-control study, L. Hardell, et al., Dr. Levy relied on for his testimony on Hodgkin's lymphoma suffers from similar flaws. That study focused on organic solvents as a class, including a wide-range of chemicals to which appellants were never exposed. Of all the organic solvents the study controlled for, it could not determine which led to an increased risk of cancer. Thus, the study concluded that "[i]t is possible . . . that exposure to organic solvents may be relevant for the development of Hodgkin's diease" and that "it is possible that exposure to organic solvents may promote the development of Hodgkin's disease irrespective of other, still unknown, etiologic factors." *See* L. Hardell & N.O. Bengtsson, *Epidemiological Study of Socioeconomic Factors and Clinical Findings in Hodgkin's Disease, and Reanalysis of Previous Data Regarding Chemical Exposure*, BR. J. CANCER 48, 218 (1983). We cannot say that the district court's assessment of this study was clearly erroneous or that its exclusion of it as unreliable for general causation was an abuse of discretion. The study does not provide a reliable basis for the opinion that the types of chemicals appellants were exposed to could cause their particular injuries in the general population.

Similarly, appellants point to the 1983 Silverman study, another case-control study excluded by the district court and relied upon by Dr. Levy for his testimony on bladder cancer. The 1983 Silverman study included men in a variety of occupations. The study concluded that there was little association between bladder cancer and employment in the auto industry; however, the study did find an increased cancer risk for truck drivers. The study "suggested" that this meant a relation between

cancer and diesel exposure because diesel trucks became more prevalent after 1950. *See* Debra T. Silverman, et al., *Occupation and Cancer of the Lower Urinary Tract in Detroit*, JNCI 70-2, 243 (1983). Although the study's "suggestion" could theoretically provide some basis for the conclusion that diesel exhaust causes bladder cancer, it does not, as appellants argue, "clearly support" that conclusion. The district court's assessment of the 1983 Silverman study was not clearly erroneous.

Appellants argue that the district court set its own "rigorous test" for admissible general-causation evidence. There is, however, nothing in the record indicating that the district court formulated its own test, nor does the district court cite to an independently formulated test in its March 14, 2005, memorandum opinion on its *Daubert* hearing regarding Dr. Levy's testimony.

For example, appellants argue that "[e]ven if the results of a study were consistent with many other studies, it was rejected if it was not large enough to reach statistical significance." To explore this argument, we consider the Siemiatycki study, excluded by the district court as "statistically insignificant." Jack Siemiatycki, et al., *Associations Between Several Sites of Cancer and Twelve Petroleum-derived Liquids*, SCAND. J. W. ENVIRON. HEALTH 13, 493-504 (1987). The Siemiatycki study dealt with exposures of over 300 different substances among 3,726 cancer patients. The study did propose links between several chemicals and particular types of illnesses. For example, the study posited a link between crude oil and lung cancer and another link between lubricating oil and prostate cancer. The study did not, however, give any specific data regarding a link between the chemicals appellants were exposed to and their particular illnesses.

The appellants point to the Nilsson study, another study excluded as "significantly insignificant" by the district court, as being "tailored specifically for Mr. Knight's case." The Nilsson study focused on cancer rates among tankermen. The study was conducted in two phases. Under the

first phase, conducted in the 1960s, no link between exposure to cargo vapours and cancer was posited. The second phase, conducted in the 1970s, did posit a link. The authors could find no difference between the two phases other than the fact that "transportation of gasoline on tankers has increased considerably since 1960." The authors suggested that the higher incidence in cancer in the 1970s was possibly due to benzene because the "exposure to benzene . . . is probably substantially higher for the exposed group in the 1970 cohort." Because of the insignificant results in the 1960 phase, the authors admitted that their risk estimates were "imprecise." Considering the limitations of the Nilsson study, it is difficult to conclude that the district court's assessment of it as "statistically insignificant" was clearly erroneous. Out of forty-six cases of cancer in the 1970 phase, only seven involved Hodgkin's lymphoma. *See* Ralph I. Nilsson, et al., *Leukaemia, Lymphoma, and Multiple Myeloma in Seamen on Tankers*, 1998, Exhibit 63.

We are mindful that under *Daubert* and FED. R. EVID. 702, a district court has broad discretion to determine whether a body of evidence relied upon by an expert is sufficient to support that expert's opinion. We also understand that in epidemiology hardly any study is ever conclusive, and we do not suggest that an expert must back his or her opinion with published studies that unequivocally support his or her conclusions. *See Bonner v. ISP Techs., Inc.*, 259 F.3d 924, 929 (8th Cir. 2001) (observing that "there is no requirement 'that a medical expert must always cite published studies on general causation in order to reliably conclude that a particular object caused a particular illness'") (quoting *Heller v. Shaw Indus., Inc.*, 167 F.3d 146, 155 (3d Cir. 1999)). Where an expert otherwise reliably utilizes scientific methods to reach a conclusion, lack of textual support may "go to the weight, not the admissibility" of the expert's testimony. *See Fed. Deposit Ins. Corp. v. Suna Assocs., Inc.*, 80 F.3d 681, 687 (2d Cir. 1996) (discussing *Daubert* factors). A contrary requirement

"would effectively resurrect a *Frye*-like bright-line standard, not by requiring that a methodology be 'generally accepted,' but by excluding expert testimony not backed by published (and presumably peer-reviewed) studies." *Heller*, 167 F.3d at 155. Nonetheless, the expert's testimony must be reliable at each and every step or else it is inadmissible. "The reliability analysis applies to all aspects of an expert's testimony: the methodology, the facts underlying the expert's opinion, the link between the facts and the conclusion, et alia." *Id*.

Even if one of the studies relied on by Dr. Levy provided a plausible basis for general causation, the district court, after weighing the "reliability" and "relevance" of such evidence, finding one or the other lacking, could still reach the conclusion that the evidence was inadmissible. Of the over fifty studies relied upon by Dr. Levy, none gave an adequate basis for the opinion that the types of chemicals appellants were exposed to can cause their particular injuries in the general population. *See In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 745 (3d Cir. 1994) (holding that "the judge should only exclude the evidence if the flaw is large enough that the expert lacks 'good grounds' for his or her conclusions") (citations omitted). Because the data relied on by Dr. Levy failed to provide a "relevant" link with the facts at issue, his expert opinion was not based on "good grounds."

District courts have an important role as gatekeepers in determining whether to admit expert testimony. District courts must carefully analyze the studies on which experts rely for their opinions before admitting their testimony. *See Gen. Elec.c v. Joiner*, 522 U.S. 136, 146-47 (1997) (holding that it was not an abuse of discretion to conclude that the studies experts relied on did not individually or in combination support their conclusions). Accordingly, for the reasons stated, we hold that the district court did not abuse its discretion in excluding Dr. Levy's testimony upon reasonably concluding that the analytical gap between the studies on which he relied and his conclusions was

simply too great and that his opinions were thus unreliable. *Id*.

Aside from the relevance of the evidence he relies on for causation, Dr. Levy's testimony also fails several *Daubert* factors. *See Daubert*, 509 U.S. at 593. It is not generally accepted. *See Rivas, et al., v. Monsanto*, No. 3:96-cv-00493 (S.D. Tex Mar. 15, 2005) (memorandum report and recommendations). It also has not been subjected to peer review, published, or tested.

Even if this court did find that the district court abused its discretion by excluding evidence, we would review the "error under the harmless error doctrine, affirming the judgment, unless the ruling affected substantial rights of the complaining party." *Bocanegra*, 320 F.3d at 584. In order for Dr. Levy's testimony to be reliable under *Daubert*, he had to provide a basis for general and specific causation. Although the district court limited its analysis to general causation, the studies it excluded are neither reliable nor relevant for specific causation. For example, although the 1970 phase of the Nilsson study could arguably support the theory that benzene can generally lead to Hodgkin's lymphoma, it would not support the conclusion that it led to Hodgkin's lymphoma in Knight's case. Because Dr. Levy did not rely on any studies that suggested that the chemicals appellants were exposed to caused their particular illnesses, any error as to general causation is harmless. *Id*.

B. Discovery Costs

Questions of law, such as a district court's interpretation of the Federal Rules of Civil Procedure, are reviewed de novo. *Odom v. Frank*, 3 F.3d 839, 843 (5th Cir. 1993). We review the district court's decisions regarding 26(b)(4)(C) fees for abuse of discretion. *Research Sys. Corp. v. IPSOS Publicite*, 276 F.3d 914, 920 (7th Cir. 2002).

FED. R. CIV. P. 26(b)(4)(C) provides that if a court allows the deposition of an expert who will testify at trial, the court must order the discovering party to compensate the expert for his time,

unless "manifest injustice would result." Additionally, the court has discretion to order the party seeking discovery to pay the other party a fair portion of the fees and expenses reasonably incurred by the latter party in obtaining facts and opinions from the expert.

The district court's determination regarding discovery costs was not an abuse of discretion. Appellants concede that their billed expenses were quite large but argue that this case required "twice the normal effort." The only changes the district court made, reducing Dr. Levy's billing rate by $100, limiting the billed preparation time of appellant's two expert witnesses to fifteen and twelve hours, and subtracting time spent at lunch or recess from Dr. Levy's billed deposition time, were reasonable deductions. Rule 26(b)(4)(C) limits discovery costs to those "reasonable" fees spent responding to discovery. When parties submit their discovery costs, the district court has discretion to limit or alter those costs if they appear to be unreasonable. *See Chambers v. Ingram*, 858 F.2d 351, 361 (7th Cir. 1988).

Additionally, the appellants also failed to cite any legal authorities supporting their contention that *Daubert* expenses are allowable under FED. R. CIV. P. 26(b)(4)(C). A *Daubert* hearing is not a discovery proceeding but an evidentiary hearing designed to screen expert testimony. *See Daubert*, 509 U.S. at 579. Appellants fail to give any persuasive legal argument as to why FED. R. CIV. P. 26 should be extended outside the discovery context.

IV. CONCLUSION

For the foregoing reasons, we AFFIRM the judgment of the district court.

AFFIRMED.