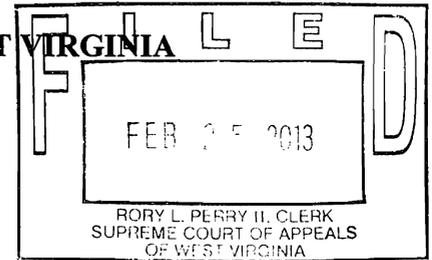


IN THE SUPREME COURT OF APPEALS OF WEST VIRGINIA

DOCKET NO. 12-1135



DEBORAH KAY HARRIS,
Administratrix of the Estate
of Ronald K. Harris, deceased,
Petitioner

V.)

CSX TRANSPORTATION INC.,
Individually and as successor in interest to
THE CHESSIE SYSTEM, INC.,
THE BALTIMORE & OHIO RAILROAD,
and THE CHESAPEAK & OHIO RAILWAY,
Respondent.

Appeal from a final order of
the Circuit Court of Marshall County
(08-C-171M)

Petitioner's Reply Brief

Counsel for Petitioner, Deborah Kay Harris

R. Dean Hartley (WV Bar # 1619)
Counsel of Record
Julie R. Magers (WV Bar # 10657)
J. Michael Prascik (WV Bar # 9135)
HARTLEY & O'BRIEN, P.L.L.C
2001 Main Street, Suite 600
Wheeling, West Virginia 26003
(304) 233-0777
dhartley@hartleyobrien.com

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ASSIGNMENTS OF ERROR

In the assignments of error in its response brief, respondent CSX Transportation, Inc. (hereafter, “CSX,” or “respondent”) acknowledges that it “restates plaintiff’s assignments of error.” Respondent’s Brief, p. 1. Unfortunately, CSX misstates the issues in this appeal so as to make a simple analysis more complex than necessary and convoluted in its nature. Petitioner asserts that her assignments of error correctly present the proper outline for appellate review.

SUMMARY OF ARGUMENT

Boiled down to its basic elements, respondent suggests that before an employee in a toxic tort action, brought under the Federal Employers’ Liability Act, can recover there must be sufficient peer-reviewed literature applicable to the employee’s specific exposure situation, confirmed by state and federal agencies, textbooks, and public health organizations.

Respondent’s assertion is simply wrong. The law does not require a perfect epidemiologic study of railroad brakemen and conductors (generally accepted by all concerned) that demonstrates that exposure to diesel exhaust causes multiple myeloma. Petitioner’s expert witnesses (using a weight-of-the-evidence methodology) correctly extrapolated from the available peer-reviewed literature and concluded that her decedent’s development of multiple myeloma was causally related to his exposure to diesel exhaust while employed by CSX.

STANDARD OF REVIEW

I. THE TRIAL COURT’S METHODS IN CONDUCTING A DAUBERT/WILT ANALYSIS ARE SUBJECT TO DE NOVO REVIEW.

The respondent acknowledges that the method in which a trial court conducts a *Daubert/Wilt* inquiry is a legal question subject to *de novo* review. Respondent’s Brief, p. 17-18.

Likewise, the respondent recognizes that this Court reviews the question of whether or not the trial court applied the proper standard in deciding the admissibility of expert testimony *de novo*. *Id.* Nevertheless, the respondent asserts that the trial court’s ruling here was an evidentiary ruling subject to review under an abuse of discretion standard. *Id.* However, the respondent’s argument inaccurately characterizes the nature of the trial court’s rulings.

The petitioner does not merely challenge the trial court’s conclusion in excluding her expert witnesses – she challenges the underlying manner in which the trial court went about its analysis, and the standards under which the trial court evaluated her expert witnesses. Most importantly, the trial court adopted the respondent’s suggestion that petitioner failed to establish the requirement that petitioner must establish that exposure to diesel exhaust had been proven by “good science” to cause multiple myeloma, and that her experts’ opinions were inadmissible as a result. (A.R. 767, 766, 783, 802). As discussed in the petitioner’s original brief and below, the trial court went beyond its proper role of evaluating the experts’ methodologies as “gatekeeper,” and made a decision as to the correctness of their conclusions.

Furthermore, as the petitioner argued in her original brief, the trial court imposed incorrect legal standards by requiring separate proof of general causation and by ignoring the interplay between the FELA and the *Daubert/Wilt* standard. As such, the petitioner challenges not only the methods by which the trial court conducted its *Daubert/Wilt* analysis, but the very standard it applied. As a result, this Court should review the trial court’s decision *de novo*.¹

¹The respondent cites *Jenkins v. CSX Transp., Inc.*, 220 W. Va. 721, 649 S.E.2d 294 (2007) in support of its assertion that the trial court’s ruling is subject to review only for abuse of discretion. *Jenkins*, however, involved experts whose testimony was excluded on the one hand as a discovery sanction, and on the other because of a lack of qualifications. 220 W. Va. at 728, 731, 649 S.E.2d at 301, 304. Neither of those subjects is remotely at issue in this case.

II. EVEN UNDER AN ABUSE OF DISCRETION STANDARD, THE TRIAL COURT'S RULING SHOULD BE REVERSED.

As the respondent notes in its brief, under the abuse of discretion standard, this Court “will not disturb a circuit court’s decision unless the circuit court makes a clear error of judgment or exceeds the bounds of permissible choices in the circumstances.” *Gribben v. Kirk*, 195 W. Va. 488, 500, 466 S.E 2d 147, 159 (1995). In the *Daubert/Wilt* analysis, “an abuse of discretion occurs when a material factor deserving significant weight is ignored, when an improper factor is relied upon, or when all proper and no improper factors are assessed but the circuit court makes a serious mistake in weighing them.” *Gentry v. Mangum*, 195 W.Va. 512, 519, 466 S.E.2d 171, 178 (1995). Here, the trial court inappropriately weighed the scientific evidence, as opposed to merely determining whether or not the petitioner’s experts’ testimony was based on a reliable methodology. As such, even under the more deferential abuse of discretion standard, this Court should reverse the trial court’s decision.

ARGUMENT

I. PETITIONER’S EXPERTS’ OPINIONS ARE RELIABLE AND ADMISSIBLE UNDER DAUBERT/WILT.

A. INTRODUCTION.

All other issues aside, petitioner’s expert witnesses’ methodology was appropriate and scientifically valid, and thus admissible as reliable evidence that can be properly applied to the facts in question and helpful to the jury in determining causation. “Pursuant to W.Va. Rules of Evidence 702, an expert’s opinion is admissible if the basic methodology employed by the expert in arriving at his opinion is scientifically or technically valid and properly applied. The jury, and not the trial judge, determines the weight to be given to the expert’s opinion.” Syl. Pt. 4,

Mayhorn v. Logan Med. Found., 193 W. Va. 42, 454 S.E.2d 87 (1994).

Respondent defends the trial court's *Daubert/Wilt* analysis by suggesting in essence that petitioner's expert witnesses were required to rely on a perfect scientific foundation (*i.e.*, literature that concerns the same job (railroad brakeman/conductor), same chemical (whole diesel exhaust), same exposure level (28-29 years of breathing diesel exhaust), same disease (multiple myeloma), and same latency (29 years)) which has been accepted by governmental agencies and public health organizations in order to testify as to causation. Requiring a generally-accepted "perfect scientific foundation" is unsupported in the law and unreasonable as a practical matter.

In *State ex rel. Wiseman v. Henning*, 212 W.Va. 128, 569 S.E.2d 204 (2002) (*per curiam*), the defendant contested the testimony of plaintiff's expert causation witness, Dr. Hussein. Dr. Hussein, an expert in multiple myeloma research and treatment at the Cleveland Clinic, proposed the novel theory that the impact from a physical trauma could cause multiple myeloma at the site of impact. This Court reversed the circuit court's categorical exclusion of testimony from this well-credentialed expert on a novel theory. The Court recognized:

[T]hat Dr. Hussein's opinion is novel and unorthodox, [and] may not have yet received, as the circuit court found, 'general acceptance in the scientific community.' However, the *Rules of Evidence* do not require that a scientific opinion be 'generally accepted'; because such a requirement is at odds with the liberal thrust of the Rules and their general approach of relaxing the traditional barriers to opinion testimony.

212 W.Va. at 134, 569 S.E.2d at 210.

Additionally, "[a] quite substantial body of case law and commentary rejects an epidemiologic threshold for sufficient proof of general causation. Many courts find that requiring proof by scientific evidence that does not exist and is not reasonably available to the plaintiff

when other, reasonably probative evidence exists is an overbroad method for screening cases.” Restatement (3d) Torts: Liability for Physical Harm, § 28, cmt. c(1) (2010); *See also City of Greenville v. W.R. Grace & Co.*, 827 F.2d 975, 980 (4th Cir. 1987) (products liability law does not preclude recovery until a statistically significant number of people have been injured or until science has had the time and resources to complete sophisticated laboratory studies).

Most importantly, this Court directly addressed respondent’s objections to petitioner’s expert witnesses’ opinions in *Casdorph v. West Virginia Office Ins. Comm’r*, 225 W.Va. 94, 690 S.E.2d 102 (2009). *Casdorph* involved a claim for workers’ compensation benefits by an employee who asserted that his exposure to cancer causing agents containing benzene caused his chronic myelogenous leukemia (CML). Like the respondent here, the employer asserted that the hypothesis that benzene causes CML had not been published in peer-reviewed textbooks as a common or accepted consensus medical opinion. 225 W.Va. at 104-105, 690 S.E.2d at 112-113. Additionally, the employer’s expert, like Dr. Shields in this matter, testified that he found no reliable scientific evidence to support the proposition that benzene exposure could cause CML, and that benzene exposure did not affect chromosomes 9 and 22, which became abnormal in CML patients. He believed that some of the studies at issue were unreliable because they were small case studies. While recognizing that Rule 702 does not apply in a workers’ compensation claim, this Court found that a lack of general acceptance in peer-reviewed textbooks did not preclude the claimant’s expert witness from assessing causation. *Id.* The Court further concluded that the “case studies, although small, are valid studies that have been peer reviewed and published,” and are sufficient to support the claim that benzene causes CML. *Id.*

In this case, petitioner’s well-credentialed experts’ methodology included reviewing

epidemiologic studies, animal studies, biological plausibility, Mr. Harris' age, work history and exposure, as well as his medical background. To be sure, numerous scientific studies have examined the association between diesel exhaust and multiple myeloma, making the petitioner's experts' opinions far less novel than those this Court found admissible in *Wiseman*.

Additionally, just like the experts whose opinions this Court found admissible in *Casdorph*, petitioner's experts applied their expertise and professional judgment to conclude that Mr. Harris' diesel exhaust exposure contributed to his development of multiple myeloma, as permitted by the Rules of Evidence. *See Casdorph, supra*.

B. THE TRIAL COURT INAPPROPRIATELY EVALUATED PETITIONER'S EXPERTS' CONCLUSIONS, NOT THEIR METHODOLOGIES.

As discussed in Petitioner's original brief, while the trial court is to evaluate the admissibility of expert witness opinions, those opinions must merely reflect scientific knowledge derived by a reliable scientific method. Here, the trial court overstepped its authority and assumed the role of an evidentiary goalkeeper, rather than its proper role as gatekeeper, by requiring petitioner to establish that exposure to diesel exhaust had been proven by "good science" to cause multiple myeloma, and by excluding her experts' opinions as a result. (A.R. 767, 766, 783, 802). *Cf. King v. Burlington N. Santa Fe Ry. Co.*, 277 Neb. 203, 226-227, 762 N.W. 2d 24, 43 (2009). "[P]laintiffs [do not] have to prove their case twice – they do not have to demonstrate to the judge by a preponderance of the evidence that the assessments of their experts are correct, they only have to demonstrate by a preponderance of evidence that their opinions are reliable." *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 744 (3rd Cir. 1994); *See also Milward v. Acuity Specialty Products Group, Inc.*, 639 F.3d 11, 15 (1st Cir. 2011) *cert. denied* 564 U.S.

___, 132 S. Ct. 1002, 181 L. Ed. 2d 734 (2012).

1. Dr. Shields' Criticisms Have Been Previously Rejected.

Respondent presented the same expert witness, Dr. Peter Shields, as the defendant in the *King* case, *supra*, and who described the same alleged inadequacies in the epidemiologic literature on the causal connection between diesel exhaust and multiple myeloma during the evidentiary hearing in this matter. As in the Nebraska case, Dr. Shields opined that the majority of the epidemiological studies failed to show that diesel exhaust can cause multiple myeloma. The Nebraska Supreme Court rejected Dr. Shields' criticisms of the plaintiff's expert in the *King* case, and the petitioner respectfully suggests that this Court should reach the same conclusion.

Here, the trial court ignored this Court's admonition that "[w]hat must be remembered, however, is that there is no 'best expert' rule." *Gentry*, 195 W.Va. at 525, 466 S.E.2d at 184. In essence, the trial court elevated the opinions of respondent's expert witnesses above those of petitioner's experts by adopting many of the unsupported conclusions of the former as justification for concluding that diesel exhaust does not cause multiple myeloma and excluding petitioner's experts.² See Petitioner's Brief, p. 28-29. The trial court's disagreement with petitioner's expert witnesses' conclusions is not grounds to preclude the experts from testifying.

2. Petitioner's Expert Witnesses Appropriately Extrapolated from the Scientific Data.

While the trial court is certainly permitted to assure itself that no "gap" exists between the

²While the trial court was advised that this Court upheld an award of workers' compensation benefits to a claimant who developed multiple myeloma after exposure to diesel exhaust, *see West Virginia Div. of Highways v. Cutlip*, No. 050404, April 17, 2006 (a claim decided after the liberality rule no longer applied to workers' compensation cases), it nevertheless concluded that diesel exhaust does not cause multiple myeloma.

data and the opinion proffered by the expert, *General Electric Company v. Joiner*, 522 U.S. 136, 146 (1999), such a “gap” does not exist in the underlying bases of petitioner’s experts’ opinions. Petitioner’s expert witnesses correctly extrapolated³ from existing data to reach their causation conclusions, and their methods were reliable. See Petitioner’s Brief, pp. 3-6. Indeed, other courts have permitted extrapolation in diesel exhaust cases. See *Norfolk S. Ry. Co. v. Wagers*, 833 N.E.2d 93, 108 (Ind. Ct. App. 2005) *transfer denied* 855 N.E.2d 995 (Ind. 2006); *Hutton v. Burlington N. and Santa Fe Ry. Co.*, No. CV-00-111, 2002 U.S. Dist. LEXIS 28743 *8-9 (D. Mont. 2002).⁴

³“Trained experts commonly extrapolate from existing data.” *General Electric Company v. Joiner*, 522 U.S. at 146. “[E]xtrapolation is permitted, especially in the areas of cutting edge science at issue here, so long as the expert extrapolates from reliable data and utilizes methodologies typically applied in his field.” *Doe v. Northwestern Mut. Life Ins. Co.*, No. 2:10-cv-02961, 2012 U.S. Dist. LEXIS 60441 (D.S.C. May 1, 2012); See also *Donaldson v. Central Ill. Pub. Serv. Co.*, 767 N.E. 2d 314, 328 (Ill. 2002), *overruled on other grounds by People v. Simons*, 821 N.E.2d 1184 (Ill. 2004) (finding that “an expert may rely upon scientific literature discussing similar, yet not identical, cause and effect relationships, and holding that “[t]he fact that an expert must extrapolate, and is unable to produce specific studies that show the exact cause and effect relationship to support his conclusion, affects the weight of the testimony rather than its admissibility”) (decided under *Frye*), *citing Duran v. Cullinan*, 677 N.E.2d 999 (Ill. App. Ct. 1997) (plaintiffs’ expert permitted to rely on 43 epidemiological studies, and extrapolate from those studies to conclude that plaintiff’s ingestion of Ovulen-21, a contraceptive, caused her child’s multiple birth defects.); *Ferebee v. Chevron Chem. Co.*, 736 F.2d 1529 (D.C. Cir. 1984); *Mendes-Silva v. United States*, 980 F.2d 1482, 1485 (D.C. Cir. 1993).

⁴Respondent suggests that the Court should adopt the analysis and holdings of *Missouri Pacific R.R. v. Navarro*, 90 S.W.3d 747 (Tex. Ct. App. 2002) and *Richardson v. Union Pacific R.R.*, 386 S.W. 77 (Ark. Ct. App. 2011), and uphold the trial court’s rulings. Petitioner has explained why the reasoning of *Richardson* is distinguishable. See Petitioner’s Brief, pp. 35-36. *Navarro* is distinguishable for two reasons: (1) plaintiff *Navarro*’s expert only cited two pieces of literature to support his causation analysis – as petitioner’s expert witnesses explained, the literature is more robust now with additional peer-reviewed articles supporting causality; and (2) *Navarro* was decided under Texas evidentiary standards that required a statistically significant two-fold elevated risk of association to support causation – neither of which is required by the West Virginia or the federal decisions. Neither *Navarro* nor *Richardson* apply the same analysis this Court has pronounced under the *Daubert/Wilt* line of cases. On the other hand, the analysis in the *King* decision, *supra*, tracks this Court’s rulings under Rule 702, and can act as a basis for overruling the trial court’s decisions.

3. **Weight-of-the-Evidence Analysis.**

Petitioner maintains that her expert witnesses correctly applied the appropriate methodology to conclude that Mr. Harris' diesel exhaust exposure contributed to his development of multiple myeloma and his ultimate death. Nevertheless, should this Court conclude that Dr. Lawrence Goldstein's and Dr. Peter Infante's causation opinions are inadmissible, petitioner maintains that their conclusions as to "biological plausibility" and "epidemiologic association" respectively were reached using sound and accepted methodologies, are admissible, and that Dr. Durie can rely on those opinions to support his causation analysis.

Dr. Goldstein opined that it was biologically plausible that diesel exhaust could cause multiple myeloma. In reaching his opinion, Dr. Goldstein reviewed the animal studies on PAHs (polycyclic aromatic hydrocarbons, a constituent of diesel exhaust), coal tar, diesel exhaust, and their effects on animals (A.R. 24); he considered the various exposure routes and the systemic nature of PAHs (A.R. 25-33); he considered the fact that diesel exhaust and its components can cause DNA damage (A.R. 24-39, 42-43); he considered that diesel exhaust is a probable human carcinogen (A.R. 21, 23, 25); and he relied on his own research on PAHs to conclude that it is biologically plausible that diesel exhaust causes multiple myeloma. (A.R. 21-22, 40, 51).

Dr. Infante reviewed and critiqued the epidemiologic literature, including among others, studies of railroad workers and of diesel exhaust exposure and multiple myeloma. (A.R. 105-108). *See also*, Infante September 9, 2010 Report. (A.R. 315-333). Dr. Infante also reviewed the opinions of CSX's expert in epidemiology, Dr. Peter Shields, regarding the scientific literature on diesel exhaust as a cause of multiple myeloma. Dr. Infante noted that in many of the studies Dr. Shields cites, multiple myeloma was not evaluated separately from other lymphomas

making it difficult to determine the relative risk of multiple myeloma. Dr. Shields also did not consider the impact of the healthy worker effect on the risk of multiple myeloma in the studies he reviewed (A.R. 108-111). *See also* Infante September 9, 2010 Report (A.R. 328). Given the foregoing factors, he came to his final interpretation that there is a significant association between diesel exhaust and risk of multiple myeloma (A.R. 105).

Utilizing Dr. Goldstein's opinion on biological plausibility and Dr. Infante's conclusions about the epidemiologic literature, as well as numerous other aspects of Mr. Harris' exposure and medical background in light of his own clinical experience, education, and training, Dr. Durie concluded that Mr. Harris' exposure to diesel exhaust contributed to his development of multiple myeloma. *See* Petitioner's Brief, pp. 5-6. Dr. Durie employed the same approach the First Circuit recently approved in *Milward, supra*. The First Circuit found that "the accumulation of multiple scientifically acceptable inferences from different bodies of evidence" was sufficiently reliable to support an admissible expert opinion. 639 F.3d at 38. Rather than elevating any one factor to the status of a *sine qua non* for admissibility, the *Milward* court permitted an expert witness to testify where "the sum of his testimony was that a weighing of the Hill factors, including biological plausibility, supported the inference that the association between [the exposure and the disease at issue] is genuine and real." *Id.* at 39. As such, Dr. Durie's opinion, supported by Dr. Goldstein's and Dr. Infante's opinions on biological plausibility and epidemiologic association, passes the requirements of *Daubert/Wilt*, and is admissible.

C. THE TRIAL COURT AND RESPONDENT INAPPROPRIATELY ELEVATE SUBJECTS OF CROSS-EXAMINATION TO MATTERS OF RELIABILITY, AND THEREFORE GROUNDS FOR EXCLUSION.

Respondent clouds a simple evidentiary issue by injecting criticisms of the science that

are for the jury to evaluate. Indeed, petitioner's experts did what scientists in their fields do – they looked at various scientific studies, compared those reported findings to Mr. Harris' circumstances, and made a professional judgment that diesel exhaust causes multiple myeloma, and in particular Mr. Harris' multiple myeloma. In essence, the concerns raised by the respondent are nothing more than disagreement among experts looking at the same data which can be fleshed out by “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof...” *See Gentry*, 195 W.Va. at 527, 466 S.E.2d at 186.

Respondent still suggests four purported flaws with the bases for the petitioner's experts opinions, none of which are grounds for exclusion. Specifically, respondent asserts (1) that the epidemiologic studies relied on by petitioners' expert witnesses are not relevant; (2) that there is a lack of a dose-response relationship demonstrated in the epidemiologic studies used by petitioners' expert witnesses; (3) that animal studies are irrelevant to the causation analysis; and (4) the petitioner's expert witnesses' lacked intellectual rigor. As an alternative, respondent suggests, for the first time, that petitioner's expert witnesses did not quantify Mr. Harris' exposure to diesel exhaust. None of these considerations supports exclusion.

1. Epidemiologic Studies.

Petitioner's expert witnesses relied on relevant epidemiologic studies. While there are differences of opinion as to each study's relevance due to differences in exposures, in reported disease type, or in the importance of statistical significance of the findings, petitioner's expert witnesses' methodology properly considered those differences and simply came to a different conclusion than respondent's expert witnesses. Expert witnesses rarely have perfect studies that are on all fours with the situation involved in the litigation, and are thus permitted to apply

professional judgment to extrapolate from the available studies. *See supra* n. 3. Epidemiologic studies can provide a foundation for an expert to “infer and opine that a certain agent can cause a disease.” *King*, 762 N.W. 2d at 36. A non-statistically significant excess risk found in an epidemiologic study does not demonstrate that there is no relationship. *See King*, 762 N.W. 2d at 45; *Berry v. CSX Transp., Inc.*, 709 So. 2d 552, 570 (Fla. Dist. Ct. App. 1st Dist. 1998); *See also* Phillip Cole testimony (A.R. 635); Peter Infante testimony. (A.R. 91-94). This suggested “flaw” goes to the weight of the evidence, and not its admissibility.

2. Lack of Dose-Response Relationship.

Respondent asserts that the studies relied on by petitioner’s expert witnesses fail to demonstrate a positive dose-response relationship. However, such a relationship is not an absolute requirement. “A dose–response relationship is strong, but not essential, evidence that the relationship between an agent and disease is causal.” Michael D. Green, D. Michal Freedman, and Leon Gordis, “Reference Guide on Epidemiology” in Federal Judicial Center, Reference Manual on Scientific Evidence 603 (3rd ed. 2011); *See also* Richard Monson, Occupational Epidemiology 100 (2nd ed. 1990) (“The lack of a dose-response relationship is fairly weak evidence against causality.”); *Cutlip v. Norfolk S. Corp.*, No. L-02-1051, 2003 Ohio App. LEXIS 1785, 23 (Ohio Ct. App. 2003) (not reported in N.E.2d) (a dose-response relationship requirement essentially would foreclose plaintiffs from recovering for [carpal tunnel syndrome] against negligent employers unless their particular job has been the subject of a national, epidemiological study on carpal tunnel syndrome). While it helps make a conclusion stronger, the lack of a positive dose-response relationship does not make a conclusion invalid, and certainly does not support exclusion of an expert witness’ opinions.

3. Relevancy of Animal Studies.

Respondent asserts that animal studies are irrelevant, and suggests that petitioner did not show how the animal studies specifically related to biological plausibility. As explained in her original brief, animal studies can be helpful in forming the basis of an admissible causation opinion. *See* Petitioner's Brief, p. 30-32. Petitioner's experts specifically explained how the animal data shows biological plausibility, (A.R. 24-40) and explained that mice developed plasmacytomas after exposure to diesel exhaust (A.R. 61, 259, 469), which petitioner's expert witnesses opined supports diesel exhaust's ability to cause multiple myeloma in humans.⁵

4. Lack of Intellectual Rigor.

Respondent asserts that petitioner's experts' methodology lacks intellectual rigor. Petitioner maintains that her experts explained their methodologies, and described how they did what members of their respective fields do in assessing causation. Respondent's nitpicking about minor inconsistencies in no way affects reliability to a degree requiring exclusion.

5. Lack of Exposure Quantification.

Respondent asserts for the first time⁶ that petitioner's expert witnesses failed to quantify Mr. Harris' exposure to diesel exhaust, relying in part on *Tolley v. ACF Indus., Inc.*, 212 W.Va. 548, 575 S.E.2d 158 (2002) (*per curiam*). While this Court did state in *Tolley I*, that "[c]ritical to establishing exposure to a toxic chemical is knowledge of the dose or exposure amount and the

⁵Plasmacytoma refers to abnormal plasma cells, and is a diagnostic indicator for myeloma, a cancer of the bone marrow. *Wiseman*, 212 W. Va. at 131, 569 S.E. 2d at 207 (emphasis added).

⁶Respondent did not raise exposure as an issue of importance at the hearing below, and did not assert a lack of exposure or exposure quantification in any papers filed with the Circuit Court. More importantly, respondent did not assert that a lack of exposure quantification undermined petitioner's expert witnesses' methodology.

duration of the exposure,” 212 W.Va. at 559, 575 S.E.2d at 169, the decision centers on the fact that the plaintiff did not establish any evidence of exposure. As the Court noted:

Given the lack of any evidence of exposure in this case combined with the inability of Appellants' experts to connect his medical symptoms to the alleged exposure, we simply cannot find that the lower court erred in concluding that Appellants' "general conclusion [that Mr. Tolley had the opportunity for exposure to asthma sensitizers] does not establish actual exposure and does not satisfy the proximate cause requirement of the West Virginia Workers' Compensation Act."

Tolley, 212 W.Va. at 559, 575 S.E.2d at 169 (emphasis added).

Even assuming that exposure is now an issue in this appeal, petitioner's experts considered, developed, and quantified the diesel exhaust dose Mr. Harris received while in his employment with CSX.⁷ This is not the same exposure quantification situation as found in *Tolley I* – petitioner, through discovery and her expert witnesses, sufficiently established that Mr. Harris was exposed to diesel exhaust for almost thirty years while employed by the railroad with extremely excessive exposures in numerous situations. *See Casdorff*, 225 W.Va. at 100, 690 S.E.2d at 108 (expert testimony that appellant was routinely and on a continuing basis exposed to cancer causing substances including gasoline, solvents, degreasers, and aromatic hydrocarbon products during his employment was sufficient to establish exposure for causation analysis).

⁷There was no expert testimony concerning exposure during the evidentiary hearing conducted by the trial court since respondent's sole issue for excluding petitioner's expert witnesses was its "general causation" proposition. However, the petitioners' experts' reports, which appear in the record as exhibits to the transcript of the hearing on this matter, discuss exposure issues. *See* Report of Lawrence Goldstein, Ph.D., describing Mr. Harris' inhalation exposure to diesel exhaust and quantifying the dose of the same. (A.R. 260-263); Report of Dr. Peter Infante describing Mr. Harris' occupational history as it related to his development of multiple myeloma, and concluding that Mr. Harris experienced 28-29 years of diesel exhaust exposure while employed by respondent which at times would have been extremely excessive. (A.R. 318-320); and Report of Dr. Brian Durie considering Mr. Harris' exposure scenario in determining causality. (A.R. 579).

In summary, all five of respondents' asserted "flaws" in petitioner's expert witnesses' methodology are nothing more than areas of inquiry for cross-examination, and do not individually or collectively justify exclusion of petitioner's expert witnesses.

II. THE TRIAL COURT ERRED IN FAILING TO CONSIDER THE INTERPLAY BETWEEN FELA AND THE DAUBERT/WILT STANDARD.

A. THIS ISSUE IS PROPERLY BEFORE THE COURT.

According to the respondent, the petitioner waived her right to challenge the trial court's failure to consider the interaction between the FELA and the standard for admissibility of expert testimony under W. Va. R. Evid. 702 and the relevant caselaw. Respondent's Brief, p. 18-20. The respondent observes that the petitioner acknowledged that the testimony at issue was scientific for purposes of application of the *Daubert/Wilt* standard, going so far as to suggest that if the trial court committed error on this subject, the petitioner invited it. *Id.*, p. 19. The respondent's position takes one statement by the petitioner's counsel out of context, and attempts to stretch it to embrace far more than it meant.

At the hearing on the admissibility of the petitioner's experts, the trial court asked petitioner's counsel the following question: "I mean, it is proper for a *Gentry/Daubert* analysis insofar as the testimony proffered by the Plaintiff is—is scientific in nature. Is that correct, Mr. Hartley?" A.R. 4. Petitioner's counsel answered, "It is, Your Honor." *Id.* Petitioner acknowledged no more or less than the fact that the testimony at issue was scientific, and as such, subject to a *Daubert/Wilt* analysis. She did not acquiesce to a failure to consider the impact of the relevant substantive law, and she most certainly took no action to invite or encourage the trial court to make such an error.

Perhaps more importantly, in this appeal the petitioner in no way argues that the *Daubert/Wilt* standard does not apply to the expert testimony in this case. She simply asserts – as have several courts passing on the issue – that in “analyzing reliability for the purposes of litigation not for the purposes of science, the substantive standard of causation can affect the standard of admissibility.” *In re Paoli*, 35 F.3d at 761 n. 31 (3d Cir. 1994). The petitioner’s acknowledgment that the *Daubert/Wilt* framework applied neither invited the trial court to fail to consider the FELA’s impact on the standard nor waived her right to challenge the same on appeal.

B. THE ISSUE OF FELA’S EFFECT ON THE *DAUBERT/WILT* STANDARD HAS NOT BEEN DECIDED IN WEST VIRGINIA, AND EXTRAJURISDICTIONAL AUTHORITY SUPPORTS THE SOUND LOGICAL PRINCIPLE THAT FELA’S STANDARD OF PROOF IMPACTS THE INQUIRY.

The respondent cavalierly asserts that admissibility is admissibility, no matter the substantive standard that applies to a case. The respondent suggests that this Court decided the issue of the interplay between the FELA and the *Daubert/Wilt* standard in *Jenkins v. CSX Transp., Inc.*, 220 W. Va. 721, 649 S.E.2d 294 (2007). Respondent’s Brief, p. 21. It is true that in *Jenkins* this Court mentioned the causation standard under the FELA, but the experts in that case were excluded as a discovery sanction, and because of a lack of qualifications. 220 W. Va. at 731, 649 S.E.2d at 304. The Court was not presented with, nor did it decide, the precise issue the petitioner raises here.

Furthermore, other courts have expressly approved the very principle the petitioner advances here: that in “analyzing reliability for the purposes of litigation not for the purposes of science, the substantive standard of causation can affect the standard of admissibility.” *In re*

Paoli, 35 F.3d at 761 n. 31.⁸ The reasoning of these courts is sound.

As the petitioner discussed in her original brief, the Third Circuit observed that “the [causation] standard under FELA can significantly influence a determination of the admissibility of [expert] testimony.” *Hines v. Consolidated Rail Corp.*, 926 F.2d 262, 269 (3d Cir. 1991). The *Hines* court reasoned that “[b]y enacting FELA, Congress desired to ‘secure jury determinations in a larger proportion of cases than would be true of ordinary common law actions.’” *Id.*, quoting *Boeing Co. v. Shipman*, 411 F.2d 366, 371 (5th Cir. 1969) (internal citations omitted). This principled distinction between FELA cases and ordinary negligence cases explains why FELA’s causation standard affects the *Daubert/Wilt* inquiry. The petitioner does not submit that her expert witnesses need not make any showing that their testimony is reliable, but rather that their opinions must be viewed through FELA’s prism. The trial court committed reversible error by failing to do so.

III. THE TRIAL COURT ERRED IN REQUIRING PETITIONER TO PROVE GENERAL CAUSATION.

A. THIS ISSUE IS PROPERLY BEFORE THE COURT.

The respondent asserts that the petitioner waived her right to challenge the trial court’s requirement that her experts separately prove general causation before they could testify in this case. Respondent’s Brief, p. 25. Specifically, the respondent argues that the petitioner should have challenged this issue in response to the respondent’s motion for summary judgment below. *Id.* The respondent’s position ignores the reality of the proceedings below, and is without merit.

The petitioner did not, as the respondent suggests, acquiesce to the error she now asserts.

⁸The respondent questions whether *Paoli*’s reasoning survives the United States Supreme Court’s *Daubert* decision. Respondent’s Brief, p. 23 n. 12. *Paoli*, however, was decided in 1994, after *Daubert*.

Indeed, the respondent expressly acknowledges that in her response to its motion to exclude her expert witnesses' testimony, the petitioner "asserted that a plaintiff is not required to establish general causation." *Id.*, p. 26 n. 14. It is true that the petitioner joined in the defendant's motion for summary judgment so as to avoid the waste of resources in challenging a motion that was unwinnable in light of the incorrect standard the trial court applied.⁹ However, the petitioner made clear her position that separate proof of general causation was not required. In joining the motion for summary judgment, she merely acknowledged that she could not prevail under the trial court's standard, but by no means did she waive her right to challenge the trial court's error.

B. FEDERAL LAW ESTABLISHES SUBSTANTIVE LAW IN THIS CASE, BUT WEST VIRGINIA EVIDENTIARY LAW GOVERNS HOW A PLAINTIFF PROVES CAUSATION.

The respondent observes that federal substantive law governs FELA actions such as this one, and asserts that federal law requires separate proof of general and specific causation. Respondent's Brief, p. 26-28. However, the method by which a plaintiff proves causation – specifically, the admissibility of expert witness testimony – is an evidentiary matter governed by West Virginia law. *See Norfolk & W. Ry. Co. v. Liepelt*, 444 U.S. 490, 503 (1980) ("Questions of procedure and evidence are to be determined according to the law of the forum in cases arising under the FELA.") (internal punctuation omitted). As the petitioner discussed in her original brief, an expert witness need not separately evaluate general and specific causation (much less **prove** it, as the trial court required) in order to render an admissible opinion on causation.

As the petitioner observed in her original brief, general causation is not a legal concept,

⁹As discussed below, the petitioner is challenging the trial court's mandate that she prove general causation before her experts could testify. Once the trial court imposed this requirement and excluded her evidence of causation, summary judgment was inevitable.

but rather an epidemiologic one. As one commentator has described, “the need for ‘general’ and ‘specific’ causation evidence is a matter of degree, not a matter of doctrinal coherence or scientific accuracy.” Steve C. Gold, “A Review of the Restatement (Third) of Torts: Liability for Physical and Emotional Harm: Article: The ‘Reshaping’ of the False Negative Asymmetry in Toxic Tort Causation,” 37 Wm. Mitchell L. Rev. 1507, 1565 (2011). Furthermore, despite the respondent’s argument to the contrary, the evidentiary standard of causation in toxic tort cases, while admittedly a complex issue, is no different than that in other negligence cases. “To reach a fact-finder, a plaintiff need do no more than is required in any case: introduce ‘sufficient evidence to permit a rational factfinder to make a determination that a defendant’s tortious conduct was a factual cause of the harm[.]’” *Id.* at 1562. *See also, Donaldson, supra;* Petitioner’s Brief, p. 16-20.

Put simply, the substantive requirement imposed by the relevant federal law is that a FELA plaintiff must show that the defendant’s negligence “contributed proximately, in whole or in part, to plaintiff’s injury.” *Jenkins*, 220 W. Va. at 729, 649 S.E.2d at 302. **How** a plaintiff makes such a showing is an evidentiary matter, and the respondent has not cited any West Virginia authority showing that a plaintiff must separately prove general and specific causation to carry the substantive burden of showing that a defendant’s tortious conduct caused his or her injury. To be sure, this case illustrates why such an evidentiary standard would be inappropriate.

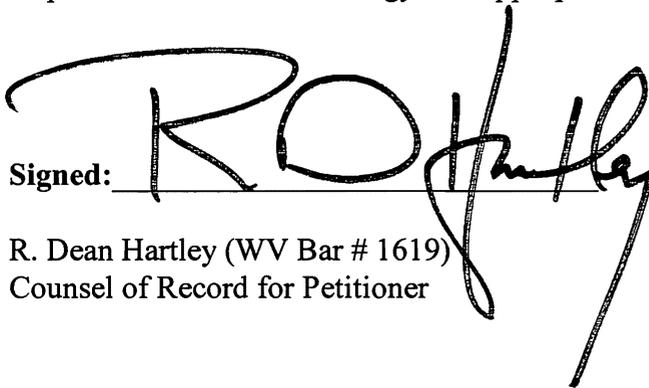
As a logical matter, an expert’s opinion that a chemical exposure caused a particular injury implies that the exposure can, in fact, cause the injury. *See Gates v. Texaco, Inc.*, No. 05C-05-043, 2008 Del. Super. LEXIS 441 (Del. Super. Ct. 2008) *aff’d* 962 A.2d 257 (Del. 2008) (“implicit in Dr. Goldstein’s opinion that Mr. Gates’s [leukemia was] caused by his benzene

exposure at the refinery is [his] opinion that benzene can cause CMML”). Requiring separate proof of general causation, however, is unsupported under West Virginia law¹⁰ and invites a trial court—as the trial court did here—to raise the standard of proof and mandate that a plaintiff prove his or her case before an expert witness is permitted to testify.

Here, the petitioner’s experts complied with the requirements of the West Virginia Rules of Evidence in forming admissible opinions directed to the substantive requirement of showing that Mr. Harris’ occupational diesel exhaust exposures caused his multiple myeloma. The trial court’s requirement that those experts separately demonstrate general and specific causation before permitting them to testify ranged beyond West Virginia’s evidentiary standards, and constituted reversible error.

CONCLUSION

Nothing in respondent’s brief undermines the conclusion that petitioner’s expert witnesses’ opinions are reliable, and that the rulings of trial court should be reversed with instructions on remand that since petitioner’s expert witnesses’ methodology was appropriate their testimony is admissible.

Signed: 

R. Dean Hartley (WV Bar # 1619)
Counsel of Record for Petitioner

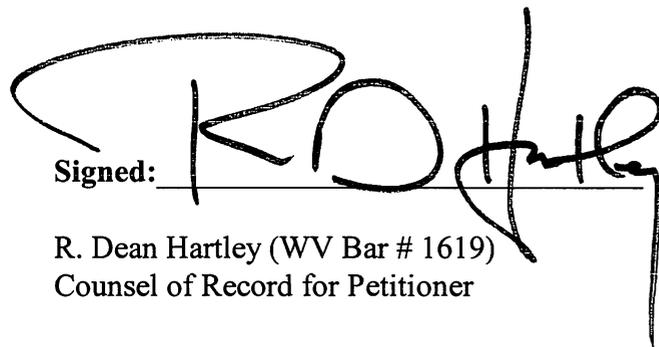
¹⁰See *Casdorph*, 225 W.Va. at 100-01, 690 S.E.2d at 108-109 (Court recognized that Rule 702 does not apply in a workers’ compensation claim, but noted that even though employee’s causation analysis that benzene causes CML had not been published in peer-reviewed textbooks as common or accepted consensus medical opinion did not preclude expert from opining that employee’s CML was caused by his occupational exposure to cancer-causing agents).

CERTIFICATE OF SERVICE

I hereby certify that on this 25th day of February, 2013, a true and accurate copy of the foregoing Petitioner's Reply Brief was deposited in the U.S. Mail contained in a postage-paid envelope addressed to counsel for all the other parties to this appeal as follows:

Counsel for Respondent

James W. Turner, Esq.
STEPTOE & JOHNSON, PLLC
Chase Center - Second Floor
1000 Fifth Avenue, Suite 250
Huntington, WV 25701

Signed: A handwritten signature in black ink, appearing to read 'R. Dean Hartley', written over a horizontal line. The signature is stylized with large, sweeping loops.

R. Dean Hartley (WV Bar # 1619)
Counsel of Record for Petitioner