

OVER THE
COUNTER

No. E2012-02392-SC-R11-CV

IN THE SUPREME COURT OF THE STATE OF TENNESSEE

ANNE PAYNE,

Plaintiff-Appellee

v.

CSX TRANSPORTATION, INC.,

Defendant-Appellant.

On appeal from the Circuit Court of Knox County, No. 2-231-07
Court of Appeals, Eastern Division: No. E2012-02392-COA-R3-CV

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INTRODUCTION

Plaintiff does not dispute that an appellate court must give great deference to trial court rulings on matters such as the admissibility of expert testimony and, in particular, whether a new trial is necessary due to evidentiary and instructional errors. *See* CSXT Br. 17-19. But she does not and cannot maintain that the Court of Appeals (“COA”) afforded *any* deference—let alone the exceptional deference the law requires—to the two jurists whose rulings it systematically overturned. And Plaintiff’s own arguments read as if this Court is required to bend over backwards to affirm the jury’s verdict rather than—as the law requires—the trial court’s first-hand assessment that the verdict was an injustice. Indeed, Plaintiff explicitly contends that the Court should view the evidence in the light most favorable to the verdict. Pl. Br. 7. That rule applies in appeals involving sufficiency of the evidence; but in an appeal from an order granting a new trial due to evidentiary and instructional error, the Court should view the evidence in the light most favorable to the ruling under review and should overturn that exercise of discretion only in “egregious cases.” *United States v. Alston*, 974 F.2d 1206, 1212 (9th Cir. 1992); *see also, e.g., Melton v. BNSF Ry.*, 322 S.W.3d 174, 181 (Tenn. Ct. App. 2010). Similarly, the Court should view the record in the light most favorable to the trial court’s ruling on the admissibility of expert testimony and “[t]he trial court’s ruling in this regard may only be overturned if the discretion is arbitrarily exercised or abused.” *McDaniel v. CSX Transp., Inc.*, 955 S.W.2d 257, 263-64 (Tenn. 1997). Plaintiff has not demonstrated that either Judge Wimberly or

Judge Workman abused the discretion afforded them, and accordingly their new-trial and evidentiary rulings (along with the resulting summary judgment order) should be reinstated.

ARGUMENT

I. **Judge Wimberly Did Not Abuse His Discretion By Ordering A New Trial.**

A. **Plaintiff's violation of Judge Wimberly's pre-trial order excluding false testimony that Payne had radiation-induced thyroid cancer.**

1. Plaintiff's assertions that "[t]he thyroid-cancer evidence was properly admitted" (Pl. Br. 12), that "the widow elected not to offer thyroid-cancer evidence" (Pl. Br. 13), and that "[n]o court order prevented the widow from cross-examining CSX's doctor about his written opinion that decedent suffered from thyroid cancer" (Pl. Br. 12) are all false. Over Plaintiff's protestation, Judge Wimberly ruled that any suggestion that Payne had thyroid cancer was improper and ordered Plaintiff's counsel to "leave that out" of the case. App. 5. Accordingly, in eliciting testimony about a supposed radiation-induced thyroid cancer, Plaintiff's counsel was acting in direct and willful violation of Judge Wimberly's pre-trial order.

2. Plaintiff tries to create the impression that her counsel was simply exploring a legitimate dispute among the experts about whether Payne had thyroid cancer. Pl. Br. 12-13. That also is false. There was initial testing suggesting thyroid cancer, but later information conclusively disproved that diagnosis. *See* App. 4. That is why Plaintiff's counsel admitted in a pretrial hearing that "[n]o one in here says [Payne] had thyroid cancer." App. 5. Moreover, even if it were not clear from the record, this

is precisely the type of issue on which an appellate court should defer to Judge Wimberly's conclusion that Plaintiff's counsel had intentionally elicited testimony "about this thyroid cancer which [Payne] apparently didn't have." App. 279-80.

3. Equally off base is Plaintiff's contention that "[t]he cross-examination shed light on the decedent's exposure to radiation." Pl. Br. 12. Because Payne did not have thyroid cancer, testimony that he had radiation-induced thyroid cancer could not possibly "shed light" on anything.

4. Plaintiff contends that "CSX has offered no support for the premise that it was harmed by this fleeting mention of thyroid cancer." Pl. Br. 13. She overlooks CSXT's explanation (CSXT Br. 21-23) that this reference to radiation-induced thyroid cancer undermined its defense by falsely suggesting that (i) Payne had a type of cancer that could not be explained by his decades of heavy smoking; (ii) Payne had sufficient exposure to radiation to cause adverse health effects; and (iii) CSXT was trying to keep this information from the jury. None of those things was true, but through his misconduct (and Judge Wimberly's insufficient response), Plaintiff's counsel was able to create the impression that they were.

5. Plaintiff contends that Judge Wimberly's curative instruction "addressed any alleged prejudice to CSX" because "[a] jury is presumed to have followed a court's instructions." Pl. Br. 12. But the curative instruction told the jury only that "there's no claim in this case that the plaintiff suffered from thyroid cancer or that that caused him anything that is the subject matter of this case." App. 241. "[F]ollow[ing]" this

instruction would mean not awarding damages for thyroid cancer. The instruction did not tell the jurors that Payne did not have thyroid cancer or even that they should disregard the testimony about thyroid cancer. As Judge Wimberly recognized, this left the jury with the false impression that Payne had thyroid cancer caused by radiation exposure, but simply was not seeking damages for that cancer in this lawsuit. *See* App. 279-80. Judge Wimberly's (obviously correct) conclusions that his curative instruction was inadequate to cure the prejudice to CSXT from Plaintiff's misconduct and that this incident resulted in a trial that was "an injustice to Defendant" warrant deference, not appellate interference.

B. Numerous other errors support the new-trial order.

1. Violation of agreement excluding cesium evidence

Plaintiff notes that Judge Wimberly deferred ruling on CSXT's pre-trial motion to exclude cesium evidence because it was unclear whether Plaintiff, who had no expert testimony on the issue, would even attempt to raise the issue. Pl. Br. 14. But when the trial came around, Plaintiff avoided an adverse ruling on this issue by representing—repeatedly—that she would not discuss cesium before the jury. App. 74a-74b; *see also* App. 162-65.

Plaintiff also implies that CSXT opened the door by identifying a witness to testify about cesium contamination at the Y-12 facility and putting on evidence that this contamination created no risk to railroad workers. Pl. Br. 14. But CSXT identified that witness as a precaution in the event that Plaintiff were to raise cesium exposure at

trial. Pl. App. 7. And CSXT put on evidence about the cesium contamination at the Y-12 facility only *after* Plaintiff improperly interjected the issue into the case. *Compare* App. 162-63 *with* App. 213-24.¹

2. Violation of court order excluding misleading photograph

Plaintiff concedes that the admissibility of photographs to demonstrate the conditions in which Payne worked is “an evidentiary issue left to the broad discretion of the trial court.” Pl. Br. 15. But she appears to have forgotten that, exercising that broad discretion, Judge Wimberly ordered her not to show the jury the following photograph, which was a highly misleading depiction of the amount of diesel exhaust in Payne’s normal work environment.



¹ Relatedly, CSXT’s argument has nothing to do with the cross-examination that Judge Wimberly allowed after CSXT put on a witness to rebut the connection Plaintiff’s counsel improperly created between Plaintiff’s work and the notorious Y-12 facility. *See* Pl. Br. 14. By then, the well already had been poisoned.

See App. 62; *see also* App. 15, 65-66 (sustaining CSXT's objection to "the black smoke locomotive picture"). Plaintiff flagrantly violated Judge Wimberly's order by publishing that photograph to the jury, without first showing it to CSXT or Judge Wimberly.² App. 161-62.

3. Admission of lay-witness testimony purporting to identify asbestos in Payne's workspace

Plaintiff does not dispute that, as her own expert witness conceded, "[i]n order for asbestos to injure a person, the person has to breathe the fibers into the lung" and the only way to detect asbestos fibers in the air is through microscopic testing conducted by an expert. App. 78-82; *see generally* CSXT Br. 27-28. She also does not contest that, for this reason, many other states have held that lay witnesses are not competent to testify about the alleged presence of respirable asbestos in the workplace.

Plaintiff points out that a witness may gain expertise through experience (Pl. Br. 15-16), but she identifies no evidence that Payne had relevant experience that qualified him to identify asbestos containing materials ("ACMs"), let alone the presence of respirable asbestos in the air. Plaintiff asserts that Payne's testimony "was cor-

² As Judge Wimberly noted, this photograph "shouldn't have been gone into" because "there's not even a claim by plaintiff he was ever exposed to that sort of thing." App. 165. Plaintiff points out that Payne testified at his deposition that he had seen locomotives like this. Pl. Br. 14-15. But she omits his clarification that this engine was not typical, but was malfunctioning: "That's definitely a fuel line stopped up or something." Pl. App. 62. In any event, Judge Wimberly considered all of this and, exercising his discretion, excluded the photograph.

roborated” (Pl. Br. 16) by other witnesses, but she cites nothing in the record to show that these witnesses (i) had relevant expertise, (ii) purported to identify ACMs in Payne’s workplace, or (iii) rendered competent opinions about the presence of respirable asbestos fibers. Moreover, contrary to Plaintiff’s assertion, CSXT not only “contend[s] that Payne testified erroneously” (*id.*), but backed up that contention with specific examples in its opening brief (at 28).

Finally, in emphasizing that the admissibility of testimony is entrusted to the trial court’s “broad discretion” (Pl. Br. 16), Plaintiff misses the point. Because Judge Wimberly had reconsidered many of his prior evidentiary rulings when ordering a new trial and Plaintiff failed to ask him to enumerate the rulings he had reconsidered, the question is whether it would have been within Judge Wimberly’s “broad discretion” to decide that it had been a mistake to allow unqualified—and demonstrably misleading—testimony from lay witnesses on this issue.

4. Allowing evidence of plutonium at the Witherspoon site

Plaintiff never disputes his own experts’ admissions that (i) there was *no* concern about plutonium in the small Candora Triangle area of the Witherspoon site where Payne worked (App. 132-34) and (ii) “we don’t have any evidence that says that Mr. Payne was exposed to plutonium at Witherspoon” (App. 75-76). Plaintiff suggests that she nevertheless offered sufficient evidence to justify the interjection of plutonium into the case because her expert criticized the dose-reconstruction estimate conducted by CSXT’s expert. Pl. Br. 17. But criticizing the analysis of a competing

expert is not the same thing as affirmatively establishing that Payne was exposed to plutonium. There was no evidence of such exposure—only the kind of speculation perpetuated in Plaintiff’s brief—and therefore no basis for tainting the jury with highly prejudicial evidence about plutonium at Witherspoon.

Plaintiff also reiterates her expert’s testimony that the lack of evidence that Payne was exposed to plutonium at Witherspoon “[d]oesn’t mean it doesn’t happen ... you just don’t know,” because “one atom [of Plutonium] could cause cancer.” App. 139-40; *see* Pl. Br. 17. As shown in CSXT’s opening brief (at 31), that type of speculation is both improper and inadequate to create a jury question on whether Payne was exposed to plutonium at Witherspoon. Judge Wimberly would have been well within his discretion to recognize in hindsight that he should not have allowed Plaintiff to distract and confuse the jury with evidence regarding plutonium contamination at Witherspoon when there was *nothing* in the record to demonstrate exposure.

5. Failure to give an appropriate instruction on foreseeability

This Court recently emphasized that “the legitimacy of a jury’s verdict is dependent on the accuracy of the trial court’s instructions.” *Spencer v. Norfolk S. Ry.*, ___ S.W.3d ___, 2014 WL 4258827, at *2 (Tenn. Aug. 29, 2014) (alterations and internal quotation marks omitted). The Court also held that FELA “require[s] the Plaintiff to prove the common law elements of negligence: duty, breach, foreseeability, and causation” and that “the evidence must establish that the railroad had notice; that is, that the railroad knew or should have known of the condition of the workplace that caused

the employee's injury." *Id.* at *3. That is consistent with the Court's prior holding that, when historical practices are at issue, a FELA plaintiff must prove "that the railroad knew, or by the exercise of due care should have known that prevalent standards of conduct were inadequate to protect [the plaintiff]." *Mills v. CSX Transp., Inc.*, 300 S.W.3d 627, 633 (Tenn. 2009) (internal quotation marks omitted).

Here, Judge Wimberly failed to accurately instruct the jury on this element of Plaintiff's FELA claim. *See* App. 269-70 (only reference to notice or foreseeability in the instructions). Contrary to Plaintiff's suggestion, CSXT's position is not merely that its proposed instruction was "better" (Pl. Br. 17-18), but that Judge Wimberly's instructions were inadequate as a matter of law. Plaintiff makes no substantive effort to defend Judge Wimberly's patently inadequate instructions.³

6. Improper instruction on federal regulations

Plaintiff does not dispute that it was her burden to prove that CSXT shipped radioactive material into or out of Witherspoon after 1976 in order to justify instructing the jury on the materially different federal regulation governing such shipments after 1976. *See* CSXT Br. 34-35. Plaintiff cites testimony that there still was radioactive material at Witherspoon after 1976 and that CSXT may have picked up and dropped off rail cars at Witherspoon after 1976 (Pl. Br. 18), but she identifies no evidence that

³ Plaintiff's contention that foreseeability is irrelevant to claims based on statutory violations (Pl. Br. 17) is inapposite because the jury was instructed that it had to find CSXT negligent to even reach the statutory-violation issues. *See* Pl. App. 189. Accordingly, Plaintiff had to prove all elements of negligence—including foreseeability—to prevail, despite the presence of her statutory-violation claims.

CSXT's alleged shipments included radioactive materials (as opposed to regular scrap) after 1976. The undisputed evidence was that Witherspoon was not shipping such materials after 1972. App. 141-42d.

C. The Court of Appeals failed to even consider other grounds that support a new trial.

Plaintiff, like the COA, fails to address whether Judge Wimberly would have been within his discretion to order a new trial in response to her counsel's repeated misconduct, which is a recognized, highly discretionary ground for granting a new trial in FELA cases. *See* CSXT Br. 35-36. Similarly, Plaintiff fails to address Judge Wimberly's conclusion that the cumulative effect of numerous evidentiary and instructional errors, some of which he tried unsuccessfully to cure, resulted in a trial that was fundamentally unfair to CSXT.⁴

II. Judge Workman Did Not Abuse His Discretion When Excluding The Specific-Causation Testimony Offered By Plaintiff's Experts.

A. The COA disregarded the gatekeeping role that this Court has instructed courts to perform before admitting expert testimony.

Plaintiff does not dispute that the COA's opinion contains none of the analysis this Court has required lower courts to perform when deciding whether expert testi-

⁴ In a last-ditch effort to salvage something from the first trial, Plaintiff argues that Judge Wimberly should have limited his new-trial order to the issue of damages. Pl. Br. 29. But Plaintiff did not ask for such a limitation in the trial court. Accordingly, this question is not preserved for review and should be ignored. *See, e.g., In re Adoption of Angela E.*, 402 S.W.3d 636, 642-43 (Tenn. 2013). In any event, almost all of the errors discussed above relate to liability, not just damages. A new trial on damages would have been an inadequate remedy.

mony is admissible. *See* CSXT Br. 38-41. Indeed, the COA’s two-sentence ruling did not even specify what the court thought Judge Workman got wrong. Plaintiff also makes no effort to defend the COA’s only stated reason for its ruling—that Judge Workman should have admitted the testimony because Judge Wimberly did. That undefended rationale is wrong for many reasons.⁵ *See* CSXT Br. 41-42.

B. The Court of Appeals failed to afford proper deference to Judge Workman’s discretionary decision on this issue.

Plaintiff does not deny that this Court has had to repeatedly intervene in cases like this because the COA has failed to give proper deference to the trial court’s discretionary rulings on the admissibility of expert testimony. *See* CSXT Br. 42-43. If any case demonstrates the need for further admonishment, this is it. The COA simply substituted its own judgment for that of Judge Workman, tossing out his diligent effort to fulfill the gatekeeping role this Court has instructed trial courts to perform.

C. Judge Workman did not abuse his discretion on this issue.

Plaintiff’s main criticism of Judge Workman’s ruling attacks a straw man. She contends that Judge Workman excluded her expert testimony because her experts were “unable to establish the precise levels of exposure to toxic materials.” Pl. Br. 20. But Judge Workman was perfectly clear that he was *not* excluding the experts’ specific-causation opinions because the experts failed to prove a precise dose. His reason instead was that they attributed causation to Payne’s alleged workplace exposures

⁵ Plaintiff makes one passing reference to “the law-of-the-case doctrine” (Pl. Br. 19), but never argues that it applies here. It does not. *See* CSXT Br. 41-42.

without using *any* scientifically valid method of demonstrating that Payne's level of exposure was sufficient to be a cause of his disease, making their opinions nothing but *ipse dixit*.⁶ See App. 395-97, 401, 408-11. That plainly is a proper basis on which to exclude expert testimony in Tennessee. See *McDaniel v. CSX Transp., Inc.*, 955 S.W.2d 257, 265 (Tenn. 1997) ("The court ... must assure itself that the opinions are based on relevant scientific methods, processes, and data, and not upon an expert's mere speculation."); see also CSXT Br. 43-48.

For the same reason, Plaintiff's contention that she could not meet Judge Workman's criteria for admissibility because CSXT did not monitor Payne's dosage during his employment (Pl. Br. 20-21) is a red herring. CSXT has never argued, and Judge Workman did not hold, that Plaintiff's "expert evidence was insufficient because data did not exist to provide exact dosage information" (Pl. Br. 20). There are well known valid methods in the field of industrial hygiene for estimating historical exposure levels without "exact dosage information." Indeed, CSXT's own experts

⁶ Thus, contrary to Plaintiff's contention (Pl. Br. 26), Judge Workman's ruling is entirely consistent with *Wilson v. CSX Transportation, Inc.*, 2003 WL 1233536 (Tenn. Ct. App. May 27, 2003). In *Wilson*, the expert based his opinion on a "qualitative exposure assessment" and a peer-reviewed study correlating similar exposures with an increased occurrence of the plaintiff's form of brain cancer. *Id.* at *8. Here, Plaintiff's experts did not conduct even a qualitative exposure assessment. Indeed, they ignored the dose-reconstruction estimates conducted by CSXT's experts, which showed that Payne's exposures, if any, were harmless. And, while Plaintiff contends that one of her experts relied on "peer-reviewed studies of uranium miners who had also been exposed to radiation resulting in lung cancer" (Pl. Br. 22), Judge Workman found those studies to be irrelevant because they involved enormously high exposure levels that bear no resemblance to any exposure that Payne may have had (App. 392).

used existing information to conduct dose-reconstruction estimates for Payne's alleged workplace exposures. *See* CSXT Br. 5-8. Plaintiff's experts admitted that this is a "standard" methodology for doing dose reconstructions (App. 125-26), but simply failed to use the available methods normally employed by experts in their fields.

The only other argument Plaintiff makes in support of the COA's ruling is one that the COA never accepted: that FELA's relaxed causation standard is the "outcome-determinative" factor that renders her experts' opinions admissible. Pl. Br. 21-27. But she does not cite a single case adopting that principle. Meanwhile, numerous federal courts of appeal, including the Sixth Circuit, have rejected that argument, holding that FELA's causation standard does not alter the standard for the admissibility of expert testimony.

For example, in *Taylor v. Consolidated Rail Corp.*, 114 F.3d 1189 (table), 1997 WL 321142 (6th Cir. 1997) (per curiam), the trial court excluded the plaintiff's medical-causation expert under *Daubert*. On appeal, the plaintiff argued that FELA's causation standard "also informs the evidentiary standard to be applied in cases brought under the Act" and that the expert therefore should have been allowed to testify "with less definiteness than is required of opinion testimony on causation" in other cases. *Id.* at *6. The Sixth Circuit rejected that argument, holding that "[t]he standard of causation under FELA and the standards for admission of expert testimony under the Federal Rules of Evidence are distinct issues and do not affect one another." *Id.*; *see also* *Mayhew v. Bell S.S.*, 917 F.2d 961, 963 (6th Cir. 1990) (similar in Jones Act case).

Applying the normal federal standard under *Daubert*, the court affirmed the trial court's ruling.⁷

Finally, Plaintiff contends that her experts conducted a valid differential etiology and that "CSX has never identified any alternative cause that the widow's medical experts failed to properly consider." Pl. Br. 25-26. On the contrary, the alternative cause that Plaintiff's experts failed to rule out through any valid scientific method is Payne's decades of heavy smoking. Plaintiff's experts agreed that Payne's smoking history was enough to cause his stereotypical "smoker's cancer," that 88-90% of lung cancers like Payne's are caused by smoking, and that Payne had other medical indicators of smoking-related disease but none of the typical signs of exposure to other carcinogens. *See* CSXT Br. 3-4. To rule out smoking as the sole cause of Payne's lung cancer, Plaintiff's experts had to identify some valid scientific method for concluding that Payne's exposures to radiation, asbestos, or diesel exhaust at work were significant enough that they too must be considered causes of Payne's lung cancer. Her experts never identified such a methodology, but simply speculated that because Payne may have been exposed to those substances at work, they must have been causes of

⁷ The Second and Ninth Circuits have agreed that FELA's relaxed causation standard "does not mean ... that in FELA cases courts must allow expert testimony that in other contexts would be inadmissible." *Claar v. Burlington N. R.R.*, 29 F.3d 499, 503 (9th Cir. 1994); *see also, e.g., Wills v. Amerada Hess Corp.*, 379 F.3d 32, 47 (2d Cir. 2004) (in Jones Act case, "the standards for determining the reliability and credibility of expert testimony are not altered merely because the burden of proof is relaxed").

his disease.⁸ That is manifestly insufficient. *See* CSXT Br. 43-50.⁹

III. Judge Wimberly Did Not Err By Further Instructing The Jury After It Returned A Verdict Based On A Prior Misstatement Of The Law.

Plaintiff does not deny that both her counsel and the trial court initially gave an incomplete account of the law related to comparative fault, falsely implying that the damages would be reduced by the jury's comparative-fault finding no matter what. CSXT Br. 50-52.¹⁰ Plaintiff also does not dispute that the further instruction given by Judge Wimberly corrected these misstatements, completely and accurately described the law, was relevant to this case (particularly in light of the prior misleading instruc-

⁸ As Judge Workman observed, this lack of a valid method for assessing Payne's level of exposure was particularly troubling because Plaintiff's experts opined that Payne's acknowledged **background** exposure to radiation, asbestos, and diesel exhaust did **not** cause his cancer—effectively conceding that there is some level of exposure required to attribute causation, but leaving the experts with no principled basis for distinguishing between background exposures, which everyone experiences, and Payne's alleged workplace exposures. App. 407-11.

⁹ *See also, e.g., Chapman v. Procter & Gamble Distrib., LLC*, __ F.3d __, 2014 WL 4454979, at *7-9 (11th Cir. Sept. 11, 2014) (affirming exclusion of expert who “failed to consider obvious alternative causes” because “[a] reliable differential analysis requires ... reasons for rejecting alternative hypotheses using scientific methods and procedures,” not just “subjective beliefs or unsupported speculation”) (internal quotation marks omitted); *Brown v. Burlington N. Santa Fe Ry.*, __ F.3d __, 2014 WL 4257854, at *6-9 (7th Cir. Aug. 29, 2014) (affirming exclusion of expert in FELA cumulative-trauma case because he “did not reliably weigh the risks posed by [the plaintiff's] job-related exertion as compared to his other activities” or “investigate and systematically rule out two obvious potential causes” and thus failed to conduct reliable differential etiology).

¹⁰ Plaintiff's contention that CSXT “abandoned” the question whether Judge Wimberly's initial instruction was inadequate because it did not object contemporaneously or raise that issue in the COA (Pl. Br. 27) misses the point. Judge Wimberly corrected the mistake *sua sponte*, which he unquestionably had authority to do (*see* CSXT Br. 54-56), leaving no instructional error for CSXT to appeal.

tion and argument on this issue), and was not redundant of other instructions. *See id.* Nevertheless, Plaintiff contends that Judge Wimberly *abused his discretion* by giving the jurors a complete and accurate instruction rather than leaving them with an admittedly false understanding of the law. Plaintiff's attempts to support that remarkable, counterintuitive conclusion have no merit.

1. Plaintiff says that "she has located no holding that a jury *must be*" instructed on the effect of comparative fault.¹¹ Pl. Br. 9. But the relevant question is not whether a complete and accurate instruction on comparative fault was required, but whether giving that instruction was an abuse of discretion, particularly after Plaintiff's counsel made a point of telling the jury that the damages would be reduced by Payne's comparative fault. Moreover, Plaintiff ignores that Judge Wimberly already had provided an incomplete instruction about the consequences of finding that Payne was partly at fault. Having started down the road, it was hardly an abuse of discretion for Judge Wimberly to complete the journey.

2. For the same reason, Plaintiff's insistence that the further instruction on comparative fault related to "a purely legal issue that is reserved to the court" (Pl. Br. 27; *see also* Pl. Br. 8-9) is beside the point. The original incomplete instruction was

¹¹ Notably, the case Plaintiff cites for the proposition that the jury need not be instructed on the effect of comparative fault (Pl. Br. 9 n.2) holds no such thing. In that decision, the court noted that "*the jury was specifically instructed* that Shepard alleged that two statutory violations were at issue: (1) the FELA, which requires negligence and provides for comparative negligence and (2) the LIA, *which imposes absolute liability.*" *Shepard v. Grand Trunk W. R.R.*, 2010 WL 1712316, at *13 (Ohio Ct. App. Apr. 29, 2010) (emphases added).

every bit as much about “a purely legal issue” as the further corrective instruction. Moreover, Plaintiff ignores that, in a remarkably similar context, the U.S. Supreme Court has held that FELA juries *must* be instructed that damages are not taxable so that juries do not artificially inflate their award to ensure that the plaintiff receives a specific amount after taxes. CSXT Br. 53-54 (discussing *Norfolk & W. Ry. v. Liepelt*, 444 U.S. 490, 496-97 (1980)). As with the law regarding comparative-fault offsets, the non-taxability of damages is a purely legal issue that merely describes what will happen after the jury returns its verdict. Nevertheless, the Supreme Court held in *Liepelt* that juries must be instructed on this aspect of the law so that they do not award damages based on a mistaken assumption about the law.

3. Plaintiff suggests that trial courts may give further instructions after the jury has returned an initial verdict only if the verdict is defective on its face. Pl. Br. 9. But she ignores that this Court has approved giving further instructions even when “the verdict as first reported to the court was not in fact ‘defective’, but was based upon an erroneous view of [the jury’s] duty.” *Riley v. State*, 227 S.W.2d 32, 34 (Tenn. 1950). In *Riley*, the Court held that, even though the verdict was not defective, “the trial court was fully justified in declining to accept the first verdict” and instead questioning the jurors, providing further instructions, and allowing further deliberations. *Id.* So too here.

4. Plaintiff “invites this Court to take judicial notice of the fact that \$8.6 million reduced by 62% is just over \$3.2 million,” which she contends demonstrates that “the

jury overrode Congress's mandate and awarded the widow a reduced sum that corresponds exactly with the degree of fault that it had found previously." Pl. Br. 8. But, as shown in our opening brief (at 58 n.14), those facts are equally consistent with the jurors having initially awarded Plaintiff *more* than they thought her injuries were worth in order to guarantee that she would receive \$3.2 million (which they considered to be fair compensation) after the 62% comparative-fault offset that the court and Plaintiff's counsel told them would occur. When the jurors learned that there would be no offset, they realized that Plaintiff would receive almost three times the amount that they considered to be fair compensation. Accordingly, they rejected the initial verdict and asked to deliberate further so that they could avoid that unjust result. The jury did not "override" federal law when it amended its verdict (Pl. Br. 29); it simply corrected its initial inflation of the damages. Plaintiff ignores this likely explanation for the jury's actions.

5. Finally, Plaintiff repeatedly misrepresents what Judge Wimberly and the jury actually did. To assist the Court in understanding what actually transpired, we have attached the relevant transcript pages (App. 275-78) as an exhibit to this brief.

- Plaintiff contends that Judge Wimberly "asked the jury ... to modify its verdict" (Pl. Br. 1) and "asked for a different result" (Pl. Br. 9). On the contrary, Judge Wimberly simply gave a further instruction on the law and then asked the jurors whether, in light of that instruction, the verdict read by the foreperson was what they intended. App. 275-76. He never asked them to change their verdict and did not suggest an opinion about the initial verdict read by the foreperson.
- Plaintiff contends that Judge Wimberly "instruct[ed] the jury, *sua sponte*, to

deliberate again” (Pl. Br. 6) and “sent the jury back for unwarranted further deliberations” (Pl. Br. 9). On the contrary, following Judge Wimberly’s further instruction, it was *the jury* that asked “Could we have a moment to discuss that?” *See* App. 277. Judge Wimberly merely granted the jury’s request to deliberate further. *Id.* Plaintiff’s appendix conspicuously omits that portion of the transcript.

- Plaintiff contends that Judge Wimberly “invited the jury to ignore the statute and revise its verdict to incorporate contributory negligence.” Pl. Br. 8; *see also* Pl. Br. 10. On the contrary, Judge Wimberly plainly told the jury that there could be no offset for comparative fault in light of its findings of statutory violations. App. 275-76. Indeed, when Plaintiff’s counsel contended that “the Court would need to instruct the jury that the FELA provides that there is no reduction of the jury’s determination for contributory fault to the plaintiff as a matter of law,” Judge Wimberly correctly responded: “That’s what I just told them.” App. 278.
- Plaintiff asserts that Judge Wimberly “asked the jury if it understood that contributory negligence was overcome by a finding of a statutory violation, and the foreman indicated yes.” Pl. Br. 9; *see also* Pl. Br. 1. On the contrary, he did not ask the jurors whether they understood the instruction he had just given them, but whether the verdict read by the foreperson was what the jurors intended in light of that instruction. App. 275-76. Moreover, Judge Wimberly’s question was directed to the entire jury and, while the foreperson “indicated yes” (Pl. Br. 9) *all of the other jurors indicated no* by failing to raise their hands (App. 275-76). *Compare* App. 277-78 (all jurors raised their hands to affirm amended verdict).

In sum, Judge Wimberly properly handled a difficult situation when he realized that the jury’s initial verdict was likely based on his and Plaintiff’s prior misleading description of the law related to comparative fault. Courts should be encouraged to proactively ensure that the jury is properly and completely instructed while the case remains pending before them and the jury retains authority to reconsider its verdict. Plaintiff has offered no valid justification for the COA’s holding that it was an abuse of discretion to give a further instruction that everyone agrees was accurate, relevant,

non-duplicative, and necessary to correct a prior incomplete and misleading description of the law.

IV. Judgment May Be Entered Only On The Jury's Final Verdict.

A. When the jury exercises its right to revise its verdict, courts may enter judgment only on the final verdict.

Plaintiff does not deny that jurors have the right to “amend or change their verdict at any time before they have been discharged” and that the trial court must “render[] judgment on th[e] last verdict” returned by the jury. *George v. Belk*, 49 S.W. 748, 749 (Tenn. 1899); *see* CSXT Br. 57-59. Instead, Plaintiff asserts that the jury here “was not exercising its right to revise a verdict,” but “was reacting to patent legal error initiated by the judge.” Pl. Br. 29 (alterations and internal quotation marks omitted). As we have explained, however, the jury’s reason for changing its verdict “is immaterial.” CSXT Br. 58-59 (quoting *George*, 49 S.W. at 749). Even if the jury changed its verdict in response to instructional error, once the jury has been discharged, the proper—and only—remedy is to order a new trial. Plaintiff cites no authority—and there is none—that would allow a court to disregard the jury’s right to change its verdict by entering judgment on a verdict that the jurors repudiated and revised.

In any event, as described above, Plaintiff’s account of what happened after trial is highly misleading. First, it was the jurors who asked to deliberate further. App. 277. Second, whereas all but one of the jurors rejected the initial verdict (App. 275-

76), the amended verdict was unanimous (App. 277-78). Third, contrary to Plaintiff's speculation about what the jury intended, the most likely explanation for the jurors' amended verdict is *not* an improper offset of the amount that they considered to be fair compensation, but the excision of surplus damages they had awarded in an effort to circumvent the anticipated comparative fault offset. The fact that it is now impossible to know which of these competing explanations represents what was going through the jurors' minds only confirms that the appropriate remedy for any error would be a new trial.

B. Courts may not enter judgment on one verdict when the jurors have affirmed only a different verdict through polling.

Plaintiff does not dispute that CSXT had a statutory right to poll the jurors and "have each juror answer the question, 'Is this your verdict?'" in the presence of a court and counsel." *Lovell v. McCullough*, 439 S.W.2d 105, 108-09 (Tenn. 1969); see T.C.A. § 20-9-508. Instead, Plaintiff contends that "[s]trictly speaking, the trial judge was not polling the jury after it affirmed every special-interrogatory finding in open court. On the contrary, he questioned the foreperson and jury members about a legal issue that is reserved to the judge under federal law." Pl. Br. 28-29 (emphasis omitted). Once again, Plaintiff's description of these events is materially inaccurate.

First, the jurors did not "affirm[]" every special-interrogatory finding." Pl. Br. 28. The jury foreperson simply gave answers to the questions on the verdict form. App. 273-75. The other jurors never affirmed the initial verdict read by the foreper-

son.¹² Second, Judge Wimberly did not “question[] the foreperson and jury members about a legal issue.” Pl. Br. 28-29 (emphasis omitted). He gave the jurors a further instruction and then asked them whether, in light of that instruction, they intended to award Plaintiff \$8.6 million: “If that is what you intend in this particular case, please indicate by raising your right hand?” App. 275-76. Judge Wimberly did not use the words “Is this your verdict?,” but he did ask the jurors whether the verdict read by the foreperson is what they intended. That is a poll of the jurors, and all but one of them rejected the initial verdict.

Even if Plaintiff were correct that the jurors were never polled on the initial verdict, however, it is undeniable that the jurors never *agreed* that the initial verdict read by the foreman was their verdict. The only verdict they affirmed through polling was the amended verdict. Plaintiff has not excluded—and could not exclude—the possibility that one or more of the jurors would have renounced the initial verdict *even without the further instruction*. Thus, it is impossible to know whether the original verdict was in fact the verdict of each juror—which CSXT had a right to confirm. For that reason alone, it would be highly improper to enter judgment on the unconfirmed initial verdict read by the jury foreperson.

¹² Similarly misleading is Plaintiff’s contention that, when asked what amount would compensate Plaintiff, the jury “unanimously responded, ‘\$8.6 million.’” Pl. Br. 11. The jurors never affirmed that verdict. Indeed, all but one of them rejected it when they were polled.

V. If The Case Is Remanded, The Trial Court Should Be Authorized To Decide Any Unresolved Issues That Were Pretermitted By Judge Wimberly's New-Trial Order.

Plaintiff does not deny that, on its face, Judge Wimberly's new-trial order resolved *only* CSXT's motion for a new trial "based upon specific prejudicial errors including, but not limited to, instructional and evidentiary errors that resulted in an injustice to Defendant ... independent of considerations regarding sufficiency of the evidence." App. 281-82. Nor does she contest that CSXT also properly raised, and fully briefed, post-trial motions for (i) judgment as a matter of law on all issues; (ii) judgment as a matter of law on Plaintiff's claims of regulatory violations; and (iii) a new trial based on the sufficiency of the evidence. *See* App. 278a-278d. Nevertheless, like the COA, Plaintiff asserts that Judge Wimberly "considered and rejected" those other motions *sub silentio* when he ordered a new trial based on evidentiary and instructional errors. Pl. Br. 28.

Plaintiff does not cite anything in the record—because there is nothing—to support her conjecture about what Judge Wimberly thought of CSXT's other pending motions. Accordingly, it would be exceedingly unfair to deny CSXT its right to a decision on those properly raised motions based only on speculation about what was going through Judge Wimberly's mind. Without an order explicitly resolving those motions, they remained pending and were pretermitted by Judge Wimberly's new trial order. And, of course, CSXT did not brief its other post-trial motions in the COA, but instead raised them "for the first time in [its] petition for rehearing" (Pl. Br. 28), pre-

cisely because there was no order deciding them.

Finally, the fact that Judge Wimberly was defeated in the recent judicial elections is beside the point. Tennessee Rule of Civil Procedure 63 provides that “[i]f a trial or hearing has been commenced and the judge is unable to proceed, any other judge may proceed upon certifying familiarity with the record and determining that the proceedings in the case may be completed without prejudice to the parties.” And the Court of Appeals has held that, under Rule 63, a successor judge can take up pretermitted post-trial motions when a case is remanded for further proceedings following appeal. *See Rogers Grp., Inc. v. Anderson Cnty.*, 113 S.W.3d 725, 727 (Tenn. Ct. App. 2003) (affirming ability of successor judge to rule on pretermitted new-trial motion upon remand following appeal and explaining that “[w]hen a successor judge steps into the shoes of the original judge, he must consider any post-trial motions which the original judge would have been obligated to consider”). Here, if the Court remands for any purpose other than a new trial, there is no reason that a successor judge could not take up CSXT’s pretermitted post-trial motions under Rule 63.

In the alternative, if Judge Wimberly were amenable to it, this Court could appoint him to address the pretermitted issues under T.C.A. § 17-2-121(a). Plaintiff could hardly object to that and at the same time complain that the original judge is no longer available to decide the remaining open issues.

VI. Plaintiff's Cross-Appeal Is Meritless.

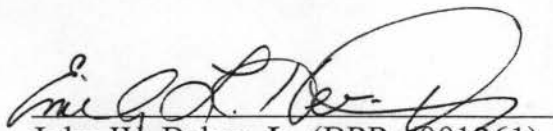
Plaintiff asks the Court to modify the COA's opinion insofar as it directed the trial court, on remand, to decide whether the jury's initial verdict is excessive. Pl. Br. 30-32. But the COA plainly was correct that, if the trial court is directed to enter judgment on the jury's initial verdict, then CSXT is entitled to have that court consider whether \$8.6 million is excessive compensation for Plaintiff's injuries under federal law. *See, e.g., Nairn v. Nat'l R.R. Passenger Corp.*, 837 F.2d 565, 566-68 (2d Cir. 1988) (the measure of damages in a FELA action is subject to the federal "shocks the judicial conscience" standard) (internal quotation marks omitted). Judge Wimberly never carried out that review because he never entered judgment for \$8.6 million, but instead entered judgment on the jury's amended verdict for \$3.2 million.

Respectfully Submitted,

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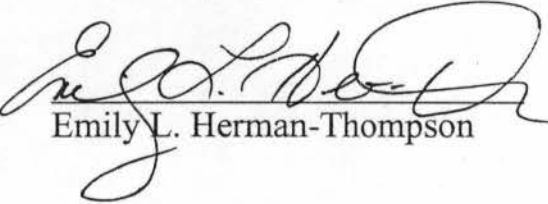
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CERTIFICATE OF SERVICE

I certify that, on this 23 day of September, 2014, I served a true and correct copy of the foregoing on:

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Emily L. Herman-Thompson

EXHIBIT

Verdict

1 was any such violation a legal cause of harm
2 suffered by the plaintiff?

3 JURY FOREMAN: Yes.

4 THE COURT: Question 5, was the
5 plaintiff negligent with regard to the harm
6 he suffered?

7 JURY FOREMAN: Yes.

8 THE COURT: Your answer was yes.
9 To what extent, expressed in
10 percentages, did the plaintiff's negligence
11 cause, in whole or in part, the harm that he
12 suffered?

13 JURY FOREMAN: 62 percent.

14 THE COURT: And finally, what
15 amount of money do you find, without
16 deduction for any the negligence, that would
17 the fairly represent adequate compensation
18 in this case?

19 JURY FOREMAN: 8.6 million.

20 THE COURT: Okay. Now, let me
21 further inform you that by answering yes to
22 questions listed on this form in Part 4
23 about the Inspection Act or any regulations,
24 by answering yes to all of those questions,
25 the concept of contributory negligence may

Verdict

1 not apply in this case. In that situation,
2 the plaintiff would receive the entire
3 amount of money that you have listed on the
4 answers to the seventh question.

5 If that is what you intend in this
6 particular case, please indicate by raising
7 your right hand?

8 (Jury foreman raised hand).

9 THE COURT: Okay. That is
10 something that we hadn't talked about
11 before, but under the authority of that case
12 that was handed to you by Mr. Shapiro
13 yesterday, we need to know if that is your
14 intention.

15 Again, by answering yes to the
16 questions listed under Part 4 of the verdict
17 form, the effect of yes answers there is
18 that the recovery would be 100 percent of
19 the amount listed on the response to
20 Question 7.

21 MR. SHAPIRO: Your Honor, can we
22 approach the bench one moment, the
23 attorneys?

24 THE COURT: Yes.

25 MR. SHAPIRO: Your Honor, under the

Verdict

1 FELA, the decision on this regulatory
2 violation is not a jury decision. The Court
3 has no choice but to impose the verdict in
4 the way it was rendered by the jury. The
5 Court, not the jury, then considers the fact
6 that contributory negligence may not be
7 considered by the jury. It's inappropriate
8 to ask this jury to change their verdict.

9 MR. BAKER: I disagree.

10 THE COURT: That was raised in that
11 case you gave me.

12 What is your feeling now?

13 JURY FOREMAN: Could we have a
14 moment to discuss that?

15 THE COURT: All right.

16 (Jury dismissed from courtroom at 4:05 p.m.)

17 (Off the record at 4:05 p.m.)

18 (Jury returned to courtroom at 4:13 p.m.)

19 (On the record at 4:13 p.m.)

20 THE COURT: Based on a previous
21 discussion, Mr. Alexander, it is the
22 intention of the jury that the plaintiff
23 recover a total amount of what?

24 JURY FOREMAN: \$3.2 million.

25 If everyone agrees with that, raise

Truesdel & Ruska

Verdict

1 your right hand.

2 The jury has raised their right
3 hand indicating that's their feeling in this
4 particular case.

5 Anything else with the jury before
6 we dismiss them?

7 MR. SHAPIRO: Yes, Your Honor. I
8 would like to say that I think that the
9 Court would need to instruct the jury that
10 the FEELA provides that there is no reduction
11 of the jury's determination for contributory
12 fault to the plaintiff as a matter of law
13 and that sending the jury back without that
14 instruction was inappropriate.

15 THE COURT: That's what I just told
16 them, that if they answered yes to those
17 things that there would be no deduction for
18 contributory fault, and they said that in
19 their opinion the total recovery would be
20 that.

21 Now, we'll talk about it later, the
22 legal effect of all this, but that's where
23 we are.

24 You have been on the longest case
25 that the Court has had in more than 20

**SUPREME COURT RULE 4(H)
LEGAL APPENDIX**

2014 WL 4257854

Only the Westlaw citation is currently available.
United States Court of Appeals,
Seventh Circuit.

Shannon BROWN, Plaintiff--Appellant,

v.

BURLINGTON NORTHERN SANTA FE
RAILWAY COMPANY, Defendant--Appellee.

No. 13--2102. | Argued May 19,
2014. | Decided Aug. 29, 2014.

Synopsis

Background: A railroad employee brought action under the Federal Employers' Liability Act (FELA) against his employer, claiming that the employer negligently caused cumulative trauma to his wrists, elbow, and shoulder by requiring him to use vibrating tools that either caused or aggravated his wrist conditions. The United States District Court for the Central District of Illinois, John A. Gorman, United States Magistrate Judge, 2013 WL 1729046, excluded the testimony of an expert witness of the employee, and granted summary judgment for the employer. The employee appealed.

Holdings: The Court of Appeals, Tinker, Circuit Judge, held that:

[1] the District Court did not exceed its role under *Daubert* in examining the methodology of the employee's expert witness, and

[2] the District Court did not abuse its discretion in excluding testimony of the expert witness for the employee.

Affirmed.

West Headnotes (15)

[1] **Labor and Employment**

↔ Proximate Cause

A Federal Employers' Liability Act (FELA) claim is judged according to a relaxed standard

of causation whereby a plaintiff must prove only that the employer's negligence played any part, even the slightest, in producing the injury or death for which damages are sought. Federal Employers' Liability Act, § 1 et seq., 45 U.S.C.A. § 51 et seq.

Cases that cite this headnote

[2] **Labor and Employment**

↔ Weight and Sufficiency of Evidence

Under the Federal Employers' Liability Act (FELA), when there is no obvious origin to an injury and it has multiple potential etiologies, expert testimony is necessary to establish causation. Federal Employers' Liability Act, § 1 et seq., 45 U.S.C.A. § 51 et seq.

Cases that cite this headnote

[3] **Evidence**

↔ Necessity and Sufficiency

An expert's testimony must be the product of reliable principles and methods. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[4] **Evidence**

↔ Speculation, Guess, or Conjecture

An expert witness must rely on facts or data, as opposed to subjective impressions. Fed.Rules Evid.Rule 703, 28 U.S.C.A.

Cases that cite this headnote

[5] **Evidence**

↔ Medical Testimony

Evidence

↔ Experiments and Results Thereof

Differential diagnosis is an accepted and valid methodology for an expert to render an opinion about the identity of a specific ailment, as well as differential etiology, which focuses on the cause, not just the identity, of an ailment. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[6] **Evidence**

☞ Necessity and Sufficiency

Evidence

☞ Experiments and Results Thereof

A differential etiology, like a differential diagnosis, satisfies a *Daubert* analysis if the expert uses reliable methods. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[7] **Evidence**

☞ Necessity and Sufficiency

Evidence

☞ Experiments and Results Thereof

Determining the reliability of an expert's differential diagnosis under *Daubert* is a case-by-case determination. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[8] **Evidence**

☞ Necessity and Sufficiency

The party offering the expert testimony bears the burden of proving its reliability.

Cases that cite this headnote

[9] **Federal Courts**

☞ Expert Evidence and Witnesses

In reviewing the district court's decision to exclude expert testimony, the Court of Appeals first undertakes a de novo review of whether the district court properly followed the framework set forth in *Daubert*.

Cases that cite this headnote

[10] **Federal Courts**

☞ Expert Evidence and Witnesses

If the district court properly understood its role in reviewing the admissibility of expert testimony under *Daubert*, the Court of Appeals

then reviews its ultimate decision to exclude expert testimony for an abuse of discretion.

Cases that cite this headnote

[11] **Evidence**

☞ Necessity and Sufficiency

The District Court did not exceed its role under *Daubert* in examining the methodology of an expert witness of a railroad employee, in the employee's action against his employer under the Federal Employers' Liability Act (FELA), even though the Court made observations about factual deficiencies in the expert's reports, where the Court stated that it was excluding the expert's testimony because he failed to follow a reliable method, by deviating from the expert's own stated description of a job site analysis and of differential etiology in general. Federal Employers' Liability Act, § 1, 45 U.S.C.A. § 51; Fed.Rules Evid.Rules 702, 703, 28 U.S.C.A.

Cases that cite this headnote

[12] **Evidence**

☞ Medical Testimony

In determining whether expert testimony meets the requirements of *Daubert*, a court may reasonably expect that a medical professionals may rely on self-reported patient histories. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[13] **Evidence**

☞ Necessity and Sufficiency

An expert must do more than just state that she is applying a respected methodology to meet the requirements for expert testimony; she must follow through with it. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[14] **Evidence**

☞ Necessity and Sufficiency

In deciding whether an expert employed a reliable method, the district court has discretion

to consider whether the expert has adequately accounted for obvious alternative explanations. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[15] Evidence

☛ Cause and Effect

The District Court did not abuse its discretion in determining that an expert witness for a railroad employee failed to eliminate potential alternative causes for the employee's injuries, in the employee's action against his employer under the Federal Employers' Liability Act (FELA), even though an employee was not required to prove that his employer's negligence was the sole cause of his injuries, where the expert witness failed to investigate entirely whether the employee's work as a volunteer firefighting or motorcycle riding could have been wholly responsible for the employee's condition. Fed.Rules Evid.Rules 702, 703, 28 U.S.C.A.

Cases that cite this headnote

Attorneys and Law Firms

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Before ROVNER, WILLIAMS, and TINDER, Circuit Judges.

Opinion

TINDER, Circuit Judge.

*1 Shannon Brown appeals the dismissal of his lawsuit against the Burlington Northern Santa Fe Railway Company ("BNSF"), which he filed under the Federal Employers' Liability Act ("FELA"), 45 U.S.C. § 51 *et seq.* The sole issue he disputes on appeal is the district court's¹ decision to exclude the testimony of his expert witness, David Fletcher, M.D. We conclude that the district court did not abuse

its discretion and therefore affirm its grant of summary judgment.

I. Background

At the time of this appeal, Brown was a 36-year-old man residing in Knoxville, Illinois. He began his employment with BNSF in 1996 as a member of the Maintenance of Way Department. From 2006 to 2009 he progressed through a variety of job duties as a foreman, track inspector, and machine operator. In 2007 a family physician diagnosed Brown with carpal tunnel syndrome in both wrists and cubital tunnel syndrome in his left elbow.² On October 25 of that year, Brown allegedly injured his right shoulder after lifting heavy angle bars at work.³ He reported the alleged injury only after increasing pain prompted him to visit an emergency room. His family physician could not detect any injury despite conducting tests, and instead sent Brown to physical therapy. By December 3rd of 2007, Brown reported that his shoulder was pain free, and his doctor cleared him to return to work with no restrictions.

The day following his official return date, however, Brown had surgery on his right wrist to relieve his carpal tunnel syndrome. Surgery on the other wrist followed on January 22, 2008. He returned to work on March 24 without any restrictions. He had surgery on his left elbow in October of 2009 to treat his cubital tunnel syndrome, and he was cleared to return to work on January 4, 2010. Brown's surgeon for both of his wrist surgeries and his elbow surgery informed him that all three procedures were successful and resolved his symptoms. Brown would remain employed at BNSF without medical restriction until September 28, 2011, at which point he no longer worked at the company.

Before returning from his elbow surgery in 2009, Brown sued BNSF under FELA, alleging that the railway negligently caused cumulative trauma to his wrists, elbow, and shoulder. According to Brown, his duties at the railroad required him to use vibrating tools that either caused or aggravated his wrist conditions. He further alleges that, in September of 2009, he was required to work excessive hours without proper equipment while BNSF was short-staffed; he maintains that this exertion triggered or exacerbated the cubital tunnel syndrome in his left elbow, prompting his surgery the next month.

Discovery commenced, and Brown retained Dr. Fletcher to examine him and provide expert medical testimony. Dr. Fletcher's expertise in diagnosing railway work injuries and identifying their cause is unchallenged. He is licensed to practice medicine in Illinois, and is a full-time physician. He graduated from Rush Medical College in Chicago and holds a Master's Degree in Public Health from the University of California, Berkeley. Dr. Fletcher is a Fellow of the American College of Occupational and Environmental Medicine and has been appointed Clinical Assistant Professor at the University of Illinois and Southern Illinois University. In 2012 he was one of two doctors chosen to serve on the Illinois Workers' Compensation Commission. He is also the medical director of SafeWorks, Illinois, a private occupational health clinic. Starting in 1985 and continuing through his 2012 deposition, Dr. Fletcher occasionally served as an independent contractor with two railroad companies, the Norfolk Southern Corporation and the Canadian National Railway Company. In that capacity he treated work-related injuries and performed physicals, tested employees' fitness for duty, and conducted some ergonomic evaluations. He has served as an expert witness in past FELA cases.

*2 Dr. Fletcher eventually submitted four expert reports on Brown's behalf, although the last was excluded as untimely in a ruling that Brown does not challenge. The first report discussed Brown's medical records and his independent medical evaluation that Dr. Fletcher conducted on August 2, 2011. Dr. Fletcher reported that Brown had no history of smoking, diabetes, or other common health risk factors. He noted that Brown reported a needle-like sensation in the palms of both hands that was minimal and easy to ignore. Brown also told Dr. Fletcher that his shoulder was "97%" better and caused him no pain. Dr. Fletcher inquired as to Brown's employment, and Brown told him that his job required him to lift 100 pounds from the floor and 50 pounds overhead. He further reported that he worked between 12 and 16 hours a day, repeatedly lifting between 35 and 40 pounds and using hydraulic and vibratory tools. He informed Dr. Fletcher that as a foreman he commonly had to repair track, shovel dirt, drive spikes, use sledge hammers, and lift heavy metal bars.

Dr. Fletcher's first report also relayed the results of his physical examination of Brown. The report notes atrophy and loss of muscle strength in his left elbow. Dr. Fletcher conducted a Tinell's test on the elbow, which revealed nerve irritation. An elbow compression test similarly uncovered signs of injury. Dr. Fletcher also indicated impingement of Brown's right shoulder, but his report goes on to contradict

that finding by reporting that "impingement signs were negative bilaterally." The report states that an MRI would be necessary to reach a "formal diagnosis" of any shoulder injury, but it notes that Brown could not undergo that test because he had a pacemaker in his chest. Dr. Fletcher recommended an arthroscopic procedure to identify any problems, but no such surgery was performed. Brown has not pointed out any other test confirming an injury to his shoulder. Nevertheless, Dr. Fletcher attributed Brown's wrist, elbow, and shoulder injuries to his work at BNSF.

Dr. Fletcher's second report was an update on Brown's progress, issued on January 3, 2012, after he had examined him a second time. Brown reported pins and needles in his left elbow and numbness in his left hand, and Dr. Fletcher concluded that he required another elbow surgery. He also stated that Brown "had incurred permanent loss" of function and required "[p]ermanent job restrictions." Again Dr. Fletcher attributed these medical problems to Brown's job.

In his third report, dated February 27, 2012, Dr. Fletcher more closely examined the cause of Brown's condition. After summarizing Brown's health concerns, he stated that he suffered from a "cumulative trauma disorder" caused by his work on the railroad. Carpal tunnel syndrome and cubital tunnel syndrome are both examples of cumulative trauma disorder because they result from repeated applications of force over time rather than one discrete event. Dr. Fletcher stated that he came to this conclusion by the process of differential etiology. "[I]n a differential etiology, the doctor rules in all the potential causes of a patient's ailment and then by systematically ruling out causes that would not apply to the patient, the physician arrives at what is the likely cause of the ailment." *Myers v. Ill. Cent. R.R. Co.*, 629 F.3d 639, 644 (7th Cir.2010).

*3 As we have noted, to conduct his method of differential etiology, Dr. Fletcher's third report states that he employed a "job site analysis," which consists of "traveling to the literal worksite with the patient and reviewing his or her job duties; measuring frequency and force required for various job tasks; videotaping and photographing job task activities for further analysis"; identifying "variances in the written job description as compared to the actual duties performed; using scientific measuring tools, such as a Chatillon gauge, which constitutes an objective measure of force; assessing push/pull job function factors; and evaluating the level of force exertion required to perform a job task." Through the job site analysis,

Dr. Fletcher could “rule in” Brown’s railroad work as a cause of his injury.

BNSF deposed Dr. Fletcher, and his accounting of his etiological investigation in this case differed considerably from the typical methodology described in his reports. Instead of going to Brown’s work site and making scientific measurements and records, Dr. Fletcher simply photographed Brown holding various work tools at the BNSF rail yard. He testified that the railroad did not allow him to observe Brown or a similarly situated employee perform representative work tasks. (Brown did not, however, move to compel BNSF’s cooperation on this point.) Instead, Dr. Fletcher based his opinion on observations he has made as an independent contractor since 1985. But when pressed for specifics, he recounted occasional memories of railroad work he witnessed ten years ago on a different site from the one Brown worked on. Dr. Fletcher also admitted that he never learned how long Brown would have used certain equipment each day, and he acknowledged that Brown’s work varied over the course of a day and from one day to the next. He also stated that he did not consider how Brown’s responsibilities changed as he progressed at his job to track inspector and then to foreman.

Moreover, Fletcher’s report did not discuss a number of potential alternative causes for Brown’s ailment. During his deposition, Dr. Fletcher stated that he had been aware of some, but not all, of the relevant information surrounding these potential alternative causes. For example, Brown was a volunteer firefighter. Fletcher testified that he knew this but that he did not know how long Brown had worked as a firefighter. He never observed Brown’s volunteer work there or learned his job duties. Brown also had a family history of cumulative trauma disorder, which Dr. Fletcher recognized but discounted. Although the doctor acknowledged that the “higher the [individual’s body mass index or “BMI”] the more likely obesity could be an independent risk factor,” he dismissed this potential cause because Brown’s BMI was “[b]orderline” and he was not “morbidly obese.” Dr. Fletcher did know that Brown regularly rode a motorcycle during the relevant time period, but he did not know the frequency or duration of the rides, or the type of motorcycle he owned. He concluded that any effect from the motorcycle would be minor because, he stated, Brown spent considerably more time working than riding. Finally, although Dr. Fletcher reported that Brown had no history of smoking, Brown himself admitted in his deposition that he had quit smoking only two or three years earlier.

*4 The district court excluded Dr. Fletcher’s reports and testimony under Federal Rules of Evidence 702 and 703. The court held that Dr. Fletcher’s methods were unreliable because he deviated substantially from the recognized scientific practices that he described in his reports. As to Brown’s shoulder, the district court doubted whether Brown had even sustained an injury because Dr. Fletcher had conceded that no formal diagnosis was possible without an MRI. More broadly, the district court reasoned that Dr. Fletcher was offering an ergonomic opinion as to the relation between Brown’s job duties and his injury, and that such opinions required a sound job site analysis of the type Dr. Fletcher mentions in his report. But because Dr. Fletcher never actually performed a job site analysis or observed Brown at work, his opinion lacked a reliable, testable basis. Moreover, Dr. Fletcher claimed that he was applying the method of differential etiology to “rule out” other potential causes, but the district court found that he failed to meaningfully consider or investigate several such possible risk factors for Brown’s condition, such as his motorcycle riding, volunteer firefighting, obesity, smoking, and family history of cumulative trauma disorders. In other words, Dr. Fletcher had failed both to “rule out” several possible causes and also to properly “rule in” Brown’s job as a cause of his condition. Because Dr. Fletcher did not adhere to his own stated methods for performing a job site analysis or differential etiology, the district court found that he in fact adhered to no reliable method, but instead impermissibly relied on his own subjective experience and untestable assumptions.

Brown’s case for establishing his work conditions as a cause of his injury depended on Dr. Fletcher’s testimony, so the district court dismissed his FELA claim. This appeal followed.

II. Discussion

[1] Congress enacted FELA in the first decade of the twentieth century in response to “the physical dangers of railroading that resulted in the death or maiming of thousands of workers every year.” *Consol. Rail Corp. v. Gottshall*, 512 U.S. 532, 542, 114 S.Ct. 2396, 129 L.Ed.2d 427 (1994). The Act requires a plaintiff to prove all the elements of a negligence claim against his employer, but courts have “liberally construed” the statute “to further FELA’s humanitarian purposes.” *Id.* at 542–43, 114 S.Ct. 2396. In particular, a FELA claim is judged according to “a relaxed standard of causation” whereby a plaintiff must prove only

that the employer's "negligence played any part, even the slightest, in producing the injury or death for which damages are sought." *Id.* at 543, 114 S.Ct. 2396 (quoting *Rogers v. Mo. Pac. R.R. Co.*, 352 U.S. 500, 506, 77 S.Ct. 443, 1 L.Ed.2d 493 (1957)).

[2] The relaxed causation standard is simple enough to meet in cases involving readily understood injuries, *e.g.*, those that result from being hit by a train. "But when there is no obvious origin to an injury and it has multiple potential etiologies, expert testimony is necessary to establish causation." *Myers*, 629 F.3d at 643 (citation and quotation marks omitted). In particular, "[f]or most cumulative trauma injuries, courts follow the general principle that a layman could not discern the specific cause and thus they have required expert testimony about causation." *Id.* Brown contends that he has suffered cumulative trauma injuries to his wrists and elbows, along with a shoulder injury, and he concedes that he was required to provide admissible expert testimony to establish causation for each. We are not so sure about that. Brown allegedly injured his shoulder performing a discrete act of lifting that could be readily understood by a layman. And in *Myers* we noted dicta in the Sixth Circuit case *Hardyman v. Norfolk & Western Railway, Co.*, 243 F.3d 255 (6th Cir.2001), indicating that "general causation testimony is enough to send the case to a jury for carpal tunnel syndrome." *Myers*, 629 F.3d at 643. We do not know whether summary judgment will always be appropriate in the absence of expert testimony where the plaintiff has alleged such discrete, easily comprehensible injuries. Nevertheless, Brown chose to pursue a standard cumulative trauma theory and has not argued that his case could survive summary judgment without expert testimony. Nor does he point to sufficient lay evidence in the record to support a finding of fault for his shoulder injury. Therefore, we agree with the parties that we may reverse the district court's grant of summary judgment only if we also reverse its decision to exclude Dr. Fletcher's testimony.

*5 [3] [4] A district court's decision to exclude expert testimony is governed by Federal Rules of Evidence 702 and 703, as construed by the Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993). Rule 702(c) requires that an expert's testimony be "the product of reliable principles and methods." Similarly, Rule 703 requires the expert to rely on "facts or data," as opposed to subjective impressions. *Daubert* laid out four factors by which courts can evaluate the reliability of expert testimony: (1) whether the expert's

conclusions are falsifiable; (2) whether the expert's method has been subject to peer review; (3) whether there is a known error rate associated with the technique; and (4) whether the method is generally accepted in the relevant scientific community. 509 U.S. at 593-94, 113 S.Ct. 2786.

[5] [6] [7] [8] Dr. Fletcher sought to offer a differential etiology in this case. "Differential diagnosis is an accepted and valid methodology for an expert to render an opinion about the identity of a specific ailment." *Myers*, 629 F.3d at 644. So is differential etiology, which focuses on the cause, not just the identity, of an ailment. *Id.* But an expert still must faithfully apply the method to the facts at hand. A differential etiology, like a differential diagnosis, "satisfies a *Daubert* analysis if the expert uses reliable methods.... Determining the reliability of an expert's differential diagnosis is a case-by-case determination." *Ervin v. Johnson & Johnson, Inc.*, 492 F.3d 901, 904 (7th Cir.2007); *see also Myers*, 629 F.3d at 644. The party offering the expert testimony bears the burden of proving its reliability. *Lewis v. CITGO Petroleum Corp.*, 561 F.3d 698, 705 (7th Cir.2009).

[9] [10] In reviewing the district court's decision to exclude expert testimony, this court "first undertakes a *de novo* review of whether the district court properly followed the framework set forth in *Daubert*...." *United States v. Hall*, 165 F.3d 1095, 1101 (7th Cir.1999). If the court properly understood its role therein, we then review its ultimate decision to exclude expert testimony for an abuse of discretion. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999). This deference is in keeping with the district court's vital "gatekeeping" role in ensuring that only helpful, legitimate expert testimony reaches the jury. *Daubert*, 509 U.S. at 597, 113 S.Ct. 2786.

Brown first contends that the district court "exceeded the scope of its gatekeeping function" under *Daubert* by nitpicking Dr. Fletcher's factual observations and gainsaying his conclusions—both of which are properly roles for the jury—rather than simply determining whether he used a reliable method. Appellant's Br. at 36. Second, Brown argues that Dr. Fletcher did properly adhere to his method of differential etiology and that the district court abused its discretion in finding otherwise. We take both arguments in turn.

[11] [12] The district court properly understood the *Daubert* framework. It noted that "[t]he court's role as gatekeeper is strictly limited to an examination of the expert's methodology." *Brown v. Burlington N. Santa Fe Ry. Co.*, No.

09–1380, 2013 WL 1729046, at *8 (C.D.Ill. Apr. 22, 2013). Brown responds that the district court's reasoning belies that acknowledgement. Specifically, the district court faulted Dr. Fletcher for apparently relying on Brown's recitation of his medical history to conclude that he did not smoke when it appears that he did. The court also noted that Dr. Fletcher's report did not describe Brown's family history of cumulative trauma disorder. Brown's failure to accurately relay his medical history should not have led the court to impugn Dr. Fletcher's methods. "Medical professionals reasonably may be expected to rely on self-reported patient histories." *Walker v. Soo Line R.R. Co.*, 208 F.3d 581, 586 (7th Cir.2000) (citing *Cooper v. Carl A. Nelson & Co.*, 211 F.3d 1008, 1019–21 (7th Cir.2000)). Likewise, the district court doubted Brown's self-reporting of his job duties to Dr. Fletcher, in particular his claims that he worked 12–16 hours a day. The court also discounted Dr. Fletcher's diagnosis of Brown's shoulder injury because he was not able to perform an MRI. Finally, the district court accused Dr. Fletcher of misidentifying a track jack as an iron angle bar, which would be a significant error because the two items are quite distinct. Brown argues that the district court's findings on these points amount to improperly quibbling with factual details of the expert's report. After all, even experts make mistakes, and imperfections in their presentations are supposed to be tested by opposing counsel and put before the jury.

*6 Although the district court did observe factual deficiencies in Dr. Fletcher's reports, it clearly stated that it was excluding the doctor's testimony because he failed to follow a reliable method; indeed, he deviated from his own stated description of a job site analysis and of differential etiology in general. Dr. Fletcher entirely failed to personally observe Brown's working conditions, obtain a written work description, or perform scientific tests. He also failed to investigate several possible causes of Brown's health problems. The factual deficiencies or discrepancies the district court identified are the result of Dr. Fletcher's faulty methods and lack of investigation. The district court used the gaps in Dr. Fletcher's analysis as illustrative examples of the perils inherent in applying subjective experience instead of a proper scientific approach. The district court did not exceed its role under *Daubert*.

[13] [14] Brown's remaining argument is that the district court abused its discretion in finding that Dr. Fletcher failed to apply a reliable method. We have recognized that there is "nothing controversial" about using differential etiology to establish legal cause. *Schultz v. Akzo Nobel Paints, LLC*,

721 F.3d 426, 433 (7th Cir.2013). However, an expert must do more than just state that she is applying a respected methodology; she must follow through with it. In deciding whether an expert employed a reliable method, the district court has discretion to consider " '[w]hether the expert has adequately accounted for obvious alternative explanations.'" *Id.* at 434 (quoting Fed.R.Evid. 702 (2000) Committee Note). The expert need not exclude all alternatives with certainty, however. See *Gayton v. McCoy*, 593 F.3d 610, 619 (7th Cir.2010) ("[A]n expert need not testify with complete certainty about the cause of an injury; rather he may testify that one factor could have been a contributing factor to a given outcome.").

[15] The district court did not abuse its discretion in finding that Brown's motorcycle riding and volunteer firefighting were obvious potential alternative causes for his injuries. The causal link Dr. Fletcher drew between Brown's job and his injuries lay in the presence of vibratory and other types of equipment that can harm elbows, wrists, and shoulders over time. But the handlebars of a running motorcycle obviously vibrate, and firefighters must frequently struggle with heavy equipment. Brown is correct that under FELA he need only prove that BNSF's negligence was a cause, not the sole cause, of his injury. But without performing an investigation, Dr. Fletcher could not rule out either activity as the sole cause of Brown's condition. And although Brown's weight, history of smoking, and family medical history were each not likely the sole cause of his ailments, these risk factors combined with either the volunteer firefighting or motorcycle riding (or both) could have been wholly responsible for Brown's condition. We do not know how likely this possibility is because Dr. Fletcher did not meaningfully consider it.

*7 Brown insists that Dr. Fletcher did consider these obvious alternative causes, but the record shows otherwise. The doctor disregarded Brown's motorcycle riding as a factor because he assumed Brown worked for longer periods than he rode. But as BNSF rightly points out, the proper question is how long he rode the motorcycle as compared to how long he used vibratory or similarly taxing tools at work. And Dr. Fletcher could not possibly answer that question in a systematic, testable fashion because he did not know the duration and frequency of Brown's motorcycle riding. Even worse, he did not know the duration or frequency of Brown's exposure to vibrations at work. He did not have enough information to conclude that one value was higher than the other, or even to doubt that the former overwhelmingly exceeded the latter. Comparing two unknown, potentially

wide-ranging variables is not a scientific exercise. There is no known error rate attached to such a calculation, nor is such guesswork widely accepted in the scientific community. See *Daubert*, 509 U.S. at 593–94, 113 S.Ct. 2786. Similarly, Dr. Fletcher did not know what hours Brown worked as a fire-fighter, or what his responsibilities were. These were not merely factual oversights; they are flatly inconsistent with differential etiology. That method does not establish a cause for an injury directly, through observation or factual reconstruction. Rather, it relies on the process of elimination by ruling out other alternatives. The failure to rule out obvious potential alternative causes is therefore fatal to Dr. Fletcher's testimony.

Dr. Fletcher's failure to consider Brown's motorcycle riding and volunteer firefighting distinguishes this case from *Schultz*, 721 F.3d 426, which Brown cites in support of his argument. In that case, the plaintiff had smoked in the past, but the expert explicitly stated that exposure to benzene was known to pose an even greater risk. This meant, in the expert's opinion, that the benzene was a "substantial factor" in his cancer. *Id.* at 433–34. Here, Dr. Fletcher did not reliably weigh the risks posed by Brown's job-related exertion as compared to his other activities. This case is also quite different from *Hardyman*, in which the expert "took an extensive history of Plaintiff's non-occupational work activities."²⁴³ F.3d at 261 (discussing the plaintiff's bowling, golf, and other recreational activities).

Not only did Dr. Fletcher fail to investigate and systematically rule out two obvious potential causes, but it is not clear that he ruled out any serious alternative. It is true that Brown apparently does not have diabetes, which could be a risk factor. Dr. Fletcher also determined that Brown's weight was not likely not a problem, because his BMI was "[b]orderline." But even this is difficult to square with his observation during his deposition that "[t]he higher the BMI the more likely that obesity could be an independent risk factor" for carpal tunnel syndrome. He did not explain at all why this positive relationship would exist only for the "morbidly obese." Brown's weight could have made it more likely that his motorcycle riding or volunteer firefighting was solely responsible for his condition. Of course, we can only speculate because Dr. Fletcher did not adequately investigate this possibility.

*8 As the district court correctly observed, Dr. Fletcher's failure to rule out obvious potential causes was only half the problem. He also failed to reliably "rule in"

Brown's workplace activity as a potential cause of Brown's condition. Dr. Fletcher failed to consider that Brown's job duties changed considerably as he progressed, beginning in 2006, from maintenance-of-way work to different roles as a foreman, track inspector, and machine operator. More fundamentally, Dr. Fletcher noted that his method required him to conduct a "job site analysis." This involved "traveling to the literal worksite with the patient and reviewing his or her job duties; measuring frequency and force required for various job tasks; videotaping and photographing job task activities for further analysis"; identifying "variances in the written job description as compared to the actual duties performed; using scientific measuring tools, such as a Chatillon gauge, which constitutes an objective measure of force; assessing push/pull job function factors; and evaluating the level of force exertion required to perform a job task." Observing Brown's actual working conditions was important in order to avoid "ruling in" risk factors that were not actually present at his job. The use of videotape and photography to record Dr. Fletcher's observations would have been crucial to ensuring that his conclusions could be objectively tested, peer reviewed, and reproduced. The same applies to the use of scientific tools that provide recorded measurements and the written job description that could offer an objective comparison with the doctor's observation. Dr. Fletcher also testified that he usually had a professional ergonomist conduct much of this investigation, but he did not use his services in this case. All of these steps are designed so that the expert can rely not on his own subjective experience or bias but on reliable scientific methods. Dr. Fletcher noted that the above safeguards were important in his own report, yet he failed to follow them. This again distinguishes Brown's case from *Hardyman*, where the plaintiff's ergonomics expert "conducted an extensive investigation of Plaintiff's work conditions."²⁴³ F.3d at 263. Without a legitimate investigation, Dr. Fletcher could not reliably ascertain whether Brown's work was even a contributing factor to his injury.

In response, Brown contends that precise measurements of the duration and frequency of his exposure to vibratory and other potentially damaging tools are unnecessary because no precise relationship between the frequency and duration of exposure and a particular cumulative trauma injury is known. Indeed, it likely varies from patient to patient. But because Brown was exposed to multiple sources of continued vibration and other trauma, Dr. Fletcher had to have some reliable basis for opining that Brown's work activities played at least a small role in his injury. Data comparing the relative

duration and frequency of exposure could have provided that basis; perhaps there were other ways. But Dr. Fletcher did not pursue any of them. Brown also argues that BNSF's experts also did not perform frequency and duration tests of its equipment either, but pointing out deficiencies in the defendant's expert testimony cannot help Brown, who bears the burden of proving negligence and demonstrating the reliability of his own expert.

*9 Brown claims that Dr. Fletcher was prevented from conducting the type of job site analysis described in his reports because BNSF would not cooperate by, for example, allowing him to test its tools or providing him with a written job description. But that is a matter that should have been brought to the district court's attention during discovery. A party cannot enter into evidence unhelpful expert testimony on the grounds that the other side made them do it. If Brown felt that BNSF was unreasonably constraining his expert's investigation, he should have raised that issue and then, if unsuccessful, pressed it on appeal.

Nor did Dr. Fletcher follow his own advice in diagnosing Brown's alleged shoulder injury. In his first report he noted that a "formal diagnosis" would not be possible without an MRI. The district court did not abuse its discretion in holding Dr. Fletcher to that representation. And if Dr. Fletcher failed to follow his own stated methods, the court could reasonably conclude that he had failed to follow any reliable method. Brown has not shown that Dr. Fletcher's actual approach, as opposed to what he claimed to have done, was generally accepted in the scientific community. His process could not produce falsifiable results or survive peer review, and it is impossible to put an error rate on his guesswork. See *Daubert*, 509 U.S. at 593–94, 113 S.Ct. 2786.

No one disputes that Brown's injuries could have been caused by frequent or long-lasting vibrations, or that his job exposed him to a significant amount of vibration over the years. But if that were sufficient to establish causation, expert testimony would be unnecessary in this case. Any layman can understand that connection. Brown wishes to use Dr. Fletcher's quarter-century of experience in the field to rule out other potential causes. But experience without reliable, testable methodology is not sufficient. See *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146, 118 S.Ct. 512, 139 L.Ed.2d 508 (1997) ("[N]othing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert."). Moreover, Dr. Fletcher's application of his own experience is itself suspect. At his deposition he was forced to rely on his memory of "spen[ding] half an hour, 40 minutes ... a decade ago" at a different rail yard to describe the type of maintenance-of-way work that Brown performed. The vagueness of this testimony is a good illustration of why mere expertise and subjective understanding are not reliable scientific evidence. The district court did not abuse its discretion by concluding that opinions based on this sort of recollection would be no help to the jury.

III. Conclusion

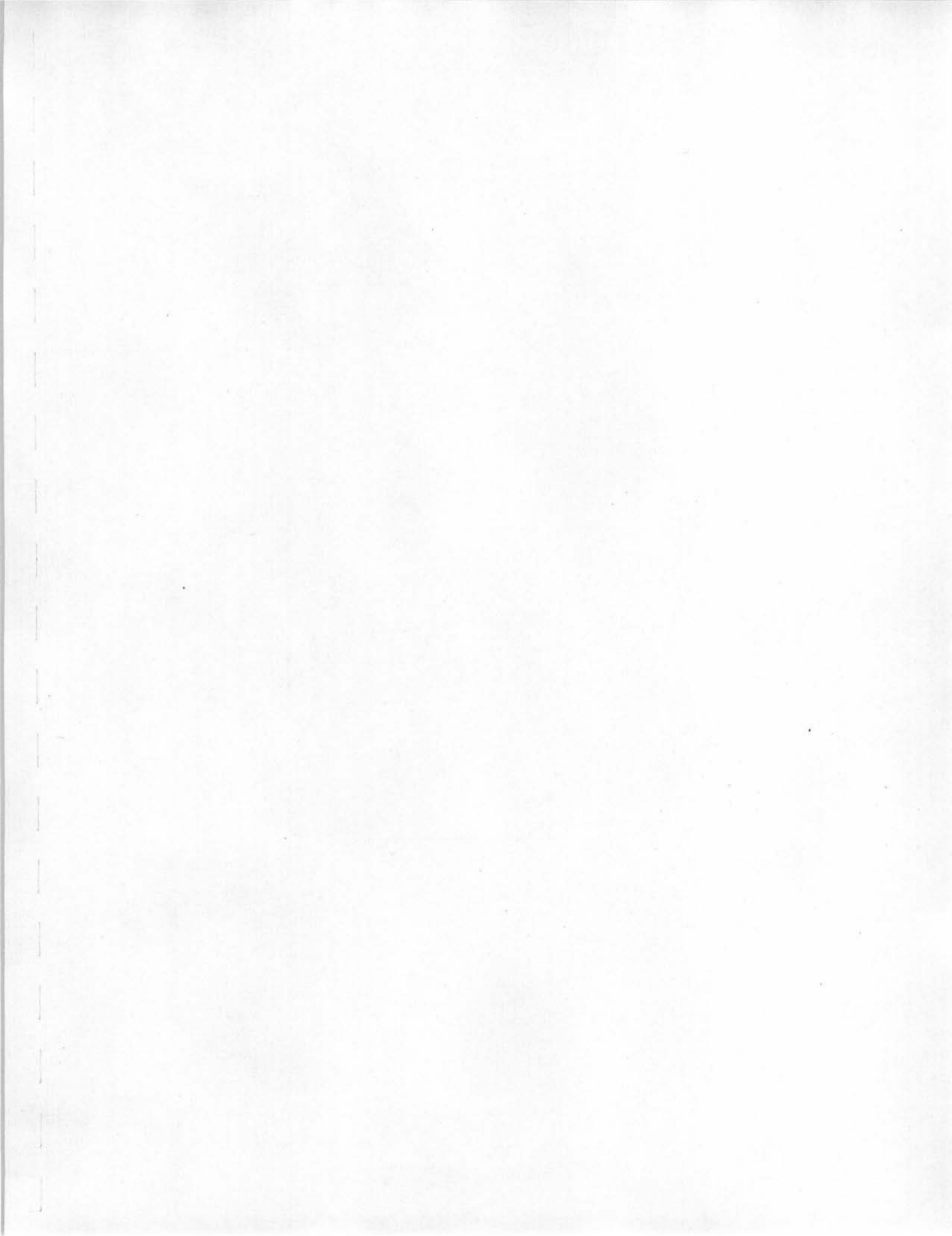
Because the district court did not abuse its discretion in excluding Dr. Fletcher's expert testimony, its grant of summary judgment is AFFIRMED.

Footnotes

- 1 The parties consented to a referral of this case to a magistrate judge, who excluded Brown's proposed expert testimony and granted summary judgment. For simplicity we will refer to the judge as the district court.
- 2 According to WebMD, "[c]arpal tunnel syndrome occurs when the median nerve is compressed because of swelling of the nerve or tendons or both.... When this nerve becomes impinged, or pinched, numbness, tingling, and sometimes pain of the affected fingers and hand may occur and radiate into the forearm." At its most severe, the condition may result in "permanent deterioration of muscle tissue and loss of hand function." *Carpal Tunnel Syndrome*, <http://www.webmd.com/pain-management/carpal-tunnel/carpal-tunnel-syndrome> (last visited Aug. 25, 2014). Similarly, "[c]ubital tunnel syndrome ... is caused by increased pressure on the ulnar nerve, which passes close to the skin's surface in the area of the elbow commonly known as the 'funny bone.'" Symptoms of cubital tunnel syndrome include "[p]ain and numbness in the elbow," "[t]ingling, especially in the ring and little fingers," "[w]eakness affecting the ring and little fingers," and "[d]ecreased ability to pinch the thumb and little finger." *Cubital and Radial Tunnel Syndrome*, <http://www.webmd.com/pain-management/cubital-radial-tunnel-syndrome> (last visited Aug. 25, 2014).
- 3 Some disagreement persists in the record as to what exactly Brown claims to have been lifting when the alleged injury occurred, but that issue is irrelevant for our purposes.

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2014 WL 4454979

Only the Westlaw citation is currently available.

United States Court of Appeals,
Eleventh Circuit.

Marianne CHAPMAN, Daniel
Chapman, Plaintiffs–Appellants,

v.

The PROCTER & GAMBLE DISTRIBUTING,
LLC, The Procter & Gamble Manufacturing
Co., Defendants–Appellees.

No. 12–14502. | Sept. 11, 2014.

Synopsis

Background: Denture wearer brought state court products liability action against manufacturer of denture adhesive, alleging use of adhesive caused her to suffer zinc-induced, copper-deficiency myelopathy (CDM). Action was removed based on diversity jurisdiction. The United States District Court for the Southern District of Florida, Cecilia M. Altonaga, 2012 WL 5407868, granted summary judgment for manufacturer. Plaintiff appealed.

Holdings: The Court of Appeals, Fay, Circuit Judge, held that:

[1] District Court properly determined two-part *Daubert* analysis of general and specific causation was appropriate;

[2] District Court did not abuse its discretion or commit manifest injustice by precluding expert testimony as to general causation;

[3] District Court did not abuse its discretion or commit manifest injustice by precluding expert testimony as to specific causation; and

[4] doctor was not qualified to present expert testimony on behalf of denture wearer.

Affirmed.

Jordan, Circuit Judge, issued concurring opinion.

West Headnotes (29)

[1] Federal Courts

☞ Limited Jurisdiction; Jurisdiction as
Dependent on Constitution or Statutes

Jurisdiction of the Court of Appeals must be both: (1) authorized by statute; and (2) within constitutional limits.

Cases that cite this headnote

[2] Evidence

☞ Medical Testimony

For judicial economy, federal courts need not consider expert opinions for diagnoses medical doctors routinely and widely recognize as true, like cigarette smoking causes lung cancer and heart disease, too much alcohol causes cirrhosis of the liver, and the ingestion of sufficient amounts of arsenic causes death.

Cases that cite this headnote

[3] Evidence

☞ Medical Testimony

In cases where the cause and effect or resulting diagnosis has been proved and accepted by the medical community, federal judges need not undertake an extensive *Daubert* analysis on the question of general toxicity of a widely-known diagnosis. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[4] Evidence

☞ Medical Testimony

Cases where the medical community generally does not recognize the substance in question as being toxic and having caused plaintiff's alleged injury require a two-part *Daubert* analysis, comprised of: (1) general causation, that is, whether the substance can cause the harm plaintiff alleges; and (2) specific causation, whether experts' methodology determines the

substance caused the plaintiff's specific injury.
Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[5] **Evidence**

☞ Medical Testimony

For cases where the medical community generally does not recognize substance in question as being toxic and having caused plaintiff's alleged injury, thereby requiring *Daubert* analysis, a district judge must assess the reliability of the expert's opinion on general, as well as specific, causation.

Cases that cite this headnote

[6] **Evidence**

☞ Medical Testimony

District Court properly determined that denture adhesive, which contained zinc compound, was not medically accepted type of cause-and-effect toxin, thereby requiring two-part *Daubert* analysis of general and specific causation as to denture wearer's illness. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[7] **Evidence**

☞ Matters Involving Scientific or Other Special Knowledge in General

Evidence

☞ Necessity of Qualification

Evidence

☞ Necessity and Sufficiency

Expert testimony is admissible under Federal Rules of Evidence if: (1) the expert is qualified to testify regarding the subject of the testimony; (2) the expert's methodology is sufficiently reliable as determined by the sort of inquiry mandated in *Daubert*; and (3) the expert's testimony will assist the trier of fact in understanding the evidence or determining a fact at issue. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[8] **Evidence**

☞ Preliminary Evidence as to Competency

Evidence

☞ Determination of Question of Competency

In considering the admissibility of proffered expert testimony, a trial judge is mindful that the burden of establishing qualification, reliability, and helpfulness rests on the proponent of the expert opinion, and to determine the reliability and relevance of proffered expert testimony, the judge performs a "gatekeeping" function. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[9] **Federal Courts**

☞ Expert Evidence and Witnesses

The considerable leeway accorded to the district judge in determining the admissibility of expert testimony under *Daubert* requires a reviewing court to defer to the District Court judge's decision on expert testimony, unless it is manifestly erroneous; this deferential abuse-of-discretion standard is applied stringently, even if a decision on expert testimony is outcome-determinative. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[10] **Federal Courts**

☞ Expert Evidence and Witnesses

A district court is more familiar with the procedural and factual details and is in a better position to decide *Daubert* issues, which are not precisely calibrated and must be applied in case-specific evidentiary circumstances that often defy generalization. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[11] **Evidence**

☞ Necessity and Sufficiency

Four factors guide District Court judges in assessing the reliability of an individual expert's methodology, for purposes of admissibility of

expert testimony under *Daubert*: (1) whether the expert's methodology has been tested or is capable of being tested; (2) whether the theory or technique used by the expert has been subjected to peer review and publication; (3) whether there is a known or potential error rate of the methodology; and (4) whether the technique has been generally accepted in the relevant scientific community. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[12] Evidence

☞ Necessity and Sufficiency

While the inquiry, under *Daubert*, into the reliability of an individual expert's methodology is a flexible one, the focus must be solely on principles and methodology, not on the conclusions they generate; however, conclusions and methodology are not entirely distinct from one another, as neither *Daubert* nor the Federal Rules of Evidence require a trial judge to admit opinion evidence that is connected to existing data only by the ipse dixit of the expert. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[13] Evidence

☞ Matters Involving Scientific or Other Special Knowledge in General

Evidence

☞ Necessity and Sufficiency

The court, when assessing the reliability of an individual expert's methodology under *Daubert*, is free to conclude there is simply too great an analytical gap between the data and the opinion proffered, as it is the court's task to ensure that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[14] Evidence

☞ Necessity and Sufficiency

As gatekeeper for the expert evidence presented to the jury, in accordance with *Daubert*, the judge must do a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue, as it is proper and necessary for the trial judge to focus on the reliability of a proffered expert's sources and methods. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[15] Evidence

☞ Speculation, Guess, or Conjecture

Under *Daubert*, the district judge asked to admit scientific evidence must determine whether the evidence is genuinely scientific, as distinct from being unscientific speculation offered by a genuine scientist. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[16] Products Liability

☞ Proximate Cause

Products Liability

☞ Chemicals in General

"General causation" in products liability case refers to the general issue of whether a substance has the potential to cause the plaintiff's injury.

Cases that cite this headnote

[17] Evidence

☞ Medical Testimony

District Court did not abuse its discretion or commit manifest injustice by precluding expert testimony as to whether use of denture adhesive could generally cause zinc-induced, copper-deficiency myelopathy (CDM) in denture wearer's products liability action against manufacturer of adhesive, as experts did not satisfy recognized methodologies such as dose-response relationship, epidemiological evidence, background risk of disease, physiological processes involved, and clinical studies. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[18] **Products Liability**

☞ Proximate Cause

Products Liability

☞ Chemicals in General

“Specific causation” in products liability action refers to the issue of whether the plaintiff has demonstrated that the substance actually caused injury in her particular case.

Cases that cite this headnote

[19] **Evidence**

☞ Medical Testimony

In specific causation analysis of products liability action, an expert's differential diagnosis will not usually overcome the fundamental failure of laying a scientific groundwork for the general toxicity of a drug and that it can cause the harm a plaintiff suffered.

Cases that cite this headnote

[20] **Evidence**

☞ Medical Testimony

District Court did not abuse its discretion or commit manifest injustice by precluding expert testimony as to whether use of denture adhesive specifically caused denture wearer's zinc-induced, copper-deficiency myelopathy (CDM) in wearer's products liability action against manufacturer of adhesive; expert did not follow differential diagnosis, as wearer was not professionally diagnosed with CDM until examined in action by purported specific-causation expert, denture wearer had medical history that included neurological ailments occurring before and after her use of adhesive, symptoms continued after she ceased using adhesive, and expert failed to fully explore other potential causes of wearer's CDM. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[21] **Products Liability**

☞ Proximate Cause

Products Liability

☞ Chemicals in General

Products Liability

☞ Proximate Cause

Temporal proximity is generally not a reliable indicator of a causal relationship in products liability action, and the temporal connection between exposure to chemicals and an onset of symptoms, standing alone, is entitled to little weight in determining causation.

Cases that cite this headnote

[22] **Evidence**

☞ Medical Testimony

A reliable differential analysis requires an expert to compile a comprehensive list of hypotheses that might explain a plaintiff's condition; the expert must provide reasons for rejecting alternative hypotheses using scientific methods and procedures and the elimination of those hypotheses must be founded on more than subjective beliefs or unsupported speculation, and an expert's failure to enumerate a comprehensive list of alternative causes and to eliminate those potential causes determines the admissibility of proposed specific-causation testimony. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[23] **Federal Courts**

☞ Summary Judgment

The Court of Appeals reviews a district judge's granting summary judgment de novo. Fed.Rules Civ.Proc.Rule 56, 28 U.S.C.A.

Cases that cite this headnote

[24] **Federal Civil Procedure**

☞ Materiality and Genuineness of Fact Issue

On motion for summary judgment, when a party fails to proffer a sufficient showing to establish the existence of an element on which that party will bear the burden of proof at trial, there is

no genuine dispute regarding a material fact.
Fed.Rules Civ.Proc.Rule 56, 28 U.S.C.A.

Cases that cite this headnote

[25] **Evidence**

⚡ Preliminary Evidence as to Competency

The burden for laying the proper foundation for admission of expert testimony is on the party offering the expert, and admissibility must be shown by a preponderance of the evidence. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[26] **Federal Civil Procedure**

⚡ Admissibility

Evidence inadmissible at trial cannot be used to avoid summary judgment. Fed.Rules Civ.Proc.Rule 56, 28 U.S.C.A.

Cases that cite this headnote

[27] **Evidence**

⚡ Knowledge, Experience, and Skill in General

Doctor was not qualified to present expert testimony in denture wearer's products liability action against denture adhesive manufacturer, alleging use of adhesive caused her to suffer zinc-induced, copper-deficiency myelopathy (CDM), since his expertise was hematology and not the myelopathy at issue. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[28] **Federal Civil Procedure**

⚡ Failure to Respond; Sanctions

District courts have broad discretion to exclude untimely disclosed expert-witness testimony. Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

[29] **Federal Civil Procedure**

⚡ Failure to Respond; Sanctions

In denture wearer's products liability action against manufacturer of dental adhesive, alleging use of adhesive caused her to suffer zinc-induced, copper-deficiency myelopathy (CDM), fact that wearer proposed ability to use manufacturer's experts and witnesses almost six months after judge's scheduled deadline for identifying experts precluded use of such testimony to avoid summary judgment on issue of causation of wearer's CDM. Fed.Rules Civ.Proc.Rule 26(a)(2), 28 U.S.C.A.; Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Cases that cite this headnote

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Appeal from the United States District Court for the Southern District of Florida. D.C. Docket Nos. 1:09-md-02051-CMA; 9:09-cv-80625-CMA.

Before PRYOR, JORDAN and FAY, Circuit Judges.

Opinion

FAY, Circuit Judge:

*1 Marianne and Daniel Chapman appeal summary judgment for The Procter & Gamble Distributing, LLC and The Procter & Gamble Manufacturing Company (collectively "P & G") in their products liability case concerning Fixodent, a denture adhesive. We affirm.

I. FACTUAL AND PROCEDURAL BACKGROUND

Marianne Chapman suffers from myelopathy, a neurological condition or spinal-cord disorder that affects the upper and lower extremities. She developed a number of neurological symptoms from April 2006 through January 2009.¹ The Chapmans maintain Marianne Chapman's symptoms were caused by zinc-induced, copper-deficiency myelopathy ("CDM") from her use of two to four 68-gram tubes of Fixodent denture adhesive each week for eight years. P & G counters that the testimony of the Chapmans' experts should not be admitted, because their methodologies are unreliable and do not substantiate the conclusion that Fixodent caused Marianne Chapman's CDM.

While zinc is an essential element for human growth, it is not found separately in nature but occurs in various compounds, such as zinc acetate and zinc sulfate. In 1990, P & G reformulated Fixodent to include a calcium-zinc compound to improve its adhesion. The calcium-zinc compound in Fixodent is less bioavailable than other zinc compounds, like zinc acetate.² A case report in 2008 hypothesized zinc in denture adhesives may lead to copper deficiency, which could cause neurologic injury. S.P. Nations, et al., *Denture Cream: An Unusual Source of Excess Zinc, Leading to Hypocupremia and Neurologic Disease*, 71 *Neurology* 639 (2008). Thereafter, various individuals filed lawsuits nationwide against GlaxoSmithKline ("GSK"), manufacturer of Poligrip, and P & G, manufacturer of Fixodent.

The Chapmans originally filed their case in Florida state court on April 1, 2009, against P & G, which removed it to federal court in the Southern District of Florida on diversity jurisdiction.³ On June 9, 2009, the United States Judicial Panel on Multidistrict Litigation ("MDL") transferred these similar cases against GSK and P & G to Judge Cecilia M. Altonaga in the Southern District of Florida for coordinated pretrial proceedings. *In re Denture Cream Prods. Liab. Litig.*, No. 09-2051-MD-Altonaga. Following the conclusion of pretrial proceedings, the individual MDL plaintiffs had the right to transfer their cases back to their respective district courts. Because this case was the only one filed in the Southern District of Florida, it provided the judge with jurisdiction to proceed to trial.

The Chapmans sought to prove causation primarily through four expert witnesses.⁴ Dr. George J. Brewer, Dr. Joseph R. Landolph, and Dr. Ebbing Lautenbach would have testified generally whether Fixodent could cause CDM. Dr. Steven A. Greenberg would have testified Marianne Chapman's

myelopathy specifically was caused by her use of Fixodent. P & G moved to exclude the Chapmans' expert testimony under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993). Briefing, supplemental briefing, and a hearing addressed the issues raised by P & G's motions. On June 13, 2011, one week before trial was to begin on June 20, 2011, the district judge issued a comprehensive order granting P & G's motions to exclude the Chapmans' expert testimony. *In re Denture Cream Prods. Liab. Litig.*, 795 F.Supp.2d 1345 (S.D.Fla.2011).

A. First Appeal

1. District Court

*2 At the previously scheduled calendar call on June 14, 2011, the parties discussed with the judge the best route to this court to decide whether the judge's *Daubert* order was correct—interlocutory appeal or summary judgment. P & G argued the other MDL cases should be "stayed pending the appeals," because "it would make no sense for the parties to be litigating anything in those cases while the issues that are set forth squarely in the Court's order yesterday are addressed by the 11th Circuit." Hr'g Tr., June 14, 2011, at 6:3–10. The judge commented it would be "futile" and "a waste of everyone's resources" to have full briefing on summary judgment "just so [the parties] could get to the 11th Circuit on the correctness of [her] decision on the *Daubert* motions." *Id.* at 7:8–12. Instead, the judge suggested the parties "consent to an entry of judgment with the right to appeal the adverse *Daubert* ruling." *Id.* at 7:13–14.

On June 16, 2011, the judge held a scheduling conference to discuss further the proper way to get her *Daubert* decision before this court. The judge recognized "the problem is how do you get [the *Daubert* order] to the Appellate Court [because] you can't ... appeal ... a *Daubert* ruling. You need a final order." Hr'g Tr., June 16, 2011, at 6:21–23. She suggested "the way to do it is to have me enter judgment against [the Chapmans] with the understanding of the parties that you are reserving your right to appeal ... my adverse ruling on *Daubert*, but you need a final order." *Id.* at 7:5–8. Since both parties wanted the *Daubert* order reviewed by this court, the judge ordered the parties to "present to [her] a proposed order that contemplates" an appealable final judgment. *Id.* at 9:10–13.

On June 23, 2011, the parties submitted a Joint Stipulation of Dismissal with Prejudice, agreeing to "1) the entry of judgment against [the Chapmans] on all claims alleged

against [P & G]; and, 2) the entry of dismissal with prejudice on all [the Chapmans'] claims alleged against [P & G].” *Jt. Stip. of Dismissal* at 1–2. The joint stipulation provided “the parties recognize that this stipulation is in the best interest of all parties and judicial economy” and expressly reserved the Chapmans' right to appeal to this court. *Id.* at 2. In accordance with the joint stipulation, the judge entered final judgment on June 24, 2011, and the Chapmans timely appealed.

2. Court of Appeals

[1] This court recognized “our jurisdiction ‘must be both (1) authorized by statute and (2) within constitutional limits.’” *Chapman v. Procter & Gamble Distrib., LLC*, No. 11–13371 at 2 (11th Cir. Jan. 4, 2012) (per curiam) (quoting *OFS Fitel, LLC v. Epstein, Becker & Green, P.C.*, 549 F.3d 1344, 1355 (11th Cir.2008)). While the district judge's order was final under 28 U.S.C. § 1291, “to be within constitutional limits,” it had to be “ ‘adverse as to the final judgment’ ... to satisfy the Article III case or controversy requirement.” *Id.* (quoting *OFS Fitel*, 549 F.3d at 1356). We noted “three ‘distinct factual ingredients that are critical to the adverseness issue.’” *Id.* (quoting *OFS Fitel*, 549 F.3d at 1357). Those factual requirements are: (1) the appealed order was “ ‘case-dispositive because it foreclosed plaintiff from presenting the expert testimony required to prove [the cause of action], which was a core element in all of its claims,’ ” (2) “ ‘plaintiff's attorney ‘candidly informed the district court of the impact of its sanctions ruling on the plaintiff's case,’ ” and (3) “ ‘importantly, the district court ... agreed with plaintiff's counsel's suggestion that the [appealed] ruling was case-dispositive.’ ” *Id.* (alterations omitted) (quoting *OFS Fitel*, 549 F.3d at 1357, 1358).

*3 We concluded the Chapmans did not meet the second and third *OFS Fitel* requirements. Although the parties had informed the district judge her *Daubert* order might be dispositive, the Chapmans “also argued that they could still muster enough evidence to prove causation at trial even without the expert testimony, specifically by presenting testimony from treating doctors.” *Id.* at 3. Not only did the Chapmans fail “ ‘candidly’ ” to inform the judge of the consequence of the *Daubert* order, but also they “disputed that it was dispositive.” *Id.* (quoting *OFS Fitel*, 549 F.3d at 1357). Regarding the third requirement, we determined the district judge's dismissal was not case-dispositive. It was unclear whether the interlocutory appeal from the *Daubert* order excluding the Chapmans' expert witnesses was “the only basis for dismissal, or if the Chapmans could otherwise have proceeded to trial and proved causation

despite the exclusion, as they initially conte[nd]ed.” *Id.* at 3–4. In addition, the Chapmans' representation that it was undisputed that the *Daubert* order was case-dispositive was belied by their persistently “claiming that the order was not case-dispositive.” *Id.* at 4. Accordingly, we dismissed the appeal of the *Daubert* order for lack of standing, because the Chapmans were not adverse to the final judgment. *Id.*

B. Second Appeal

Following dismissal of the Chapmans' first appeal by this court, the district judge granted their motion to vacate the stipulated final judgment under Federal Rule of Civil Procedure 60(b). P & G then moved for summary judgment, which the Chapmans opposed, and P & G replied. Because the district judge had determined none of the Chapmans' proffered experts qualified as experts under *Daubert*, P & G maintained the Chapmans could not use treating physicians as experts at trial. Since these doctors had never been designated as experts, the judge determined they were not qualified to testify regarding general or specific causation of Marianne Chapman's CDM. Accordingly, she granted P & G's summary judgment motion and entered final judgment. The Chapmans appealed, which is the case we now decide. We necessarily first must address the merits of the district judge's *Daubert* order, because it is incorporated by reference in the Chapmans' opposition to P & G's summary judgment motion,⁵ and the parties' first appeal to this court was dismissed for lack of jurisdiction without addressing the merits of the *Daubert* order.

II. DISCUSSION

A. *Daubert* Analysis

1. Distinguishing *Daubert*–Applicable Cases

[2] [3] For analyzing cases involving alleged toxic substances, we have delineated two categories. *McClain v. Metabolife Int'l, Inc.*, 401 F.3d 1233, 1239 (11th Cir.2005). The first category consists of “cases in which the medical community generally recognizes the toxicity of the [substance] at issue” to “caus[e] the injury plaintiff alleges.” *Id.*; *Hendrix ex rel. G.P. v. Evenflo Co.*, 609 F.3d 1183, 1196 (11th Cir.2010). In this category are “toxins like asbestos, which causes asbestosis and mesothelioma; silica, which causes silicosis; and cigarette smoke, which causes cancer.” *McClain*, 401 F.3d at 1239. For judicial economy, federal courts need not consider expert opinions for diagnoses

“medical doctors routinely and widely recognize as true, like cigarette smoking causes lung cancer and heart disease, too much alcohol causes cirrhosis of the liver, and ... the ingestion of sufficient amounts of arsenic causes death.” *Id.* at 1239 n. 5. In cases where the cause and effect or resulting diagnosis has been proved and accepted by the medical community, federal judges “need not undertake an extensive *Daubert* analysis on the general toxicity question.”⁶ *Id.* at 1239.

*4 [4] [5] In contrast, the second category contains cases, where the medical community generally does not recognize the substance in question as being toxic and having caused plaintiff's alleged injury. *Id.* These cases require a two-part *Daubert* analysis, comprised of (1) general causation, “whether the [substance] can cause the harm plaintiff alleges,” *id.*, and (2) specific causation, whether experts' methodology determines the substance “caused the plaintiff's specific injury,” *Hendrix*, 609 F.3d at 1196 (citing *McClain*, 401 F.3d at 1239). For cases in category two, a district judge “must assess the *reliability* of the expert's opinion on *general*, as well as specific, causation.” *Id.* (first emphasis added). The two categories economize the time of a trial judge, who “does not need to waste time with a *Daubert* hearing ‘where the reliability of an expert's methods is properly taken for granted, and to require appropriate proceedings in the less usual or more complex cases where cause for questioning the expert's reliability arises,’” *McClain*, 401 F.3d at 1239 n. 5 (quoting *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152, 119 S.Ct. 1167, 1176, 143 L.Ed.2d 238 (1999)).

[6] The Chapmans represent the district judge should have analyzed this case under *McClain* category one, because there is a general consensus in the medical community that ingestion of zinc causes CDM. They cite medical textbooks and journals as well as their experts⁷ and those of P & G, who have recognized an association between excess zinc and copper deficiency. See *Rider v. Sandoz Pharm. Corp.*, 295 F.3d 1194, 1199 (11th Cir.2002) (“[W]hile they may support other proof of causation, case reports alone ordinarily cannot prove causation.”). But they fail to show that the zinc compound in Fixodent is in *McClain* category one of medically accepted, cause-and-effect toxins, such as asbestos causing asbestosis and cigarette smoking causing lung cancer and heart disease. *Id.* at 1239 & n. 5. P & G notes: “Millions of consumers have regularly used Fixodent for decades without complaint. Nevertheless, [the Chapmans] claim that Fixodent is toxic because it contains zinc in a calcium-zinc compound—even though zinc is undeniably an essential nutrient the body must have to function properly.” Appellees'

Br. at 1; see *Guinn v. AstraZeneca Pharm. LP*, 602 F.3d 1245, 1257 (11th Cir.2010) (per curiam) (recognizing in a products liability case that two-thirds of patients who took an antipsychotic prescription drug, Seroquel, did not experience weight gain, which plaintiff alleged was the cause of her diabetes). Therefore, the district judge properly determined that Fixodent, containing zinc, was in *McClain* category two and conducted the requisite *Daubert* review of proffered expert testimony, which included a thorough hearing and consideration of “thousands of pages of filings by the parties, including the experts' reports and depositions, and scientific literature.” *In re Denture Cream Prods. Liab. Litig.*, 795 F.Supp.2d at 1348.

2. *Daubert* Review for Reliability of Expert Testimony

*5 [7] [8] [9] [10] Under Federal Rule of Evidence 702, expert testimony is admissible if (1) the expert is qualified to testify regarding the subject of the testimony; (2) the expert's methodology is “sufficiently reliable as determined by the sort of inquiry mandated in *Daubert*”; and (3) the expert's testimony will assist the trier of fact in understanding the evidence or determining a fact at issue. *United States v. Frazier*, 387 F.3d 1244, 1260 (11th Cir.2004) (en banc) (citation and internal quotation marks omitted). In considering the proffered expert testimony, a trial judge is mindful “[t]he burden of establishing qualification, reliability, and helpfulness rests on the proponent of the expert opinion.” *Id.* To determine the reliability and relevance of proffered expert testimony, the judge performs a “gatekeeping” function. *Daubert*, 509 U.S. at 589 n. 7, 113 S.Ct. at 2795 n. 7; see *Quiet Tech. DC-8, Inc. v. Hurel-Dubois UK Ltd.*, 326 F.3d 1333, 1342 (11th Cir.2003) (recognizing “one may be considered an expert but still offer unreliable testimony”). We review a district judge's exclusion of expert testimony only for abuse of discretion. *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 141–43, 118 S.Ct. 512, 517, 139 L.Ed.2d 508 (1997). This “considerable leeway” accorded to the district judge, *Kumho Tire Co.*, 526 U.S. at 152, 119 S.Ct. at 1176, requires us to defer to the judge's decision on expert testimony, “unless it is manifestly erroneous.” *Rink v. Cheminova, Inc.*, 400 F.3d 1286, 1291 (11th Cir.2005) (citation and internal quotation marks omitted). This deferential abuse-of-discretion standard is applied stringently, even if a decision on expert testimony is “outcome determinative.”⁸ *Gen. Elec. Co.*, 522 U.S. at 142–43, 118 S.Ct. at 517; *United States v. Brown*, 415 F.3d 1257, 1266 (11th Cir.2005).

[11] The *Daubert* Court identified four factors to guide district judges in assessing the reliability of an individual expert's methodology:

- (1) whether the expert's methodology has been tested or is capable of being tested; (2) whether the theory or technique used by the expert has been subjected to peer review and publication; (3) whether there is a known or potential error rate of the methodology; and (4) whether the technique has been generally accepted in the relevant scientific community.

United Fire & Cas. Co. v. Whirlpool Corp., 704 F.3d 1338, 1341 (11th Cir.2013) (per curiam) (citing *Daubert*, 509 U.S. at 593–94, 113 S.Ct. at 2796–97). These factors are not “a definitive checklist or test,” *Daubert*, 509 U.S. at 593, 113 S.Ct. at 2796, and *Daubert* considerations are “applied in case-specific evidentiary circumstances,” *Brown*, 415 F.3d at 1266. “[T]he trial judge must have considerable leeway in deciding in a particular case how to go about determining whether particular expert testimony is reliable.” *Kumho Tire Co.*, 526 U.S. at 152, 119 S.Ct. at 1176.

[12] [13] While the inquiry is “a flexible one,” *the focus must be solely on principles and methodology, not on the conclusions that they generate.*” *Daubert*, 509 U.S. at 594–95, 113 S.Ct. at 2797 (emphasis added); see *McDowell v. Brown*, 392 F.3d 1283, 1298 (11th Cir.2004) (recognizing a trial judge “should meticulously focus on the expert's principles and methodology, and not on the conclusions that they generate”). “But conclusions and methodology are not entirely distinct from one another”; neither *Daubert* nor Federal Rule of Evidence 702 requires a trial judge “to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert.” *Gen. Elec. Co.*, 522 U.S. at 146, 118 S.Ct. at 519. Instead, the judge “is free to ‘conclude that there is simply too great an analytical gap between the data and the opinion proffered.’” *Hendrix*, 609 F.3d at 1194 (quoting *Gen. Elec. Co.*, 522 U.S. at 146, 118 S.Ct. at 519); see *McDowell*, 392 F.3d at 1299 (noting “there is no fit where a large analytical leap must be made between the facts and the opinion,” such as proffering animal studies concerning a type of cancer in mice to establish a different cancer in humans (citing *Gen. Elec. Co.*, 522 U.S. at 146, 118 S.Ct. at 519)). The district judge has “the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand.” *Daubert*, 509 U.S. at 597, 113 S.Ct. at 2799.

*6 [14] [15] As gatekeeper for the expert evidence presented to the jury, the judge “must do a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.” *Kilpatrick v. Breg, Inc.*, 613 F.3d 1329, 1335 (11th Cir.2010) (citation and internal quotation marks omitted). It is “proper” and “necessary” for the trial judge “to focus on the reliability” of a proffered expert's “sources and methods.” *Id.* at 1336. Under *Daubert*, the “district judge asked to admit scientific evidence must determine whether the evidence is genuinely scientific, as distinct from being unscientific speculation offered by a genuine scientist.” *Allison v. McGhan Med. Corp.*, 184 F.3d 1300, 1316–17 (11th Cir.1999) (citation and internal quotation marks omitted).

a. General Causation

[16] General causation refers to the “general issue of whether a substance has the potential to cause the plaintiff's injury.” *Guinn*, 602 F.3d at 1248 n. 1. The district judge consolidated her consideration of the proffered testimonies of Dr. Brewer, Dr. Landolph, and Dr. Lautenbach regarding general causation. Neither the judge nor the parties questioned that these three experts were qualified to testify based on their credentials, the first part of the Rule 702 test for admission of expert testimony. *Frazier*, 387 F.3d at 1260. The judge, however, determined that their methodologies were not sufficiently reliable to satisfy part two of the test and therefore would not assist the trier of fact in understanding the evidence, part three of the test. *Id.* We must review the judge's analysis that caused her to reach that conclusion.

At the outset, the judge placed this case in *McClain* category two, where “the medical community does not generally recognize the agent as both toxic and causing the injury plaintiff alleges.” *McClain*, 401 F.3d at 1239. To establish generally “Fixodent is capable of causing a myelopathy,” the Chapmans proffered the testimonies of three experts. *In re Denture Cream Prods. Liab. Litig.*, 795 F.Supp.2d at 1350. “Dr. Brewer would testify ‘that zinc containing Fixodent denture adhesives are a health hazard and capable of causing severe hematological and neurological injury.’” *Id.* at 1350–51 (quoting Brewer Report). “Dr. Landolph would testify ‘that long-term use of Fixodent (containing 1.69% zinc) will result in ... neurotoxic, neurologic, and hematologic consequences.’” *Id.* at 1351 (quoting Landolph Report). Dr. Lautenbach would testify “that there is ‘an

association between Fixodent and myeloneuropathy' and he would 'consider the myeloneuropathy as a "probable" reaction related to denture adhesive use.' " *Id.* (quoting Lautenbach Report).

The judge reviewed reliable methodologies, including dose-response relationship, epidemiological evidence, background risk of the disease, physiological processes involved, and clinical studies. *Id.* at 1351–57. The judge determined the Chapmans' experts did not satisfy any of these recognized methodologies. Failure to satisfy any of the four reliability factors recognized in *Daubert* is sufficient to preclude the testimony of any of the general causation experts from testifying at trial. 509 U.S. at 593–94, 113 S.Ct. at 2796–97. Recognizing all substances potentially can be toxic, the judge noted " 'the relationship between dose and effect (dose-response relationship) is the hallmark of basic toxicology,' " and " 'is the single most important factor to consider in evaluating whether an alleged exposure caused a specific adverse effect.' " ⁹ *In re Denture Cream Prods. Liab. Litig.*, 795 F.Supp.2d at 1351–52 (quoting *McClain*, 401 F.3d at 1242). The judge noted, however, neither the Chapmans' general causation experts "nor the articles on which they rely determine how much Fixodent must be used for how long to increase the risk of a copper-deficiency, or for how long a copper-deficiency must persist before an individual is at an increased risk of developing a myelopathy." *Id.* at 1352. Similarly, the judge recognized "[e]pidemiology is the 'best evidence of causation' " in cases involving toxic substances. *Id.* at 1354 (quoting *Kilpatrick*, 613 F.3d at 1337 n. 8). But she determined the Chapmans' "experts have no analytical epidemiological evidence on which to base their inference of causation." ¹⁰ *Id.*

*7 The judge further noted "[b]ackground risk of disease 'is the risk a plaintiff and other members of the general public have of suffering the disease or injury that plaintiff alleges *without* exposure to the drug or chemical in question.' " *Id.* at 1355 (quoting *McClain*, 401 F.3d at 1243). While " '[a] reliable methodology should take into account the background risk,' " the judge found the Chapmans' "causation experts uniformly testified that they did not know the background risk of copper-deficiency myelopathy," which was "a serious methodological deficiency." ¹¹ *Id.* (alteration in original) (quoting *McClain*, 401 F.3d at 1243). The judge explained:

[T]he question of background risk is important because it could

be coincidence that any particular denture-cream user has a myelopathy or copper-deficiency myelopathy. Some people use denture cream and some people have a myelopathy; it is possible (and depending on the incidence of myelopathies, likely) that some denture-cream users have an idiopathic myelopathy simply due to the background distribution of that disease. Without a baseline, any incidence may be coincidence.

Id. at 1356. The judge concluded the absence of background risk of disease was "a substantial weakness" in the Chapmans' experts' general-causation reasoning. *Id.*

[17] Given the deposition admissions of Dr. Brewer, Dr. Lautenbach, and Dr. Landolph regarding their lack of knowledge of dose-response, epidemiological evidence, and background risk of disease, methodologies this circuit has recognized as indispensable to proving the effect of an ingested substance, we conclude that the testimonies of these proffered experts could not establish general causation of myelopathy by Fixodent. Because these experts have failed to demonstrate the primary methods for proving the zinc in Fixodent causes myelopathy, their secondary methodologies, including plausible explanations, generalized case reports, hypotheses, and animal studies are insufficient proof of general causation. This latter evidence could mislead the jury by causing it to consider testimony that was insufficient by recognized primary methodologies to prove using Fixodent causes myelopathy. As gatekeeper for the evidence presented to the jury, the judge did not abuse her discretion or commit manifest injustice by precluding the testimonies of Dr. Brewer, Dr. Lautenbach, and Dr. Landolph as experts on general causation.

b. Specific Causation

[18] [19] "Specific causation refers to the issue of whether the plaintiff has demonstrated that the substance actually caused injury in her particular case." *Guinn*, 602 F.3d at 1248 n. 1. The Chapmans proffered only one expert to prove specific causation, Dr. Greenberg, who would testify at trial: " '[A] diagnosis of copper deficiency myelopathy is certain ... [and] in this patient, it was precisely the ingested zinc in the denture cream that caused her copper deficiency.' " *In re Denture Cream Prods. Liab. Litig.*, 795 F.Supp.2d at 1365 (alterations and ellipsis in original) (quoting

Greenberg Report). His conclusion allegedly resulted from “the scientifically accepted methodology of differential diagnosis,” *Guinn*, 602 F.3d at 1253, “a medical process of elimination whereby the possible causes of a condition are considered and ruled out one-by-one, leaving only one cause remaining,” *Hendrix*, 609 F.3d at 1195. Differential diagnosis includes three steps: (1) the patient’s condition is diagnosed, (2) all potential causes of the ailment are considered, and (3) differential etiology is determined by systematically eliminating the possible causes. *McClain*, 401 F.3d at 1252. A reliable differential analysis “need not rule out all possible alternative causes,” but “it must at least consider other factors that could have been the sole cause of the plaintiff’s injury.” *Guinn*, 602 F.3d at 1253. Differential diagnosis, “however, will not usually overcome the fundamental failure of laying a scientific groundwork for the general toxicity of the drug and that it can cause the harm a plaintiff suffered.” *McClain*, 401 F.3d at 1252.

*8 [20] While differential diagnosis as a scientifically accepted methodology meets the *Daubert* guiding factors for district judges in deciding reliability, 509 U.S. at 593–94, 113 S.Ct. at 2796–97, Dr. Greenberg did not follow it. Marianne Chapman’s treating physicians had not diagnosed her with CDM or informed her that her Fixodent use caused her neurologic symptoms.¹² Although her diagnosis generally was “neurological syndrome,” she was not professionally diagnosed with CDM until Dr. Greenberg examined her in the course of this litigation as the Chapmans’ specific-causation expert.¹³ Greenberg Report at 10.

[21] Marianne Chapman’s medical history included neurological ailments that occurred before and after her Fixodent use.¹⁴ Notably, her neurological symptoms continued after she ceased using Fixodent.¹⁵ “Temporal proximity is generally not a reliable indicator of a causal relationship.” *Guinn*, 602 F.3d at 1254. “The temporal connection between exposure to chemicals and an onset of symptoms, standing alone, is entitled to little weight in determining causation.” *McClain*, 401 F.3d at 1254 (citation, internal quotation marks, and alteration omitted). But Dr. Greenberg failed to explore fully other potential causes of Marianne Chapman’s CDM, which he diagnosed in the course of this litigation. *In re Denture Cream Prods. Liab. Litig.*, 795 F.Supp.2d at 1366. In addition to copper deficiency as the cause of Marianne Chapman’s neurological ailments, Dr. Greenberg had identified “structural spinal cord injury, multiple sclerosis, and vitamin B12 deficiency.”¹⁶ *Id.* Given

her extensive medical history of neurological problems since childhood, it is entirely possible that Marianne Chapman had the myelopathy condition that she attributes to Fixodent prior to her use of the denture cream, because her symptoms occurred before and after using Fixodent. *See Guinn*, 602 F.3d at 1254 (“Because [plaintiff] was diagnosed with diabetes only four years after beginning to take Seroquel, the temporal relationship in this case does not provide strong evidence of causation; in fact, *it appears to equally indicate that [plaintiff] may have already developed diabetes before ever taking Seroquel.*” (emphasis added)). In addition, Dr. Greenberg recognized lymphoproliferative disorders as possible causes of Marianne Chapman’s hematological syndrome and “*malabsorption and gastric bypass surgery as potential causes for her copper deficiency.*” *In re Denture Cream Prods. Liab. Litig.*, 795 F.Supp.2d at 1366 (emphasis added).

[22] A reliable differential analysis requires an expert to “compile a comprehensive list of hypotheses that might explain” a plaintiff’s condition. *Hendrix*, 609 F.3d at 1195 (citation and internal quotation marks omitted). The “expert must provide reasons for rejecting alternative hypotheses using scientific methods and procedures and the elimination of those hypotheses must be founded on more than subjective beliefs or unsupported speculation.” *Id.* at 1197 (citation and internal quotation marks omitted). An expert’s failure to enumerate a comprehensive list of alternative causes and to eliminate those potential causes determines the admissibility of proposed specific-causation testimony. *See Guinn*, 602 F.3d at 1254 (determining no abuse of discretion in concluding the specific-causation expert’s hypothesis was unreliable under *Daubert*, because of failure to consider possible alternative causes of plaintiff’s diabetes).

*9 Significantly, after concluding his report on Marianne Chapman, Dr. Greenberg performed an additional, reasonable test on her to determine if she had arterial venous malformation in her thoracic spinal cord. The judge found Dr. Greenberg’s “failure to perform a test he considered reasonable before opining on the cause of Ms. Chapman’s disease shows a lack of methodological rigor in reaching the diagnosis in his report,” because he “did not consider the possibility of an idiopathic cause for Ms. Chapman’s myelopathy.” *In re Denture Cream Prods. Liab. Litig.*, 795 F.Supp.2d at 1367. Dr. Greenberg failed to consider obvious alternative causes for Marianne Chapman’s CDM, such as hereditary and acquired conditions known to cause myelopathies. *See Guinn*, 602 F.3d at 1257 (affirming

exclusion of plaintiff's expert witness following *Daubert* proceedings, when the expert's testimony revealed facts casting "substantial doubt on whether Seroquel contributed to [plaintiff's] development of diabetes," since plaintiff "had multiple risk factors that could have been the sole cause of [her] diabetes [,] and [the expert] was unable to determine the relative risk of each factor"). Instead, Dr. Greenberg pursued his view that zinc-associated copper deficiency was responsible for Marianne Chapman's neurological and hematological symptoms. Yet, he provided no support for his hypothesis that Marianne Chapman's anemia, neutropenia, and myelopathy resulted from a single cause rather than several causes. He also omitted consideration of idiopathic causes for Marianne Chapman's CDM, additionally rendering his differential diagnosis unreliable. See *Kilpatrick*, 613 F.3d at 1342 ("The failure to take into account the potential for idiopathically occurring [disease]—particularly when [the disease] is a relatively new phenomenon in need of further study—placed the reliability of [the expert's] conclusions in further doubt.").

Obviously, there were numerous potential causes for Marianne Chapman's CDM that Dr. Greenberg did not analyze or consider. The district judge determined "Dr. Greenberg's differential diagnosis is not reliable as a matter of law in the Eleventh Circuit because he ruled-in and considered an etiology—Fixodent-induced copper-deficiency myelopathy—that has not been established to cause Ms. Chapman's disease." *In re Denture Cream Prods. Liab. Litig.*, 795 F.Supp.2d at 1366. In reviewing the evidence presented and applying the applicable law, we conclude the district judge did not abuse her discretion or commit manifest error in precluding Dr. Greenberg's expert testimony regarding the specific causation of Marianne Chapman's CDM.

c. Exclusion of Other Expert Testimony

Because the judge determined neither the general nor specific-causation experts had proffered testimony that would prove the zinc in Fixodent had caused Marianne Chapman's CDM, she also excluded the testimonies of Dr. Wogalter and Dr. Von Frunhofer, whose testimonies were premised on the toxicity of Fixodent. *In re Denture Cream Prods. Liab. Litig.*, 795 F.Supp.2d at 1367.

*10 In short, taking everything together, there is enough data in the scientific literature to *hypothesize* causation, but not to *infer* it.

Hypotheses are verified by testing, not by submitting them to lay juries for a vote. It may very well be that Fixodent in extremely large doses over many years can cause copper deficiency and neurological problems, but the methodology [the Chapmans'] experts have used in reaching that conclusion will not reliably produce correct determinations of causation.

Id. The proposed testimony of Dr. Raffa concerned P & G's assets, which related to the punitive damages claim. Consequently, the judge precluded the proffered testimonies of these experts based on Rule 702 relevancy. We conclude there was no abuse of discretion or manifest injustice in granting P & G's motions preventing the testimonies of these three experts for the Chapmans.

B. Summary Judgment

After this court dismissed the parties' first appeal for lack of jurisdiction, based on our conclusion the Chapmans did not consider the district judge's *Daubert* order case-dispositive, the judge granted their Federal Rule of Civil Procedure 60(b) motion for relief from the final judgment. Thereafter, P & G moved for summary judgment and argued the Chapmans did not have an admissible expert witness to establish general or specific causation. In opposition, the Chapmans argued they had alternative expert witnesses to testify at trial, irrespective of the district judge's *Daubert* order. Concluding under the governing law the Chapmans had no experts to prove their products liability case alleging Fixodent was the cause of Marianne Chapman's CDM, the district judge granted summary judgment to P & G and entered final judgment.

The Chapmans' notice of appeal states they are appealing the summary judgment order and final summary judgment entered on July 31, 2012, "as well as all orders and rulings that produced that final judgment," including the order granting P & G's motions to exclude the testimony of the Chapmans' seven general and specific expert witnesses. Notice of Appeal (Aug. 27, 2012). We have considered fully the district judge's thorough *Daubert* order, which eliminated the Chapmans' expert witnesses, and concluded it was decided correctly under the controlling law. We now address the summary judgment order the Chapmans have appealed in conjunction with the *Daubert* order.¹⁷

[23] [24] [25] [26] We review a district judge's granting summary judgment de novo. *Williams v. Mast Biosurgery USA, Inc.*, 644 F.3d 1312, 1318 (11th Cir.2011). Summary judgment is proper if the movant shows "there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed.R.Civ.P. 56(a). When a party fails to proffer a sufficient showing "to establish the existence of an element on which that party will bear the burden of proof at trial," there is no genuine dispute regarding a material fact. *Williams*, 644 F.3d at 1318 (citations, internal quotation marks, and ellipsis omitted). The burden for laying the proper foundation for admission of expert testimony is on the party offering the expert; admissibility must be shown by a preponderance of the evidence. *Daubert*, 509 U.S. at 592 n. 10, 113 S.Ct. at 2796 n. 10 (citing *Bourjaily v. United States*, 483 U.S. 171, 175-76, 107 S.Ct. 2775, 2778-79, 97 L.Ed.2d 144 (1987)). "Evidence inadmissible at trial cannot be used to avoid summary judgment." *Corwin v. Walt Disney Co.*, 475 F.3d 1239, 1249 (11th Cir.2007) (citation, internal quotation marks, and alteration omitted).

*11 The Chapmans opposed summary judgment for lack of expert witnesses following the *Daubert* order for three reasons: (1) their expert, Dr. Joseph Prohaska, a biochemistry professor at the University of Minnesota Medical School, could testify at trial, because P & G had not contested his proffered testimony; (2) they could call P & G experts and witnesses to testify that excessive ingestion of zinc can lead to copper deficiency, which can cause CDM; and (3) Marianne Chapman's treating physicians for her neuropathy could testify regarding causation. Because of the Chapmans' "periodic and contradictory insistence on having enough evidence to proceed to trial," the judge analyzed the merits of P & G's motion to make her decision "perfectly clear" for this court.¹⁸ Summ. J. Order at 6. In granting summary judgment to P & G, the district judge addressed the three possibilities for expert testimony the Chapmans had proffered following her *Daubert* order, precluding the testimonies of their general and specific causation experts, and concluded their alternative expert witnesses also were unavailing.

On appeal, the Chapmans challenge both the district judge's *Daubert* order and summary judgment granted to P & G, because the cumulative effect of these orders eliminated all potential causation experts the Chapmans had proffered. Their arguments for alternative expert witnesses are combined in the Chapmans' initial and reply briefs with their *Daubert* arguments, regarding their contention the district judge erred in disqualifying their original causation

experts. See, e.g., Appellants' Br. at 18 n. 5, 22-23, 25, 30-31, 40, 43, 44-46, 47, 48-49, 50, 56, 60; Appellants' Reply Br. at 4 n. 1, 6, 8, 11, 14, 16-17, 18, 21, 22, 24, 30. The alternative expert witnesses the Chapmans propounded following the *Daubert* order and precluded by summary judgment granted to P & G necessarily had to satisfy the same *Daubert* review standards to testify concerning causation for the Chapmans to prove their case that Fixodent caused Marianne Chapman's CDM.

[27] The Chapmans discuss Dr. Prohaska¹⁹ and P & G experts and witnesses²⁰ in their initial and reply briefs in connection with their contention that the medical community generally accepts excess zinc can cause CDM. Appellants' Br. at 27-33; Appellants' Reply Br. at 3-6. Accepting this classification would place this case in *McClain* category one, which would eliminate the *Daubert* analysis of the Chapmans' experts, if it were generally accepted by the medical community that zinc causes CDM. We give the Chapmans "the benefit of the doubt" that these first two sources of alternative expert witnesses have been presented on appeal in their briefs. *Carmichael v. Kellogg, Brown & Root Servs., Inc.*, 572 F.3d 1271, 1293 (11th Cir.2009). The district judge noted "Dr. Prohaska's report was limited to hematological disorders, not myelopathy, and is therefore irrelevant." Summ. J. Order at 7. Although the Chapmans "may show zinc blocks copper absorption, this alone cannot constitute a showing of general or specific causation." *Id.* at 8; see *Rider*, 295 F.3d at 1202 (noting causation evidence of one type of stroke "does not apply to situations involving" another type of stroke). Moreover, she decided "there was no mechanistic evidence regarding the absorption of zinc from Fixodent itself." Summ. J. Order at 8. In performing the requisite gatekeeping function, a trial judge's assessment of proposed testimony does not mean "'taking the expert's word for it.'" *Frazier*, 387 F.3d at 1261 (quoting Fed.R.Evid. 702 Advisory Committee Notes (2000 Amends.)). We also conclude that Dr. Prohaska's testimony cannot provide admissible proof the Chapmans need to establish their case at trial, because his expertise is hematology and not myelopathy at issue in this case.

*12 [28] [29] In addition, the judge explained the Chapmans "cannot create a triable issue of fact as to causation" with P & G experts and witnesses, who have not submitted the requisite epidemiological or clinical reports. Summ. J. Order at 9. Expert witnesses, who are expected to testify at trial, must be identified in the Joint Pretrial Stipulation and must meet the procedural requirements

of Federal Rule of Civil Procedure 26(a)(2), including time designations for supplying disclosures and reports, regarding expert testimony to be given. The Chapmans proposed their ability to use P & G experts and witnesses at trial almost six months *after* the judge's scheduled January 24, 2011, deadline for identifying experts, making complying with the procedural timely notice and disclosure requirements of Rule 26(a)(2), including reports of testimony, impossible.²¹ See Fed.R.Civ.P. 26(a)(2)(D) (stating a party "must" disclose expert testimony "at the times and in the sequence that the court orders"). "District courts have broad discretion to exclude untimely disclosed expert-witness testimony." *Pride v. BIC Corp.*, 218 F.3d 566, 578 (6th Cir.2000).

Even if the Chapmans had satisfied the procedural requirements of Rule 26(a)(2) to use P & G experts and witnesses to testify for them at trial, the district judge concluded the Chapmans could not prove their case with them. P & G's experts had "reached the conclusion that Fixodent does *not* cause CDM."²² Summ. J. Order at 9. The judge determined the Chapmans had "not made a sufficient showing that [P & G's] expert testimony would withstand the *Daubert* analysis of [her] June 13 Order and yield the conclusion they seek, in view of [P & G's] experts' testimony as a whole." *Id.* Deciding the P & G witnesses ultimately did not support the Chapmans' conclusion that Fixodent caused Marianne Chapman's CDM, the judge explained the Chapmans "cannot perform an end run around the [*Daubert*] Order by calling witnesses who have not been vetted for reliability." *Id.* The judge also noted P & G's expert, Dr. Laura W. Katzan, cannot "establish general causation, a necessary element of their claims," by differential diagnosis. *Id.* (citing *McClain*, 401 F.3d at 1253). Considering the prospective testimonies of P & G experts and witnesses in context, the judge properly decided the Chapmans could not prove their case with admissible evidence from these alternative experts and witnesses.

At a status conference the day after issuance of the *Daubert* order, the Chapmans' counsel argued *for the first time* they still could try to prove causation through "*treating experts* who have opined [Marianne Chapman's] condition was caused by her use of Fixodent that were not the subject of the *Daubert* motion." Hr'g Tr., June 14, 2011, at 7:21-8:1 (emphasis added). In recasting Marianne Chapman's treating physicians as "treating experts," the Chapmans sought to have these doctors testify concerning their personal treatment of Marianne Chapman as well as their view of

the cause of her CDM. The judge, however, explained in her summary judgment order that treating physicians, who diagnosed Marianne Chapman's CDM, are fact and not expert witnesses.²³ Summ. J. Order at 10 (citing *Hendrix*, 609 F.3d 1183). The Chapmans have not briefed on appeal their district-court argument in opposing summary judgment that Marianne Chapman's treating physicians could testify as experts at trial. "The 'law is by now well settled in this Circuit that a legal claim or argument that has not been briefed before the court is deemed abandoned and its merits will not be addressed.'" *Carmichael*, 572 F.3d at 1293 (quoting *Access Now, Inc. v. Sw. Airlines Co.*, 385 F.3d 1324, 1330 (11th Cir.2004)). Consequently, we conclude the Chapmans have abandoned on appeal their argument that Marianne Chapman's treating physicians could have testified as experts at trial. Because none of the Chapmans' alternative sources for expert witnesses could provide evidence admissible at trial "to avoid summary judgment," the district judge appropriately granted summary judgment to P & G. *Corwin*, 475 F.3d at 1249 (citations and internal quotation marks omitted).

III. CONCLUSION

*13 To prove Fixodent caused Marianne Chapman's CDM, the Chapmans were *required* to have *Daubert*-qualified, general and specific-causation-expert testimony that would be admissible at trial to avoid summary judgment. *Guinn*, 602 F.3d at 1252. With the district judge's properly analyzed *Daubert* order, the Chapmans lost their designated general and specific-expert witnesses, because of deficiencies in the experts' scientific-methodology reliability. Their attempts to proffer alternative causation-expert witnesses failed, because their prospective testimony was inadmissible substantively, procedurally, or abandoned on appeal. Summary judgment correctly was granted to P & G.

AFFIRMED.

JORDAN, Circuit Judge, concurring:

Given the "due deference" that the abuse of discretion standard embodies, *see Gall v. United States*, 552 U.S. 38, 59, 128 S.Ct. 586, 169 L.Ed.2d 445 (2007), and the "range of choice" permitted by that standard, *see In re Rasbury*, 24 F.3d 159, 168 (11th Cir.1994), I agree that we should affirm the district court's exclusion of the Chapmans' general causation

experts. I would, therefore, not address any of the other issues raised by the Chapmans.

Specifically, I would not suggest, as the court does in dictum, that the district court could have properly prevented the Chapmans from relying on Procter & Gamble's own experts. The district court addressed the Chapmans' reliance on some of the defense experts on the merits and did not exclude those experts under Rule 26 of the Federal Rules of Civil Procedure. So there is no need to hypothesize about how we would rule if the district court had decreed that such reliance by the Chapmans was procedurally improper. Moreover, P & G does not assert Rule 26 on appeal, and some cases hold that, because there is no surprise or prejudice, a party is permitted to use and rely on the expert testimony presented by the opposing party. *See, e.g., Nat'l Railroad Passenger Corp. v. Certain Temporary Easements*, 357 F.3d 36, 42 (1st Cir.2004) (no abuse of discretion in allowing plaintiff

to call defense expert in its case-in-chief); *Kerns v. Pro-Foam of South Alabama*, 572 F.Supp.2d 1303, 1309–12 (S.D.Ala.2007) (failure of plaintiff to disclose defendant's expert as its own expert did not prevent plaintiff from calling that expert during its case-in-chief). If we are going to opine on this issue, we should wait for a case which directly presents it.

In closing, I recognize that the district court at times used language which might be seen as opining on the ultimate persuasiveness of the theories advanced by the Chapmans' experts. But given its numerous accurate statements of the correct standard under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), I do not think the district court applied an incorrect (or improperly onerous) legal standard.

Footnotes

- 1 These symptoms included loss of feeling in her hands and feet, a progressive gait ataxia that caused her to trip when walking in the dark and subsequently confined her to bed, a burning pain in her hands and feet requiring opioid management, blood dyscrasias with anemia and neutropenia (low red and white blood-cell counts), and subacute bilateral asymmetric wrist and finger drop in both hands, limiting her ability to extend her fingers and thumbs. *In re Denture Cream Prods. Liab. Litig.*, 795 F.Supp.2d 1345, 1348 (S.D.Fla.2011).
- 2 The zinc in Fixodent enters a user's digestive tract, when food is chewed and swallowed. The absorption of zinc occurs in the small intestine, where the Chapmans contend it blocks copper assimilation into the body, resulting in CDM. Bioavailability refers to accessibility to metabolic and physiological body processes, while dissociation references how a compound separates into component parts under particular conditions.
- 3 The Chapmans' Amended Complaint, filed on November 9, 2009, contains seven causes of action, including state-law claims: (1) strict products liability, (2) negligence, (3) intentional misrepresentation, (4) breach of express warranty, (5) implied warranty, (6) violation of the Florida Deceptive and Unfair Trade Practices Act, Florida Statutes §§ 501.201, *et seq.*, and (7) loss of consortium. This appeal concerns only the products liability claim.
- 4 P & G also sought to exclude the testimonies of three additional experts for the Chapmans: Dr. Frederick Raffa, Dr. J. Anthony Von Fraunhofer, and Dr. Michael S. Wogalter.
- 5 In their opposition to P & G's summary judgment motion, the Chapmans stated: "Plaintiffs explicitly reserve their right to appeal this Court's June 13, 2011 decision and preserve all arguments previously set forth in opposition to Defendants' *Daubert* motions. All such arguments are hereby incorporated herein by reference."Chapmans' Opp'n to P & G's Summ. J. Mot. at 7 n. 11.
- 6 The focus for cases in the first category is "individual causation to plaintiff"—"was plaintiff exposed to the toxin, was plaintiff exposed to enough of the toxin to cause the alleged injury, and did the toxin in fact cause the injury?"*McClain*, 401 F.3d at 1239.
- 7 For example, the Chapmans quote from the report of their only expert unchallenged by P & G in the *Daubert* proceedings, Dr. Joseph Prohaska, that "it is well understood in the scientific community that excess zinc can result in low plasma copper."Appellants' Br. at 31 n. 8 (citation, internal quotation marks, and alteration omitted). The Chapmans, however, did not advance Dr. Prohaska with their other seven proffered experts they argued could establish general and specific causation, all of whom the district judge disqualified in her *Daubert* order. Moreover, Dr. Prohaska was limited by his report to opining on "the hematological changes associated with copper deficiency as well as the impact of zinc on copper status."Prohaska Report at 2.
- 8 We have "explain[ed] why it is difficult to persuade a court of appeals to reverse a district court's judgment on *Daubert* grounds [...] ... where the abuse of discretion standard thrives."*United States v. Brown*, 415 F.3d 1257, 1264, 1266 (11th Cir.2005)."[A] district court is more familiar with the procedural and factual details and is in a better position to decide *Daubert* issues," which "are not precisely calibrated and must be applied in case-specific evidentiary circumstances that often defy generalization."*Id.* at 1266.In "applying [the] abuse of discretion standard, we must affirm unless we at least determine that the district court has made a clear

error of judgment, or has applied an incorrect legal standard.” *McClain*, 401 F.3d at 1238 (alteration in original) (citation and internal quotation marks omitted). Clearly, the abuse-of-discretion standard applied in *Daubert* cases is specialized and specifically addresses the narrow issue of the admission of reliable expert trial testimony rather than the general abuse-of-discretion standard implicated in other civil and criminal cases, which makes them not comparable.

- 9 The judge quoted the deposition testimonies of the three general-causation experts to show their inability to state the Fixodent dosage to put an individual at risk of developing myelopathy:

Dr. Brewer:

Q. Have you ever determined the dose of Fixodent necessary to consistently place individuals into a negative copper balance?

A. Experimentally, no.

....

Dr. Lautenbach:

Q. Now, do you know how much below normal ... serum copper has to be and for how long before you have myelopathies?

A. I don't know.

Dr. Landolph:

Q. So no studies have been done to determine how low the copper must be in the serum and for how long to cause myelopathy?

A. I had not seen such a precise curve....

In re Denture Cream Prods. Liab. Litig., 795 F.Supp.2d at 1352 n. 16 (deposition citations omitted).

- 10 The judge supported the lack of epidemiological evidence with Dr. Lautenbach's deposition testimony:

Q. To the best of your knowledge, there are no controlled population-based epidemiologic studies testing whether there is an association between denture adhesive and the development of hematologic or neurologic disease. Correct?

A. That's correct.

In re Denture Cream Prods. Liab. Litig., 795 F.Supp.2d at 1354 n. 21 (deposition citation omitted).

- 11 The Chapmans' general-causation experts testified concerning the lack of background risk of CDM at their respective depositions:

Dr. Brewer:

Q. Do you know the incidence of myeloneuropathies in the United States?

A. No.

Q. Do you know the incidence of myeloneuropathies, myelopathies, or myeloneuropathies [sic] amount uses of zinc-containing denture adhesives in the United States?

A. No.

Dr. Lautenbach:

Q. Do you know what the incidence of myelopathy is in the general population?

A. I don't. I'm not sure it's been well defined.

Dr. Landolph:

Q. You are unable to give me a number setting forth the incidence of myeloneuropathy among users of zinc containing denture adhesives in the United [S]tates, correct?

A. That's correct, the precise number, I don't have that data.

In re Denture Cream Prods. Liab. Litig., 795 F.Supp.2d at 1355 n. 22 (first alteration in original) (deposition citations omitted).

- 12 Marianne Chapman's medical history reveals she had experienced neurologic ailments in her childhood, long before her Fixodent use began in 2001. Matthew E. Fink (P & G expert) Report at 4–5. As a child, she had suffered frequent migraine headaches and was treated for unexplained foot and ankle pain. *Id.* at 4. She was evaluated during her teen years for pain from her shoulder through her leg. *Id.* After a series of recurrent falls, some of which resulted in hospitalization, she complained of pain in her lower extremities, numbness, and decreased sensation. *Id.* at 5. In adulthood, before her use of Fixodent, Marianne Chapman was diagnosed with hereditary hemorrhagic telangiectasia, a genetic disorder often accompanied with spinal cord, neurologic ailments. Marianne Chapman Dep. at 39:20–25; Fink Report at 16.

- 13 Marianne Chapman's husband first “diagnosed” her medical ailments as the result of her ingestion of zinc by researching the issue on the Internet. See Daniel Chapman Dep. at 57:15–24 (“A. I looked up her symptoms and I learned about zinc poisoning. Q. Now, prior to the time when you did that, had anybody suggested to you that it could be zinc poisoning? A. No. Q. So are you the first person that thought Marianne Chapman, your wife, might have zinc poisoning? A. Yes.”); Marianne Chapman Dep. at 111:13–25 (“When did it first come to your attention that there might be some nerve problems that could result from the zinc in Fixodent or other dental adhesives?... A. In the beginning of #09 when my husband was looking up neuropathy, the browser log popped up with all different types of neuropathy, links to neuropathy and possible causes of neuropathy. And that's when he had brought it to my attention that the zinc in the denture cream could cause neuropathy.”); Greenberg Report at 6 (noting Marianne Chapman and her husband “became concerned about the possibility of zinc poisoning after research on the Internet”).

- 14 After Marianne Chapman began using Fixodent, she again complained of pain in her lower extremities. Marianne Chapman Dep. 12:25–13:14. She was diagnosed with and treated for vitamin B12 deficiency, which has been associated with myelopathy. Fink Report at 14; Greenberg Dep. 75:1–9. Following brief improvement, her neurologic ailments returned in 2006, when she experienced burning and numbness in her legs, poor balance, and the eventual loss of motor control in her right hand. Fink Report at 14–15. In 2006, Marianne Chapman also developed anemia (low red blood cells) and neutropenia (low white blood cells). Greenberg Report at 5 (Table 3). She had normal red and white blood-cell measurements in May and November 2006, while she continued to use Fixodent; her neutropenia normalized permanently in September 2008, before she stopped using Fixodent in 2009. *Id.*; Fink Report at 15.
- 15 Ten months after Marianne Chapman stopped using Fixodent, she reported worsening hand weakness and wrist drop. Fink Report at 15. Two years after she ceased using Fixodent, in 2011, she had a recurrence of a neurological problem, a positive Romberg sign of unsteady balance with her eyes closed, which was not present in 2010. Greenberg Report at 7; Fink Report at 13.
- 16 P & G contended to the district judge that Dr. Greenberg also should have considered other hereditary and acquired diseases that could have caused Marianne Chapman's myelopathy, including adrenomyeloneuropathy, complicated hereditary spastic paraplegia, Charcot–Marie–Tooth disease, hereditary motor and sensory neuropathy Type V, subtypes of spinocerebellar atrophy, hereditary ataxia with neuropathy, vitamin E deficiency, Sjogren's syndrome, sarcoidosis, HTLV–1, neuromyitis optica, and multiple-vitamin-deficiency syndrome. *In re Denture Cream Prods. Liab. Litig.*, 795 F.Supp.2d at 1366. The judge noted P & G's argument concerning hereditary neuropathies, including myelopathies, “are far more common than copper-deficiency myelopathies,” making Marianne Chapman's myelopathy “*more likely caused by a genetic condition than by Fixodent*, especially considering her personal medical history.” *Id.* (emphasis added) (citation and internal quotation marks omitted).
- 17 Procedurally, this case has been appealed from the district judge's order granting summary judgment to P & G. Her *Daubert* order, excluding the Chapmans' general and specific-causation experts, alone could not have provided the procedural basis for appellate jurisdiction, because it was not a final order. Consequently, the Chapmans have incorporated the judge's *Daubert* order in their appeal of summary judgment granted to P & G to have this court review the merits of the *Daubert* order. The Chapmans' reasons for appealing summary judgment granted to P & G were raised before the district judge and decided in her order. The Chapmans' opposition to P & G's summary judgment motion consisted of their proposing alternative experts for trial testimony, while the *Daubert* order had addressed and excluded their general and specific-causation experts. To the extent the Chapmans have appealed the same reasons for opposing P & G's summary judgment motion before the district judge, we address them.
- 18 Because of the Chapmans' joining in the interlocutory appeal purporting to be a final judgment and her granting the Rule 60(b) motion, the judge was inclined to grant P & G's motion for summary judgment based on judicial estoppel under *New Hampshire v. Maine*, 532 U.S. 742, 121 S.Ct. 1808, 149 L.Ed.2d 968 (2001). *See id.* at 749, 121 S.Ct. at 1814 (“Where a party assumes a certain position in a legal proceeding, and succeeds in maintaining that position, he may not thereafter, simply because his interests have changed, assume a contrary position, especially if it be to the prejudice of the party who has acquiesced in the position formerly taken by him.”) (citation, internal quotation marks, and alteration omitted)).
- 19 The Chapmans argue Dr. Prohaska's Report states his “unchallenged opinion [by P & G] that zinc excess causes copper deficiency and that copper deficiency caused [Marianne] Chapman's hematological symptoms.” Appellants' Br. at 18 n. 5.
- 20 In their initial brief, the Chapmans argue P & G pre-litigation studies, demonstrating the bioavailability of zinc after ingestion, would support their position:

Plaintiffs' experts relied on three internal P & G studies demonstrating that a large percentage of the Fixodent used by denture wearers is ultimately ingested into the body and that the zinc in Fixodent, once ingested, is highly bioavailable in the small intestine, ultimately being absorbed into the bloodstream and leading to elevated serum zinc levels. In 1993, P & G performed a study of 10 actual denture wearers “to obtain data on the quantity of Zinc ions ingested by the study subjects following daily administration of the maximum recommended amount of [denture] adhesive paste.” P & G Clinical Study Report No. 003793, at 5 (Sept. 1993) (“1993 Study”). Even when the study subjects were instructed to apply only half of the label's recommended amount of adhesive, P & G found that the studied users ingested approximately 50% of the Fixodent applied. [Footnote 17 to this sentence states: “At that rate, someone like Ms. Chapman would ingest 247 mg of zinc daily (approximately 10 times the threshold for causing hypocupremia).”] Moreover, P & G internal studies dating back more than two decades have demonstrated that, once ingested, most of the elemental zinc dissociates from the Fixodent polymer and becomes free-floating in the intestines, where it affects copper metabolism. First, in 1989, prior to the introduction of Fixodent, P & G conducted a “zinc dissociation experiment” in which it mixed Fixodent with laboratory-simulated saliva, gastric fluid, and intestinal proteins. P & G calculated that “nearly 100% [of the zinc] dissociated (96.6%)” from its polymer when mixed with the simulated gastric fluid. P & G Report on Zinc Dissociation Experiment at 5 (July 1989). P & G further recognized that the zinc ions would bind with proteins in the small intestine, the precise mechanism by which zinc interferes with copper absorption (binding to metallothionein).

Subsequently, in 1994, P & G performed an “[i]n vitro dialysis study” to further analyze the bioavailability of Fixodent. Consistent with its 1989 study, P & G found that 83.3% of the zinc in Fixodent became bioavailable when the denture cream was mixed

with simulated gastric fluid (compared to 93% for zinc salt). P & G Dialysis Study on Denture Adhesives at 2 (Nov.1994). The researchers responsible for the 1994 study noted that, "if the adhesive is ingested, ... the majority of [the zinc will] be released" into the body, and as P & G had found the previous year, users ingest almost all of the Fixodent that they apply. As Dr. Brewer stated in his report, P & G's own studies provide reliable evidence that the zinc in Fixodent can, if the adhesive is consumed, "caus[e] copper depletion and its clinical manifestations."Brewer Rep. 9 & n. 14.

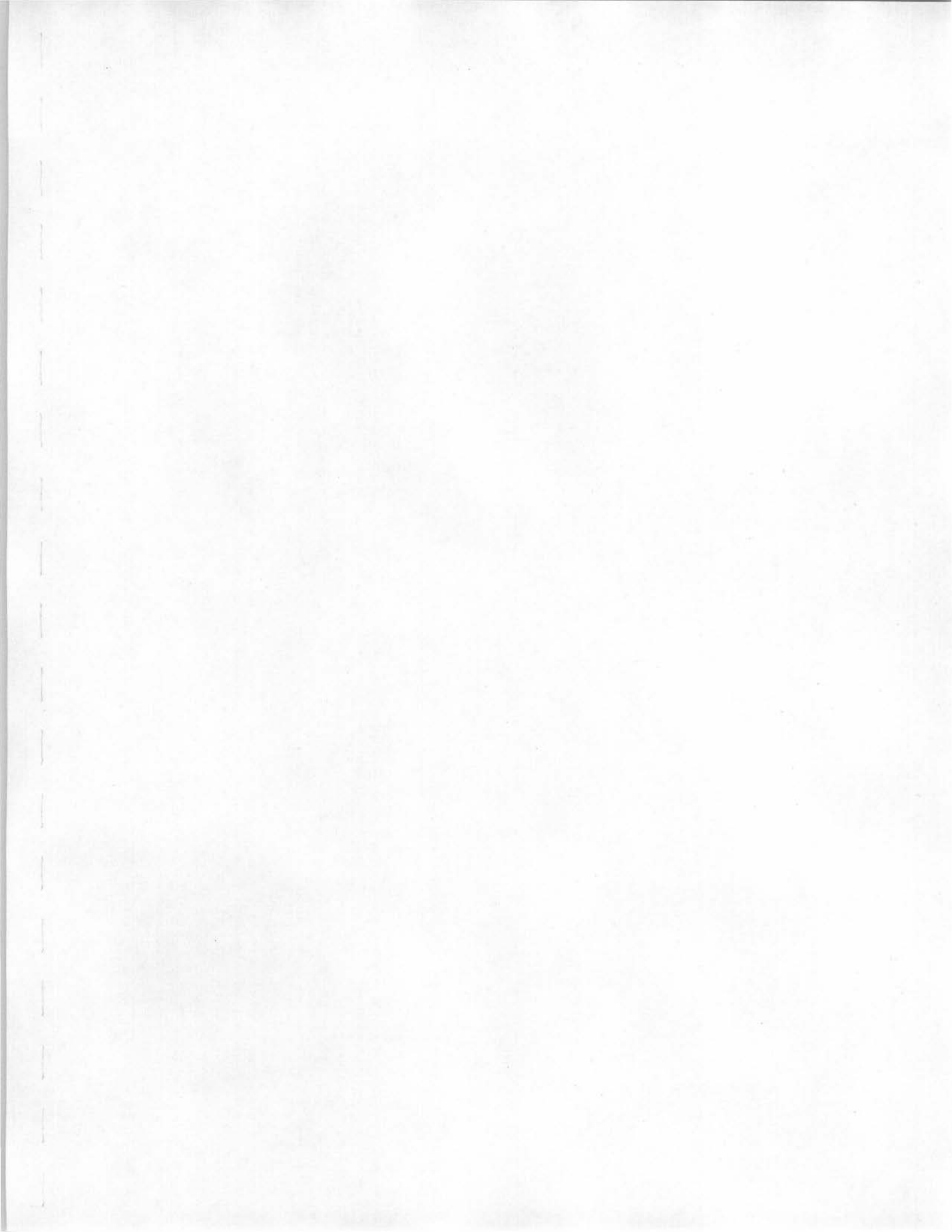
In excluding Plaintiffs' general-causation experts, the district court never mentioned these studies or explained why they were not reliable in demonstrating the bioavailability of zinc in Fixodent. The court thus erred by failing to do the kind of "exacting analysis of the proffered expert's methodology" that *Daubert* requires. That error was critical: given that it is well settled that zinc can cause CDM, P & G's own internal studies showing that Fixodent is ingested, and that when ingested exposes users to bioavailable zinc, constitute reliable evidence that zinc in Fixodent generally can cause CDM.

Appellants' Br. at 44-46 (alterations and ellipsis in original) (some citations omitted).

21 Because the Chapmans had waited six months after the court-imposed deadline for naming expert witnesses before proffering P & G's experts to testify for them at trial, the district judge recognized that they were procedurally barred from using these alternative witnesses at trial. We are not saying parties may not use opposing parties' experts to prove their case at trial as a general proposition. We are recognizing that all experts, regardless of which party secured their services, must meet the qualifications established by *Daubert* and the procedural requirements of Rule 26(a)(2).

22 For example, P & G expert, Dr. Timothy R. Koch, plainly disagreed with the Chapmans' general causation theory and stated: "It's my position, based on an independent review of the literature [and] based upon my own practice and experience, that there's not a sufficient amount of medical and scientific information and evidence available to support the statement that zinc induces myelopathy."Koch Dep. at 67:9-17. Similarly, the district judge noted the Chapmans contended P & G expert, Dr. Lara W. Katzin, "confirmed that zinc-induced CDM should be considered in the differential etiology for Ms. Chapman's condition," but failed to square that statement with the judge's discussion of Eleventh Circuit law stating general causation cannot be proved by differential diagnosis, "a necessary element of their claims."Summ. J. Order at 9 (citing *McClain*, 401 F.3d at 1253) (citation and internal quotation marks omitted).

23 A treating physician providing lay testimony can testify narrowly, limited to personal knowledge resulting from providing medical care, involving consultation, examination, or treatment of a patient plaintiff. See *United States v. Henderson*, 409 F.3d 1293, 1300 (11th Cir.2005) (distinguishing between an oral surgeon's testimony that a patient had a fractured jaw as opposed to giving a hypothesis as to the cause). But "a treating doctor ... is providing expert testimony if the testimony consists of opinions based on 'scientific, technical, or other specialized knowledge' regardless of whether those opinions were formed during the scope of interaction with a party prior to litigation." *Musser v. Gentiva Health Servs.*, 356 F.3d 751, 757 n. 2 (7th Cir.2004) (quoting Fed.R.Evid. 702(a)).



Not allowing appeal 10/13/10
131 S.Ct. 3090, denying appeal
to Ohio Sup. Ct. 6/28/11

2010 WL 1712316

CHECK OHIO SUPREME COURT RULES FOR
REPORTING OF OPINIONS AND WEIGHT OF LEGAL
AUTHORITY.

Court of Appeals of Ohio,
Eighth District, Cuyahoga County.

William E. SHEPARD, Plaintiff-Appellee

v.

GRAND TRUNK WESTERN
RAILROAD, INC., Defendant-Appellant.

No. 92711. | Decided April 29, 2010.

Civil Appeal from the Cuyahoga County Court of Common
Pleas, Case No. CV-558055.

Attorneys and Law Firms

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Christopher Murphy, Michael L. Torcello (pro hac vice),
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Before: McMONAGLE, P.J., SWEENEY, J., and COONEY,
J.

*1 N.B. This entry is an announcement of the court's
decision. See App.R. 22(B) and 26(A); Loc.App.R. 22. This
decision will be journalized and will become the judgment
and order of the court pursuant to App.R. 22(C) unless a
motion for reconsideration with supporting brief, per App.R.
26(A), or a motion for consideration en banc with supporting
brief per Loc.App.R. 25.1(B)(2), is filed within ten days of
the announcement of the court's decision. The time period for
review by the Supreme Court of Ohio shall begin to run upon
the journalization of this court's announcement of decision by
the clerk per App.R. 22(C). See, also, S.Ct. Prac.R. 2.2(A)(1).

Opinion

CHRISTINE T. McMONAGLE, P.J.

{¶ 1} Defendant-appellant, Grand Trunk Western Railroad,
Inc., appeals from the trial court's judgments denying
its motions for (1) summary judgment, (2) a directed
verdict, (3) judgment notwithstanding the verdict (JNOV), or
alternatively, a new trial, and (4) remittitur. Grand Trunk also
challenges a portion of the court's jury instructions.

Procedural History

{¶ 2} In March 2005, plaintiff-appellee, William E. Shepard,
filed this action under the Federal Employers' Liability Act
(FELA) and the Locomotive Inspection Act (LIA). Shepard
alleged that during his employment with the railroad, he was
exposed to asbestos and diesel fumes in violation of the
FELA and the LIA, and that as a result of such exposure, he
developed chronic obstructive pulmonary disease (COPD),
heart conditions, and laryngeal cancer.

{¶ 3} Grand Trunk filed a motion for summary in which
it alleged that the action was filed outside of the three-
year statute of limitations under the FELA. The motion was
denied. The case proceeded to a jury trial. The railroad
moved for a directed verdict at the conclusion of both
Shepard's case and the presentation of all the evidence; both
motions were denied. The jury returned a verdict in favor
of Shepard, finding that the railroad had violated the FELA
and the LIA, and awarded \$872,756 to Shepard. The trial
court subsequently entered a judgment in that amount in
favor of Shepard. Grand Trunk filed motions for JNOV, or
alternatively, a new trial, and remittitur, which were denied.

Facts

{¶ 4} Shepard began his employment with the railroad in
1950 and worked there continuously until his retirement in
1991.¹ Initially, he worked as a fireman on steam engines,
and in 1954, became an engineer on the diesel engines until
his retirement. He alleged that in both capacities he was
exposed to asbestos and diesel exhaust fumes. Specifically,
Shepard testified that as a fireman, he was exposed to
asbestos and asbestos dust while working on the engines
and in the buildings, especially in the roundhouse where
the steam engines were repaired. According to Shepard, the
asbestos lining the steam engine pipes where he worked were
"raggedy" and asbestos was on the floor and piled against
the walls in the roundhouse. He described "walking through"
loose asbestos in the roundhouse. Shepard also testified that
he was exposed to asbestos on the pipes of the diesel engines
when he worked as an engineer.

*2 {¶ 5} Shepard further described his exposure to diesel
fumes. He testified that many times the diesel fumes "would
come into your cab and just about suffocate you."According

to Shepard, the fumes would enter the cab through leaky windows and doors, as well as through the floorboards. He described how he and his coworkers would sometimes stuff the cracks with paper towels. Shepard further testified that he was exposed to diesel fumes when he worked in the yard where the engines operated.

{¶ 6} Shepard began having breathing problems at least by 1986. He was diagnosed with COPD in December 1986, had heart surgery in the late 1980's, and was diagnosed with laryngeal cancer in August 2000. He testified that sometime prior to 1987, a doctor told him that his breathing problems could have been caused by his environment. He further testified, however, that he never told the doctor what he did for a living and he only saw that doctor on one occasion. According to Shepard, no other doctor or health care provider told him that his problems were related to his work.

{¶ 7} Shepard testified that he did not know, or have reason to know, that the substances he was exposed to were harmful to his health. He explained that the first time he became aware of the harmful effects of the substances was in 2005 when he was at a picnic for the railroad's retirees, saw a sign posted about breathing problems, and heard some other retirees discussing it.

{¶ 8} Shepard admitted to a long history of heavy cigarette smoking. Further facts will be developed in addressing the assignments of error.

Law and Analysis

The FELA and LIA

{¶ 9} A brief review of the FELA and LIA will be helpful. The FELA provides, in relevant part, that: "[e]very common carrier by railroad while engaging in [interstate] commerce * * * shall be liable to any person suffering injury while he is employed by such carrier in such commerce * * * for such injury or death resulting in whole or in part from the [carrier's] negligence." 45 U.S.C. § 51.

{¶ 10} To recover damages under the FELA, the plaintiff's injury must occur while acting within the scope of his employment and in furtherance of the employer's interstate business. See *Green v. River Terminal Ry. Co.* (C.A.6, 1985), 763 F.2d 805, 808. The employer's negligent conduct must also play a role in causing the employee's injury. *Id.*

{¶ 11} Congress enacted the FELA as a "broad remedial statute" to assist railroad employees when an employer's negligence causes injury. *Atchison, Topeka & Santa Fe Ry. Co. v. Buell* (1987), 480 U.S. 557, 561-62, 107 S.Ct. 1410, 94 L.Ed.2d 563. The FELA is a "response to the special needs of railroad workers who are daily exposed to the risks inherent in railroad work and are helpless to provide adequately for their own safety." *Sinkler v. Missouri Pacific RR. Co.* (1958), 356 U.S. 326, 329, 78 S.Ct. 758, 2 L.Ed.2d 799. The Act is intended to be read liberally in favor of injured railroad employees. *Urie v. Thompson* (1949), 337 U.S. 163, 180, 69 S.Ct. 1018, 93 L.Ed. 1282.

*3 {¶ 12} To supplement the FELA and to "facilitat[e] employee recovery," Congress enacted the LIA. ² *Urie* at 189, 191; 49 U.S.C. § 20701. The LIA requires that a locomotive must be "safe to operate without unnecessary danger of personal injury." *Id.* The LIA additionally empowers the Secretary of Transportation to prescribe regulations applicable to the railroad industry. When an employee can prove an employer has violated the LIA or a rule or regulation promulgated under the LIA, this "is effective to show negligence as a matter of law"; the employee need not show that the defendant employer's conduct was unreasonable. *Urie* at 189. So while the FELA generally requires that negligence be shown, a violation of LIA and its regulations suffices to prove negligence.

{¶ 13} The FELA and LIA should be read together as companion statutes. *Baltimore & O.R. Co. v. Groeger* (1925), 226 U.S. 521, 528, 45 S.Ct. 169, 69 L.Ed. 419. Because the LIA does not create an independent cause of action for personal injuries, injured parties rely on the FELA to recover damages caused by a LIA violation. *Matson v. Burlington N. Santa Fe RR.* (C.A.10, 2001), 240 F.3d 1233, 1235.

Motion for Summary Judgment

{¶ 14} In its first assignment of error, the railroad contends that the trial court erred by denying its motion for summary judgment.

{¶ 15} Appellate review of the trial court's ruling on a motion for summary judgment is de novo. *Grafton v. Ohio Edison Co.*, 77 Ohio St.3d 102, 105, 1996-Ohio-336, 671 N.E.2d 241. The Ohio Supreme Court enunciated the appropriate test in *Zivich v. Mentor Soccer Club*, 82 Ohio St.3d 367, 369-70, 1998-Ohio-389, 696 N.E.2d 201, as follows:

{¶ 16} “Pursuant to Civ.R. 56, summary judgment is appropriate when (1) there is no genuine issue of material fact, (2) the moving party is entitled to judgment as a matter of law, and (3) reasonable minds can come to but one conclusion and that conclusion is adverse to the nonmoving party, said party being entitled to have the evidence construed most strongly in his favor.”

{¶ 17} Grand Trunk's motion for summary judgment was based on its claim that Shepard filed his case outside of the applicable statute of limitations. We disagree.

{¶ 18} The FELA provides that “no action shall be maintained under this act unless commenced within three years from the day the cause of action accrued.”⁴⁵ U.S.C. § 56. Courts have consistently used “the discovery rule” to determine when the statute of limitations for a FELA claim begins to run. *Urie* at 170; *Campbell v. Grand Trunk W. RR. Co.* (C.A.6, 2001), 238 F.3d 772, 775; *Shesler v. Consol. Rail Corp.*, 151 Ohio App.3d 462, 2003-Ohio-320, 784 N.E.2d 725, ¶ 76. Under the discovery rule, the statute of limitations “begins to run when the reasonable person knows, or in the exercise of due diligence should have known, both his injury and the cause of that injury.” *Campbell* at 775.

*4 {¶ 19} Grand Trunk argues that at least by the late-1980's, in regard to the COPD, and by August 2000, in regard to the laryngeal cancer, Shepard had an affirmative duty to investigate the cause of his illnesses. In support of its claim, the railroad relies solely on Shepard's admission that, sometime prior to 1987, a doctor told him that his breathing problems could have been caused by his environment.

{¶ 20} Shepard, however, testified and averred (in a discovery deposition and affidavit) that he only saw that doctor on one occasion, he never told him what he did for a living, and no other doctors or health care providers ever alerted him to the cause of his health problems. Shepard further testified that although he knew what asbestos was and that he was working with it, he did not know it, or the diesel fumes, were harmful and the railroad never provided any warnings or indication to its employees that they were. Further, Shepard had a long history of heavy cigarette smoking. In fact, in regard to Shepard's laryngeal cancer, the railroad's expert on this issue, Dr. Pierre Lavertu, was of the opinion that “the relationship between asbestos and laryngeal cancer is still controversial” and that Shepard's cancer was “secondary to his smoking habits.” Thus, had Shepard seen Dr. Lavertu upon being diagnosed with laryngeal cancer, he would not

have been told that his cancer was related to his asbestos exposure.

{¶ 21} On this record, the trial court did not err by denying Grand Trunk's summary judgment motion. The first assignment of error is overruled.

Motions for Directed Verdict and JNOV

{¶ 22} For its second assigned error, Grand Trunk contends that the trial court erred by denying its motions for a directed verdict and JNOV.

{¶ 23} Civ.R. 50 sets forth the standard for granting a motion for a directed verdict:

{¶ 24} “When a motion for directed verdict has been properly made, and the trial court, after construing the evidence most strongly in favor of the party against whom the motion is directed, finds that upon any determinative issue reasonable minds could come to but one conclusion upon the evidence submitted and that conclusion is adverse to such party, the court shall sustain the motion and direct a verdict for the moving party as to that issue.”

{¶ 25} The same standard applies to a motion for judgment notwithstanding the verdict. *Chem. Bank of New York v. Neman* (1990), 52 Ohio St.3d 204, 207, 556 N.E.2d 490. We employ a de novo standard of review in evaluating the grant or denial of a motion for directed verdict or a motion for judgment notwithstanding the verdict. *Grau v. Kleinschmidt* (1987), 31 Ohio St.3d 84, 90, 509 N.E.2d 399.

1. Diesel Exhaust

{¶ 26} The railroad maintains that Shepard failed to demonstrate an injury based on exposure to diesel exhaust. Specifically, it claims that Shepard failed to demonstrate that the locomotives on which he worked were not in proper condition and were not safe to operate.

*5 {¶ 27} The LIA provides that: “A railroad carrier may use or allow to be used a locomotive or tender on its railroad lines only when the locomotive or tender and its parts and appurtenances-

{¶ 28} “(1) are in proper condition and safe to operate without unnecessary danger of personal injury;

{¶ 29} "(2) have been inspected as required under this chapter and regulations prescribed by the Secretary of Transportation under this chapter; and

{¶ 30} "(3) can withstand every test prescribed by the Secretary under this chapter." 49 U.S.C. § 20701.

{¶ 31} This court has held that "the LIA may be violated in two ways: (1) by failing to comply with Federal Railway Regulations, or (2) by fail[ing] to keep the locomotive in safe working condition." *Hager v. Norfolk & W. Ry. Co.*, Cuyahoga App. No. 87553, 2006-Ohio-6580, ¶ 31, citing *Mosco v. Baltimore & Ohio RR.* (C.A.4, 1987), 817 F.2d 1088, 1091; *Reed v. Norfolk S. Ry. Co.* (N.D. Ohio, 2004), 312 F.Supp.2d 924, 926.

{¶ 32} Shepard's claim relative to exposure to diesel fumes was based on 49 C.F.R. § 229.43(a), which provides that "[p]roducts of combustion shall be released entirely outside the cab and other compartments. Exhaust stacks shall be of sufficient height or other means provided to prevent entry of products of combustion into the cab or other compartments under usual operating circumstances."

{¶ 33} In *Hager*, supra, this court found that the denial of a railroad's motion for a directed verdict on the plaintiff's claim of injury due to exposure to diesel fumes was proper. The employee offered the testimony of Dr. Leonard Vance, an industrial hygienist, who also testified for Shepard in this case. His opinion in this case was the same as in *Hager*: "Well, the Federal Railroad Administration has a regulation that prohibits diesel exhaust from coming into the cab of a locomotive, and what [Shepard] told me in his testimony in his deposition was consistent with that, was that it was a commonplace thing; that routinely happened that the cab would get diesel exhaust in. So I offered an opinion on whether or not the railroad had complied with that regulation. The opinion was that it hadn't." See, also, *Hager* at ¶ 34.

{¶ 34} Grand Trunk argues that *Hager* is not dispositive because: (1) it conflicts with this court's opinion in *Shesler*, supra, which stated that "[t]o establish a violation of the LIA, a plaintiff must show that the carrier's equipment is defective[.]" (citations omitted) *id.* at ¶ 62, and (2) there was testimony in this case that the fumes entered the cabs through windows opened by employees—a circumstance beyond the control of the railroad. We are not persuaded.

{¶ 35} First, although this court in *Shesler* did cite a 1948 Second Circuit case for the proposition that a plaintiff must demonstrate that a carrier's equipment was defective to show a violation of the LIA, this court also stated that "[f]urther, the jury could find that the conditions to which the appellees were exposed on the appellant's railroad posed the very 'unnecessary danger of personal injury' contemplated by [the] LIA. 'Only when there is a complete absence of probative facts to support the conclusion reached does a reversible error appear.'" *Shesler* at ¶ 66, quoting 49 U.S.C. § 20702(1), and *Lavender v. Kurn* (1946), 327 U.S. 645, 653, 66 S.Ct. 740, 90 L.Ed.2d 916.

*6 {¶ 36} Second, the testimony of Shepard's coworker, Larry Berger, that sometimes fumes came into the cabs because employees opened the windows, must be taken in context. Specifically, Berger testified that the fumes would come in through cracks that were present throughout the cab. He described that "[t]he smoke comes from everywhere feasible. There is no way to escape it. It's an impossibility to escape." Berger therefore testified that the only way to ventilate the cab was to open the windows.

{¶ 37} Similarly, Shepard described the fumes as "suffocating," and testified that he and his coworkers would sometimes stuff the cracks with paper towels. Moreover, one of Grand Trunk's experts, Edward English, admitted that under the circumstances described by Shepard and Berger, a violation of the LIA occurred. Shepard further testified that he was exposed to diesel fumes when he worked in the yard where the engines operated.

{¶ 38} On this record, the trial court properly denied the railroad's motions for a directed verdict and JNOV as to Shepard's claim based on exposure to diesel fumes.

2. Asbestos Exposure

{¶ 39} Grand Trunk also claims that Shepard failed to demonstrate an injury based on asbestos exposure. In support of its claim, the railroad argues that the mere presence of asbestos on a locomotive is not a violation of any federal regulation, as admitted by Shepard's expert, Dr. Vance. The evidence presented by Shepard went beyond the mere presence of asbestos, however. For example, Shepard testified about pipes on the locomotives wrapped in "raggedy" asbestos insulation and that asbestos was "piled up" in a tool cage in the roundhouse. Berger, Shepard's co-worker, also testified to asbestos being out in the open.

{¶ 40} On this record, the trial court properly denied Grand Trunk's motions for a directed verdict and JNOV on Shepard's LIA claim based on asbestos exposure.

{¶ 41} In light of the above, the second assignment of error is overruled.

Jury Instructions

{¶ 42} Grand Trunk contends that, over its objection, the trial court improperly quantified the degree of causation in its negligence instruction to the jury. Specifically, the trial court included the phrases "however slight," "no matter how slight," and "even the slightest" in its causation instruction. The railroad sought to have the court instruct with the phrase "in whole or part." The railroad largely relies on two United States Supreme Court cases in support of its contention that the instruction given was in error: *Norfolk S. Ry. Co. v. Sorrell* (2007), 549 U.S. 158, 127 S.Ct. 799, 166 L.Ed.2d 638, and *CSX Transp., Inc. v. Hensley* (2009), U.S., 129 S.Ct. 2139, 173 L.Ed.2d 1184. The railroad further argues that this court's decision in *Hager*, supra, which supports the instruction given, is flawed. We disagree.

{¶ 43} In *Sorrell*, the Supreme Court *declined* to address what standard for railroad negligence and employee contributory negligence should be used in instructing a jury in a case brought under the FELA. Rather, the Court held "that the causation standard should be the same for both categories of negligence[.]" *Id.* at 160.³ Further, *Hensley* is not helpful to this case. Grand Trunk quotes with emphasis as follows from *Hensley*: " * * * the nature of [asbestos] claims enhance the danger that a jury, without proper instruction, could award * * * damages based on slight evidence * * * ." Grand Trunk's Brief at pg. 25, quoting *Hensley* at 2141. That quote, however, must be considered in context.

*7 {¶ 44} *Hensley* brought suit against the railroad under the FELA for injuries sustained from his exposure to asbestos and a cleaning agent. He sought pain-and-suffering damages based on, among other things, his fear of developing lung cancer in the future. The trial court denied the railroad's proposed jury instruction that "[i]n order to recover, Plaintiff must demonstrate * * * that the * * * fear is genuine and serious." *Id.* at 2140, quoting defendant's proposed jury instruction no. 30. The Supreme Court held that the trial court erred by not giving the instruction, stating:

{¶ 45} "Instructing the jury on the standard for fear-of-cancer damages would not have been futile. To the contrary, the fact that cancer claims could 'evoke raw emotions' is a powerful reason to instruct the jury on the proper legal standard. Giving the instruction on this point is particularly important in the FELA context. That is because of the volume of pending asbestos claims and also because the nature of those claims enhances the danger that a jury, without proper instructions, could award emotional-distress damages based on slight evidence of a plaintiff's fear of contracting cancer. But as this Court said in [*Norfolk & W. Ry. Co. v. Ayers* (2003), 538 U.S. 135, 123 S.Ct. 1210, 155 L.Ed.2d 261], more is required. Although plaintiffs can seek fear-of-cancer damages in some FELA cases, they must satisfy a high standard in order to obtain them. 538 U.S., at 157-158, and n. 17, 123 S.Ct. 1210. Refusing defendants' requests to instruct the jury as to that high standard would render it all but meaningless." *Hensley* at 2141.

{¶ 46} Because the *Hensley* Court was concerned with jury instructions for the unique aspect of emotional-distress damages based on the fear of developing cancer in the future, Grand Trunk's citation to that case is misplaced.

{¶ 47} In *Rogers v. Missouri Pacific RR. Co.* (1957), 352 U.S. 500, 77 S.Ct. 443, 1 L.Ed.2d 493, the United States Supreme Court considered whether, under a claim based on the FELA, the probative facts of the case warranted submission of the case to the jury. The court held that "the test of a jury case is simply whether the proofs justify with reason the conclusion that [employer] negligence played any part, even the slightest, in producing the injury or death for which damages are sought." *Id.* at 506. Citing *Rogers*, this court in *Hager*, supra, upheld jury instructions in a FELA railroad case containing the phrase "even the slightest." We similarly uphold the instructions given in this case. Accordingly, the third assignment of error is overruled.

Motion for New Trial

{¶ 48} In its fourth assigned error, Grand Trunk contends that the trial court committed numerous errors, all involving the admission or exclusion of evidence, the cumulative effect of which entitled it to a new trial.

{¶ 49} The decision to grant or deny a motion for new trial rests in the sound discretion of the trial court and will not be reversed on appeal absent an abuse of discretion. *Sharp v. Norfolk & W. Ry. Co.*, 72 Ohio St.3d 307, 312, 1995-Ohio-224, 649 N.E.2d 1219. The admission or exclusion

of evidence is likewise within the sound discretion of the trial court. *Beard v. Meridia Huron Hosp.*, 106 Ohio St.3d 237, 2005-Ohio-4787, 834 N.E.2d 323, ¶ 20. An abuse of discretion is more than an error in judgment or a mistake of law; it connotes that the court's attitude is unreasonable, arbitrary, or unconscionable. *Blakemore v. Blakemore* (1983), 5 Ohio St.3d 217, 219, 450 N.E.2d 1140.

1. Disparate Application of Loc.R. 21.1 of the Court of Common Pleas of Cuyahoga County, General Division⁴

*8 ¶ 50} Grand Trunk contends that the trial court disparately applied the rule because it precluded the railroad's expert from testifying about the lack of studies linking Shepard's cancer to asbestos exposure, but allowed Shepard's expert to testify as to his prognosis of death, which was not contained in his expert report. The primary purpose of the rule is "to avoid prejudicial surprise resulting from noncompliance with the report requirement." *Blandford v. A-Best Products*, Cuyahoga App. Nos. 85710 and 86214, 2006-Ohio-1332, ¶ 14.

¶ 51} The railroad's expert, Dr. Pierre Lavertu, acknowledged in his expert report that there were studies showing a "possible association" between laryngeal cancer and asbestos exposure. The railroad sought to have him testify at trial that there were *no* studies linking asbestos exposure to laryngeal cancer and that the studies finding a causal link between the two did not involve any throat specialists. The testimony the railroad sought to elicit was contrary to Dr. Lavertu's report. The trial court therefore did not abuse its discretion by not allowing it.

¶ 52} Likewise, the trial court did not abuse its discretion by allowing Shepard's expert, Dr. Shakil Khan, to testify as to Shepard's prognosis of death. The trial court reasoned that, although such prognosis was not contained in Dr. Khan's report, the prognosis would not "come [] as any great surprise to the defense." This court has previously held that application of Loc.R. 21.1 "must be determined on a case-by-case basis." *O'Connor v. Cleveland Clinic Found.*, 161 Ohio App.3d 43, 2005-Ohio-2328, 829 N.E.2d 350, ¶ 21. With that in mind, and affording due deference to the trial court as we must, there was no abuse of discretion by allowing Dr. Khan's testimony.

2. Testimony From Shepard's Expert, Dr. Arthur Frank, Regarding the Causal Relationship Between Shepard's Cancer and his Asbestos Exposure

¶ 53} The railroad contends that Dr. Frank's testimony and opinion regarding Shepard's laryngeal cancer were not based on reliable scientific, technical, or other specialized information as required under Evid.R. 702. We disagree.

¶ 54} Dr. Frank relied on several sound scientific sources, including the National Academy of Science and the Journal of the American Medical Association, in forming his opinion. He admitted that there were reliable and valid sources rendering opinions on both sides of the issue of whether there is a causal relationship between laryngeal cancer and asbestos exposure. Even the railroad's expert on this issue, Dr. Lavertu, testified that "although the relationship between asbestos and laryngeal cancer is still controversial many studies have [shown] a possible association with a risk factor around 1.5." Dr. Frank's testimony was proper under Evid.R. 702, and the trial court did not abuse its discretion by allowing it.

3. Photographs and the United Transportation Union Complaint Letter

*9 ¶ 55} Three photographs of locomotives were admitted into evidence over the railroad's objection. The locomotives in the photographs were not ones on which Shepard had worked, but he testified that they depicted the working conditions under which he had worked. Grand Trunk contends that the photographs were (1) not authenticated under Evid.R. 901(A), (2) irrelevant, and (3) highly prejudicial.

¶ 56} Evid.R. 901(A) provides that "[t]he requirement of authentication or identification as a condition precedent to admissibility is satisfied by evidence sufficient to support a finding that the matter in question is what its proponent claims." Shepard testified what the photographs depicted and that the conditions shown in the images were fair and accurate representations of the locomotives and roundhouses on and in which he worked. The photographs were therefore authenticated.

¶ 57} Further, the conditions under which Shepard worked were relevant and the probative value of the photographs was not "substantially outweighed by the danger of unfair prejudice, of confusion of the issues, or of misleading the jury." Evid.R. 403(A). Moreover, prior to the use of the

photographs, the trial court gave a limiting instruction to the jury, in which it explained that there was no indication that the photographs were of locomotives on which Shepard actually worked and cautioned the jury that “[t]hey are solely given to you because Mr. Shepard says, ‘[t]his looks like what I was working under,’ but it’s for you ultimately to decide whether or not you want to accept that.” On this record, the trial court did not abuse its discretion by admitting the photographs into evidence.

{¶ 58} The Union letter, dated December 17, 1971, which was read by Dr. Vance (Shepard’s expert) during his testimony, refers to a complaint about diesel fumes made by employees at Grand Trunk’s Pontiac, Michigan site.⁵ Grand Trunk objected to the letter on the grounds that (1) it was unauthenticated, (2) it was irrelevant because Shepard never worked at the Pontiac, Michigan site, (3) it was highly prejudicial.

{¶ 59} Documents can be authenticated under the ancient documents rule contained in Evid.R. 901(B)(8) if, “[e]vidence that a document * * *, in any form, (a) is in such condition as to create no suspicion concerning its authenticity, (b) was in a place where it, if authentic, would likely be, and (c) has been in existence twenty years or more at the time it is offered.”

{¶ 60} The letter was obtained by Shepard’s counsel from Grand Trunk through discovery in another case. There was no evidence creating suspicion about its authenticity, and it was more than 20 years old at the time it was used. On this record, the letter was authenticated. Moreover, as with the photographs, the letter was relevant and its probative value was not “substantially outweighed by the danger of unfair prejudice, of confusion of the issues, or of misleading the jury.” Evid.R. 403(A).

*10 {¶ 61} In light of the above, the trial court did not abuse its discretion by admitting the photographs into evidence and allowing Dr. Vance to read the Union letter during his testimony.

4. Exclusion of the Locomotive Crash Worthiness and Cab Working Conditions Report for Purposes of Cross-Examining Dr. Vance

{¶ 62} The Report was created in 1996 by the Federal Railroad Administration and contained the investigative results performed by General Electric and the Electromotive

Division of General Motors (the same manufacturers used by Grand Trunk during the period of Shepard’s employment) regarding the asbestos exposure in locomotive cabs.

{¶ 63} In *Hager*, supra, this court addressed the use of the Report in cases where the employee retired before its creation, stating that “the report was published in 1996, nine years after [the employee] ended his employment with the railroad. There was no evidence presented that any of the statements contained in the report accurately represented the working conditions encountered by [the employee] between 1943 and 1987.” *Id.* at ¶ 23.

{¶ 64} Here, Shepard retired from Grand Trunk in 1991, five years before the Report was created. Thus, on the authority of *Hager*, the report was properly excluded.

5. Dr. Vance’s Reading to Jury Portions of Shepard’s Discovery Deposition

{¶ 65} At trial, Dr. Vance read a portion of Shepard’s discovery deposition and testified that he relied on that portion of the deposition in forming his opinion. The railroad objected because Dr. Vance’s testimony came after Shepard’s trial testimony, Shepard did not testify at trial to the portion of his discovery deposition read by Dr. Vance and, therefore, the railroad was not able to cross-examine him on this testimony.⁶

{¶ 66} The railroad cites *Hager* in support of its contention. There, the defendant railroad sought to present evidence of the employee’s prior lawsuits and to read his interrogatory answers and his depositions from those lawsuits to impeach his credibility. The trial court refused the request, and this court affirmed, stating “[t]he trial court properly refused to allow [the railroad] to introduce evidence regarding [the employee’s] prior lawsuits after his trial testimony had been completed. The proper time to have pursued this matter would have been when [the employee] was cross-examined. However, [the railroad] failed to ask him regarding his other lawsuits during cross-examination. [The railroad] could not then attempt to impeach him by reading his interrogatories and depositions from other lawsuits because this would prevent [the employee] the opportunity to provide further explanation. Because of his health problems, [the employee] was not present at the trial, and could not have been called to rebut this evidence.” *Id.* at ¶ 20.

{¶ 67} Here, the testimony was not offered for the purpose of impeachment; rather, it was offered as an explanation of the basis of Dr. Vance's opinion. Evid.R. 705 provides that "[t]he expert may testify in terms of opinion or inference and give the expert's reasons therefor after disclosure of the underlying facts or data." The rule requires disclosure to "insure that the trier of facts is aware of the facts upon which the [expert's] opinion rests, so that in the event that the trier of facts rejects these facts as not having been established by the evidence, it will then be warranted in rejecting the opinion also." *Mayhorn v. Pavey* (1982), 8 Ohio App.3d 189, 191, 456 N.E.2d 1222.

*11 {¶ 68} Further, the trial court gave a cautionary instruction to the jury, advising it that Dr. Vance was reading from Shepard's discovery deposition, not his trial testimony, and it would be up to the jury to determine whether Shepard's testimony was reliable. Moreover, Dr. Vance's report provided that, in forming his opinions, he "talked with Mr. Shepard and read his [discovery] deposition." Thus, the railroad was put on notice that the basis of Dr. Vance's opinions would be disclosed at trial. Accordingly, the trial court did not abuse its discretion by allowing Dr. Vance to read a portion of Shepard's deposition testimony.

6. Shepard's and Berger's Testimony about the Asbestos Content of Dust and Pipe Covering

{¶ 69} The Railroad contends that the trial court improperly allowed Shepard and his co-worker, Berger, to testify about their exposure to asbestos and asbestos-containing products because a foundation was not laid to demonstrate that they had personal knowledge of asbestos.

{¶ 70} Evid.R. 602 provides in part that, "[a] witness may not testify to a matter unless evidence is introduced sufficient to support a finding that the witness has personal knowledge of the matter. Evidence to prove personal knowledge may, but need not, consist of the witness' own testimony."

{¶ 71} This court addressed this argument in *Shesler*, supra, where the defendant railroad contended that testimony given by the plaintiffs about their exposure to asbestos lacked a proper foundation. The two plaintiffs testified that they became familiar with asbestos during their 40-plus years working for the railroad. Further, one plaintiff testified that he saw the word "asbestos" marked on materials being used. Both plaintiffs testified that they saw asbestos in the cabs of the locomotives on which they worked and witnessed other employees working with it around the yard.

{¶ 72} This court found that the testimony was properly admitted because "it [was] clear that the [plaintiffs] offered sufficient evidence to establish their personal knowledge of asbestos products, specifically, their personal exposure to products containing asbestos while employed on the railroad." *Id.* at ¶ 23. This court distinguished that case from *Goldman v. Johns-Manville Sales Corp.* (1987), 33 Ohio St.3d 40, 514 N.E.2d 691, a case relied on by Grand Trunk here.

{¶ 73} In *Goldman*, the Ohio Supreme Court held that the wife of a former bakery worker could not offer affidavits from several witnesses that they "believed" and "were told" that certain products in the bakery contained asbestos because they were not based on the personal knowledge of the witnesses.

{¶ 74} This court held that "there is a marked difference in the testimony of the [plaintiffs] based on personal knowledge which specifically referred to asbestos as opposed to the situation in *Goldman*, which was based largely on speculation and allegations by secondary witnesses." *Shesler* at ¶ 21. Likewise, here, Shepard and Berger had personal knowledge of the presence of asbestos from their extensive railroad careers—40-plus years for Shepard and almost 30 years for Berger. Both testified that they knew what asbestos looked like, they knew it was used on the railroad, and it was present on the railroad throughout their careers. On this record, the trial court properly allowed Shepard's and Berger's testimony.

7. The 1995 Deposition Testimony of Robert Yeager and the 1999 Videotape Deposition Testimony of Dr. Vincent Gallant

*12 {¶ 75} Grand Trunk's final two grounds for a new trial were based on the trial court allowing Shepard to (1) read into evidence portions of the 1995 deposition testimony of Robert Yeager and (2) play the 1999 videotape deposition testimony of Dr. Vincent Gallant. The witnesses were declared unavailable and their testimony was therefore exempted from the hearsay rule. Grand Trunk contends that their testimony should have been excluded because they were not deposed for this case, and their testimony was irrelevant and unfairly prejudicial.

{¶ 76} Evid.R. 804 governs hearsay exceptions when a witness is unavailable. Subsection A of the rule defines

unavailability and "includes any of the following situations in which the declarant: * * * (4) is unable to be present or to testify at the hearing because of death or then-existing physical or mental illness or infirmity[.]" If the proponent of the testimony can demonstrate unavailability, Evid.R. 804(B) (1) allows testimony given at another hearing of a different proceeding to come into evidence "if the party against whom the testimony is now offered, or, in a civil action or proceeding, a predecessor in interest, had an opportunity and similar motive to develop the testimony by direct, cross, or redirect examination."

{¶ 77} Yeager, who was deceased at the time of the trial here, had been a co-worker witness in a Michigan asbestos case against Grand Trunk. Because Yeager was deceased at the time of trial, he was an unavailable witness under Evid.R. 804(A)(4). Dr. Gallant, who was the former Grand Trunk medical director, a Michigan resident, and had previously testified in a Michigan asbestos case (a different case from Yeager's), indicated to Shepard that he would not appear in court to testify because of his advanced age of 80 and poor health. Because of his physical illness or infirmity, Dr. Gallant was also an unavailable witness under Evid.R. 804(A)(4). We therefore consider whether Grand Trunk had an opportunity and similar motive to develop Yeager's and Dr. Gallant's testimony in the Michigan cases as required under Evid.R. 804(B)(1). Upon review, we find that it did.

{¶ 78} Specifically, both Michigan cases involved work injuries stemming from asbestos exposure on Grand Trunk's railroad. The witnesses' testimony in the Michigan cases was presented to prove that the railroad's locomotives contained asbestos (Yeager), and the railroad was aware of the asbestos and its harmful affects, and to show what, if any, training, education, or protection it gave to its employees (Dr. Gallant). On this record, Grand Trunk had an opportunity and similar motive to develop the testimony. Moreover, the testimony was relevant and was edited so that only the pertinent portions were admitted. Finally, the probative value of the testimony was not "substantially outweighed by the danger of unfair prejudice, of confusion of the issues, or of misleading the jury." Evid.R. 403(A). On this record, the trial court did not abuse its discretion by allowing the testimony.

*13 {¶ 79} In light of the above, the trial court did not abuse its discretion by denying Grand Trunk's motion for a new trial, and the fourth assignment of error is overruled.

Motion for Remittitur

{¶ 80} For its fifth and final assigned error, Grand Trunk contends that the jury's award was manifestly excessive and subject to remittitur. We disagree.

{¶ 81} We review a trial court's decision to deny remittitur under an abuse of discretion standard. See *Betz v. Timken Mercy Med. Ctr.* (1994), 96 Ohio App.3d 211, 218, 644 N.E.2d 1058. "The assessment of damages is a matter within the province of the jury." *Carter v. Simpson* (1984), 16 Ohio App.3d 420, 423, 476 N.E.2d 705. It is not proper for the reviewing court to substitute its opinion for that of the jury. *Litchfield v. Morris* (1985), 25 Ohio App.3d 42, 44, 495 N.E.2d 462. The denial of a motion for remittitur is not erroneous unless the award is so excessive as to appear to be the result of passion or prejudice on the part of the jury, or unless the amount awarded is excessive and against the manifest weight of the evidence. *Id.* To reverse the jury's damage award, it must appear to be "so disproportionate as to shock reasonable sensibilities." *Jeanne v. Hawkes Hosp. of Mt. Carmel* (1991), 74 Ohio App.3d 246, 258, 598 N.E.2d 1174.

{¶ 82} The jury awarded Shepard \$775,000 in unliquidated damages (\$650,000 for his COPD and heart condition and \$125,000 for his laryngeal cancer). It is Grand Trunk's contention that the award should have been reduced by Shepard's negligence.

{¶ 83} This court addressed this issue of apportionment of damages in *Ball v. Consol. Rail Corp.* (2001), 142 Ohio App.3d 748, 756 N.E.2d 1280:

{¶ 84} "The FELA allows workers to recover if an employer's negligence or statutory violation contributed in any way to their injuries. *Rogers v. Missouri Pacific RR. Co.* (1957), 352 U.S. 500, 506, 77 S.Ct. 443, 1 L.Ed.2d 493. The statute also requires a parallel apportionment of damages whenever the evidence shows a worker's contributory negligence caused any part of his injuries. *Dixon v. Penn Cent. Co.* (C.A.6, 1973), 481 F.2d 833, 835. Apportionment is not allowed, however, where an employer is liable for violating certain safety statutes, including the Locomotive Boiler Inspection Act ("LBIA"). *Rogers*, 352 U.S. at 506, fn. 12. Because the jury found an LBIA violation, [the railroad] was not entitled to apportionment for contributory negligence * * *." (Parallel pinpoint cites omitted.) *Id.* at 754.

{¶ 85} Here, the jury was specifically instructed that Shepard alleged that two statutory violations were at issue: (1)

the FELA, which requires negligence and provides for comparative negligence and (2) the LIA, which imposes absolute liability. Under FELA, the jury found Grand Trunk negligent and also found Shepard comparatively negligent. But because the jury further found that the railroad had violated the LIA, under well-settled law, it was not entitled to apportionment of damages under a comparative negligence defense.

*14 {¶ 86} The award was not excessive in light of Shepard's health problems. He suffered with cancer, which was resolved after two years of extensive radiation treatments. He suffers with severe and debilitating breathing problems, has been totally oxygen dependent since 2006, was hospitalized three times in 2008, and was placed on a mechanical ventilator at least once. Moreover, Grand Trunk's contention that the post-verdict discussions with the jury demonstrated that they believed the award was going to be reduced is not persuasive-a party may not challenge the validity of the verdict using post-verdict discussions with jurors. *Cleveland Elec. Illuminating Co. v. Astorhurst Land Co.* (1985), 18 Ohio St.3d 268, 274, 480 N.E.2d 794, citing Evid.R. 606(B). The jury was properly instructed and is presumed to have followed those instructions. *Nolan v. Conseca Health Ins. Co.*, Jefferson App. Nos. 07 JE 30, 07 JE 31, 2008-Ohio-3332, ¶ 196.

Footnotes

- 1 He started with the Detroit & Toledo Shoreline Railroad; it merged with Grand Trunk in 1989 or 1990.
- 2 Formerly known as the Locomotive Boiler Inspection Act.
- 3 As noted by Grand Trunk, the trial court did not use the same phraseology it used when instructing on the railroad's negligence as when instructing on Shepard's negligence. We find the error to be harmless, however, in light of the fact that the jury found Shepard 82% negligent for his COPD and heart condition and 85% negligent for his laryngeal cancer.
- 4 The rule provides in relevant part as follows: "A party may not call a non-party expert witness to testify unless a written report has been procured from the witness and provided to opposing counsel. * * * The report of a non-party expert must reflect his opinions as to each issue on which the expert will testify. A non-party expert will not be permitted to testify or provide opinions on issues not raised in his report."
- 5 The letter was not admitted into evidence, but Grand Trunk contends that "the harm was already done as the jury was made aware of the contents of this unauthenticated, irrelevant and prejudicial letter through Dr. Vance's testimony."
- 6 Specifically, Shepard testified at deposition that "I would be walking through the roundhouse on a sunny day. It was so dusty with asbestos that you couldn't see your hand in front of your face."

{¶ 87} In light of the above, the fifth assignment of error is overruled.

Judgment affirmed.

It is ordered that appellee recover from appellant costs herein taxed.

The court finds there were reasonable grounds for this appeal.

It is ordered that a special mandate be sent to said court to carry this judgment into execution.

A certified copy of this entry shall constitute the mandate pursuant to Rule 27 of the Rules of Appellate Procedure.

JAMES J. SWEENEY, J., and COLLEEN CONWAY COONEY, J., concur.

Parallel Citations

2010 -Ohio- 1853

2014 WL 4258827

Only the Westlaw citation is currently available.

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Supreme Court of Tennessee,
at Knoxville.

Andrew SPENCER

v.

NORFOLK SOUTHERN RAILWAY COMPANY.

No. E2012-01204-SC-R11-CV. | May 28, 2014
Session Heard at Cookeville.¹ | Aug. 29, 2014.

Synopsis

Background: Railroad employee brought action against railroad for negligence under the Federal Employers' Liability Act after he was injured while pulling a switch. The Circuit Court, Hamilton County, W. Jeffrey Hollingsworth, J., entered judgment on a jury verdict in favor of railroad. Employee appealed, and the Court of Appeals, 2013 WL 3946118, reversed and granted new trial. Railroad was granted permission to appeal.

[Holding:] The Supreme Court, Gary R. Wade, C.J., held that instruction regarding railroad's notice of defect was substantially accurate because the instruction adequately defined the law with respect to notice and did not mislead the jury.

Reversed.

West Headnotes (11)

[1] Appeal and Error

↔ Cases Triable in Appellate Court

Whether a jury instruction is erroneous is a question of law and is therefore subject to de novo review with no presumption of correctness.

Cases that cite this headnote

[2] Trial

↔ Matters of law

Trial courts have a duty to impart substantially accurate instructions concerning the law applicable to the matters at issue.

Cases that cite this headnote

[3] Trial

↔ Construction and Effect of Charge as a Whole

In determining whether a jury instruction is substantially accurate, Supreme Court reviews the charge in its entirety and considers it as a whole, and it will not invalidate an instruction that fairly defines the legal issues involved in the case and does not mislead the jury.

Cases that cite this headnote

[4] Trial

↔ Rules of construction in general

Jury instructions are not measured against a standard of perfection.

Cases that cite this headnote

[5] Courts

↔ Particular questions or subject matter

Courts

↔ Construction of federal Constitution, statutes, and treaties

Although Federal Employers' Liability Act (FELA) claims filed in state court generally are subject to state procedural rules, federal substantive law always controls FELA claims, regardless of the court in which such claims are filed. Federal Employers' Liability Act, § 1 et seq., 45 U.S.C.A. § 51.

Cases that cite this headnote

[6] Labor and Employment

↔ Elements of Recovery

To present a prima facie case under Federal Employers' Liability Act (FELA), an injured railroad employee must prove that: (1) the employee was injured in the scope of employment; (2) the employee's employment was in furtherance of the railroad's interstate transportation business; (3) the railroad was negligent; and (4) the railroad's negligence played some part in causing the injury for which the employee seeks compensation under FELA. Federal Employers' Liability Act, § 1 et seq., 45 U.S.C.A. § 51.

Cases that cite this headnote

[7] **Labor and Employment**

☞ Relationship Between Parties

Federal Employers' Liability Act (FELA) pertains only to railroads in their capacity as employers. Federal Employers' Liability Act, § 1 et seq., 45 U.S.C.A. § 51.

Cases that cite this headnote

[8] **Labor and Employment**

☞ Nature and scope of duty owed by employer

Under Federal Employers' Liability Act (FELA), a railroad has a duty to provide its employees with a reasonably safe place in which to work. Federal Employers' Liability Act, § 1 et seq., 45 U.S.C.A. § 51.

Cases that cite this headnote

[9] **Labor and Employment**

☞ Knowledge by employer of defect or danger

To prove a breach of railroad's duty under Federal Employers' Liability Act (FELA) to provide a safe workplace, the evidence must establish that the railroad had notice; that is, that the railroad knew or should have known of the condition of the workplace that caused the employee's injury. Federal Employers' Liability Act, § 1 et seq., 45 U.S.C.A. § 51.

Cases that cite this headnote

[10] **Labor and Employment**

☞ Weight and sufficiency of evidence

Notice of unsafe condition on the part of railroad need not be established by direct evidence in an employee's action under Federal Employers' Liability Act (FELA); a jury may infer that the workplace condition could have been discovered by the defendant railroad at any time prior to the injury through the exercise of reasonable care or inspection. Federal Employers' Liability Act, § 1 et seq., 45 U.S.C.A. § 51.

Cases that cite this headnote

[11] **Labor and Employment**

☞ Instructions

Instruction regarding railroad's notice of defect given by trial court in Federal Employers' Liability Act (FELA) negligence action qualified as substantially accurate because the instruction adequately defined the law with respect to notice and did not mislead the jury, even if the instruction could have been more clear as to the required timing of the receipt of notice; instruction did not state that the railroad must have obtained its knowledge only on the actual date of the employee's injury, but rather, under the instruction provided by the trial court, the knowledge of the condition of the switch on the date of the incident could have been obtained by the railroad prior to the date of the incident. Federal Employers' Liability Act, § 1 et seq., 45 U.S.C.A. § 51.

Cases that cite this headnote

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GARY R. WADE, C.J., delivered the opinion of the Court, in which JANICE M. HOLDER, CORNELIA A. CLARK, WILLIAM C. KOCH, JR., and SHARON G. LEE, JJ., joined.

OPINION

GARY R. WADE, C.J.

*1 The plaintiff, who was injured while pulling a switch for his employer, Norfolk Southern Railway, filed suit for negligence under the Federal Employers' Liability Act. The jury returned a verdict in favor of the defendant railroad. The Court of Appeals, ruling that the trial court had provided an erroneous jury instruction, reversed the jury verdict and granted the plaintiff a new trial. Because we find that the instruction qualifies as "substantially accurate" in the context of the entire charge, we reverse the judgment of the Court of Appeals and reinstate the verdict of the jury.

I. Facts and Procedural History

On May 16, 2010, Andrew Spencer (the "Plaintiff"), an employee of Norfolk Southern Railway Company (the "Railroad"), seriously injured his back when he threw a switch in the rail yard in an effort to move a section of track. The Plaintiff sued the Railroad under the Federal Employers' Liability Act ("FELA"), 45 U.S.C. §§ 51–60 (2006), alleging that the Railroad was negligent because it knew or should have known that the switch was not operating properly and failed to take adequate precautionary measures to ensure safe working conditions.

Prior to trial, the Plaintiff and the Railroad each requested special jury instructions with respect to the Railroad's knowledge of the condition of the switch. The trial court conferred with counsel in an effort to prepare proper instructions but the Plaintiff objected to the trial court's proposed instruction on notice. The trial court overruled that objection and also denied the special notice instructions sought by the Plaintiff and the Railroad. At the conclusion of the proof, the trial court provided the following instruction:

In this case [the Plaintiff] must prove that [the Railroad], [(1)] knew or should have known that *on the day of the incident* the switch was not operating properly; [(2)] that the switch was not operating properly because of [the Railroad's] negligence in failing to properly maintain the

switch; and, [(3)] ... that the incident on May 16, 2010[,] caused the injury the [P]laintiff claims to have suffered.

....

The [R]ailroad is said to have notice of an unsafe work condition if it actually knows or reasonably should have known of the unsafe condition based on ... complaints, letters, petitions, reasonable investigations[,] and safety meetings.

In this case the [P]laintiff must show that with due care [the Railroad] knew or should have known that *on the day of the incident* the switch was not operating properly. If you find [that the Railroad] knew or should have known that the conditions in which [the Plaintiff] worked could cause injury to him and failed to rectify those conditions, then ... the [R]ailroad[] was negligent.

(Emphasis added.) Following the trial court's charge to the jury, the Plaintiff again objected to the trial court's notice instruction, and the trial court again overruled the objection.

*2 During its deliberations, the jury submitted a question as to whether the Plaintiff was required to prove all three elements as charged in the first paragraph of this portion of the instruction. The jury inquired whether a "no" answer to any of these elements necessarily required a finding in favor of the Railroad. The trial court confirmed that all three elements had to be present in order to find negligence. Afterwards, the jury returned a verdict for the Railroad.

In his motion for a new trial, the Plaintiff challenged the propriety of the notice instruction, claiming that the trial court had erroneously narrowed the "notice window" by instructing the jury that the Railroad could be found negligent only if it "knew or should have known that, *on the day of the incident*, the switch was not operating properly." (Emphasis added.) According to the Plaintiff, the inclusion of the phrase "on the day of the incident" improperly required him to prove that the Railroad had obtained knowledge of the condition of the switch on the actual date of the incident, rather than on some prior date.² The trial court rejected the Plaintiff's contention and denied his motion for a new trial, concluding that the instructions, when read in their entirety, did not require proof of notice on the specific date of the injury.

The Court of Appeals reversed, holding that the trial court's notice instruction "improperly focused and limited the jury on whether the Railroad knew or should have known that

the switch was not operating properly on May 16, 2010,” and that “[l]imiting the notice and foreseeability requirement to what the Railroad knew or should have known on that one single day was improper and placed a burden upon the Plaintiff not required by ... FELA and the cases interpreting ... FELA.” *Spencer v. Norfolk S. Ry.*, No. E2012-01204-COA-R3-CV, 2013 WL 3946118, at *5 (Tenn.Ct.App. July 29, 2013).

We granted the Railroad's application for permission to appeal. Although stated as two issues in the Railroad's application and in its brief, there is really a single issue before this Court: Whether the jury instruction requiring the Plaintiff to prove that the Railroad knew or should have known that on the day of the incident the switch was not operating properly, was substantially accurate or was so misleading as to require a new trial.

II. Standard of Review

[1] [2] [3] [4] “Whether a jury instruction is erroneous is a question of law and is therefore subject to de novo review with no presumption of correctness.” *Nye v. Bayer Cropscience, Inc.*, 347 S.W.3d 686, 699 (Tenn.2011) (citing *Solomon v. First Am. Nat'l Bank of Nashville*, 774 S.W.2d 935, 940 (Tenn.Ct.App.1989)). Trial courts have “a duty to impart ‘substantially accurate instructions concerning the law applicable to the matters at issue.’” *Id.* (quoting *Hensley v. CSX Transp., Inc.*, 310 S.W.3d 824, 833 (Tenn.Ct.App.2009)). This is important because “[t]he legitimacy of a jury's verdict is dependent on the accuracy of the trial court's instructions, which are the sole source of the legal principles required for the jury's deliberations.” *Id.* In determining whether a jury instruction is substantially accurate, we review the charge in its entirety and consider it as a whole, and we will not invalidate an instruction that “‘fairly defines the legal issues involved in the case and does not mislead the jury.’” *Id.* (quoting *Otis v. Cambridge Mut. Fire Ins. Co.*, 850 S.W.2d 439, 446 (Tenn.1992)). Moreover, “[j]ury instructions are not measured against [a] standard of perfection.” *Akers v. Prime Succession of Tenn., Inc.*, 387 S.W.3d 495, 504 (Tenn.2012) (first alteration in original) (quoting *City of Johnson City v. Outdoor W., Inc.*, 947 S.W.2d 855, 858 (Tenn.Ct.App.1996)).

III. Analysis

A. The Federal Employers' Liability Act

*3 [5] [6] [7] FELA, enacted by Congress in 1908, provides, in pertinent part, as follows:

Every common carrier by railroad while engaging in commerce ... shall be liable in damages to any person suffering injury while he is employed by such carrier in such commerce ... for such injury or death resulting in whole or in part from the negligence of any of the officers, agents, or employees of such carrier, or by reason of any defect or insufficiency, due to its negligence, in its cars, engines, appliances, machinery, track, roadbed, works, boats, wharves, or other equipment.

45 U.S.C. § 51.³ A plaintiff may bring an action under FELA in either federal or state court. *Id.* § 56. Although FELA claims filed in state court generally are subject to state procedural rules, federal substantive law always controls FELA claims, regardless of the court in which such claims are filed. *Mills*, 300 S.W.3d at 631. Thus, we look to federal substantive law for the four elements of a FELA claim:

- (1) the employee was injured in the scope of employment;
- (2) the employee's employment was in furtherance of the railroad's interstate transportation business;
- (3) the railroad was negligent; and
- (4) the railroad's negligence “played some part in causing the injury for which [the employee] seeks compensation under FELA.”

Id. (alteration in original) (quoting *Van Gorder v. Grand Trunk W. R.R.*, 509 F.3d 265, 269 (6th Cir.2007)).

[8] [9] [10] The jury instruction at issue pertains to the third element of the Plaintiff's FELA claim—the negligence of the Railroad—which required the Plaintiff to prove the common law elements of negligence: duty, breach, foreseeability, and causation. *Adams v. CSX Transp., Inc.*, 899 F.2d 536, 539 (6th Cir.1990) (quoting *Robert v. Consol. Rail Corp.*, 832 F.2d 3, 6 (1st Cir.1987)). Under FELA, a railroad has a duty to provide its employees with a reasonably

safe place in which to work. *Mills*, 300 S.W.3d at 633 (quoting *Van Gorder*, 509 F.3d at 269). To prove a breach of this duty, the evidence must establish that the railroad had notice; that is, that the railroad knew or should have known of the condition of the workplace that caused the employee's injury. *Szekeres v. CSX Transp., Inc.*, 617 F.3d 424, 430–31 (6th Cir.2010) (“Under [the] law, [the railroad] could not be convicted of negligence, absent proof that such defect was known, or should or could have been known, by [the railroad], with opportunity to correct it.”(quoting *Miller v. Cincinnati, New Orleans & Tex. Pac. Ry.*, 317 F.2d 693, 695 (6th Cir.1963))); see also *Mills*, 300 S.W.3d at 633 (“To prove a breach of duty under ... FELA, an employee must show that the railroad knew, or by the exercise of due care should have known[,] that prevalent standards of conduct were inadequate to protect [the employee] and similarly situated employees.”(third alteration in original) (quoting *Van Gorder*, 509 F.3d at 269–70) (internal quotation marks omitted)). Such notice need not be established by direct evidence; a jury may infer that the workplace condition could have been discovered by the defendant railroad at any time prior to the injury through the exercise of reasonable care or inspection. *Szekeres*, 617 F.3d at 431 (quoting *Miller*, 317 F.2d at 695).

B. The Jury Instruction

*4 [11] In this appeal, the Railroad argues that the trial court's notice instruction, in proper context, was substantially accurate, meaning that the instruction was not misleading and fairly defined for the jury the legal issue of notice. The Railroad maintains that the notice instruction did not improperly require the Plaintiff to show that the Railroad was placed on notice of the unsafe switch on the specific date of the injury, and that the entirety of the instructions demonstrated that the requisite notice could have been established at any time prior to the incident. We agree.⁴

When holding that the instruction given by the trial court was erroneous and warranted a new trial, the Court of Appeals offered the following rationale:

The instruction as given by the [t]rial [c]ourt improperly focused and limited the jury on whether the Railroad knew or should have known that the switch was not operating properly on May 16, 2010. In other words, did the Railroad

have knowledge on May 16, 2010[,] that the switch was not operating properly on that day. Limiting the notice and foreseeability requirement to what the Railroad knew or should have known on that one single day was improper and placed a burden upon the Plaintiff not required by ... FELA and the cases interpreting ... FELA.

Id. at *5. The Court of Appeals further observed that the Plaintiff had acknowledged the special instruction submitted by the Railroad, although rejected by the trial court, as a proper statement of the law. *Id.* at *6. That special instruction provided as follows:

The defendant railroad's duty of care is measured by what is reasonably foreseeable under like circumstances. That means that, in measuring the defendant's conduct here, the point of view to be taken should be the view before the accident occurred, to see what, in the light of the facts then known, should or could reasonably have been anticipated. A defendant is not required to guard against that which a reasonably prudent person, under the circumstances, would not anticipate as likely to happen. If a defendant has no reasonable ground to anticipate that a particular condition would or might result in an accident and injury, it has no duty to correct that condition.

Id. The Court of Appeals pointed out that “if the [t]rial [c]ourt had utilized this special instruction, the error as discussed above would have been prevented,” and suggested that on remand for a new trial the court may wish to utilize this instruction. *Id.*

While the special instruction proposed by the Railroad might have been more clear as to the required timing of the receipt of notice, it is not, in our view, a superior instruction. In the future, a more precise statement regarding the notice required to establish a breach of duty would include language regarding whether a defendant knew or should have known at a time sufficiently before the incident in question such that the defendant could have taken action to prevent the

incident or ameliorate its effects. See *Szekeres*, 617 F.3d at 431. Nevertheless, the instruction provided by the trial court, in our view, was substantially accurate and, therefore, was not erroneous. The trial court's instruction did not state that the Railroad must have obtained its knowledge only on the actual date of the Plaintiff's injury. Rather, under the instruction provided by the trial court, this knowledge of the condition of the switch on the date of the incident could have been obtained by the Railroad prior to the date of the incident. If the Plaintiff had proof that the Railroad received notice of the condition of the switch on a date prior to the incident, such proof also would establish that the Railroad knew or should have known of the unsafe condition on the day of the incident, absent proof that the prior condition had been corrected during the intervening time period. The reasonable interpretation of the instruction—requiring the Plaintiff to prove that the Railroad “knew or should have known that on the day of the incident the switch was not operating properly”—is that the proof had to establish that the switch was not operating properly at the time of the incident and that the Railroad was aware or should have been aware of this fact.⁵

*5 Moreover, there is nothing in the trial court's instruction to suggest that the Railroad would be insulated from liability if it had received notice prior to the date of the incident resulting in the Plaintiff's injury. In fact, the trial court explained as a part of its instruction that notice to the Railroad could have been “based on ... complaints, letters, petitions, reasonable investigations and safety meetings.” These examples clearly indicate that the Railroad's notice of the defective switch could have occurred at any time prior to the incident. If the Railroad had received notice of the defective condition of the switch a week before the incident, for example, and the defect had not been corrected by the time of the Plaintiff's injury, the Railroad still would have possessed such knowledge of the defect when the incident occurred.

Finally, our interpretation of the instruction is supported by portions of defense counsel's closing argument. Although counsel for the Railroad included in his closing argument the subject language from the trial court's instruction on notice, he also made the following statements:

If you find that [the Railroad] knew or should have known that the conditions on which [the Plaintiff] worked could

have caused [his injury] and [the Railroad] failed to rectify that condition, then it was negligent. But [the Plaintiff must] prove that [the Railroad] knew *that day or before that day* and didn't correct it.

....

[O]n May 11, 2010, [an assistant track supervisor for the Railroad] threw that switch and found no problems with it and said that it did not need maintenance, it did not need sweeping, it did not need graphiting. May 11, five days before [the Plaintiff's] incident.

It is further undisputed that from that date until the date of the incident, May 16, there were no complaints.

....

So I submit to you, for [the Plaintiff] to prevail in this case, he's going to have to put on proof, prove to you by a preponderance of the evidence that *somebody complained about that switch on May 13, 14 or 15, and it wasn't taken care of like it should have been....*

(Emphasis added.) These statements indicate that the Railroad recognized that the Plaintiff's negligence claim could have been established by proof that the Railroad was on notice of the condition of the switch at some time prior to the date of the incident.

IV. Conclusion

The notice instruction, in context, qualifies as “substantially accurate” because, if not ideal, the instruction adequately defined the law with respect to notice and did not mislead the jury. The instruction, therefore, was not erroneous and a new trial is not warranted. As discussed, however, a more precise statement of the law would instruct the jury to determine whether a defendant knew or should have known at a time sufficiently before the incident in question such that the defendant could have taken action to prevent the incident or ameliorate its effects. The judgment of the Court of Appeals is reversed and the verdict of the jury is reinstated. Costs are assessed to Andrew Spencer and his surety, for which execution may issue if necessary.

Footnotes

1 Oral argument was heard in this case on May 28, 2014, at Tennessee Technological University in Cookeville, Putnam County,
Tennessee, as part of this Court's S.C.A.L.E.S. (Supreme Court Advancing Legal Education for Students) project.

2 At trial, the Plaintiff phrased his objection as follows:

[W]hat [the Plaintiff] must prove is not that the [R]ailroad knew or should have known that the switch was not operating
properly.... [The Plaintiff] must prove that the [R]ailroad failed to properly maintain the switch.... [T]hey didn't have to know
that the switch was not operating properly on that day. That's not the burden. It's that it was not properly maintained.

3 FELA pertains only to railroads in their capacity as employers. *See Mills v. CSX Transp., Inc.*, 300 S.W.3d 627, 630 & n. 2
(Tenn.2009); *see also CSX Transp., Inc. v. Miller*, 159 Md.App. 123, 858 A.2d 1025, 1028–29 (2004) (“The only possible defendants
are railroads engaged in interstate commerce. The only possible plaintiffs are the employees of those railroads who are injured on
the job.”).

4 The Court of Appeals, concluding that the notice instruction was misleading and therefore in error, granted the Plaintiff a new trial
without conducting a harmless error analysis. *See Spencer*, 2013 WL 3946118, at *5–6. In light of our holding that the instruction
was not erroneous, we need not reach the Railroad's additional argument that any error in the instruction was harmless.

5 The grammatical structure of the jury charge clearly supports this interpretation. The placement of the word “that” *before* “on the day
of the incident” is important. If the word “that” had been placed *after* “on the day of the incident,” then the Plaintiff might have a
stronger argument that the trial court improperly narrowed the “notice window.” As given, however, the instruction specifies the time
at which “the switch was not operating properly,” not the time when the Railroad “knew or should have known” of the condition of
the switch. In other words, the most reasonable interpretation of the instruction is to say, “The Plaintiff was required to prove that
the Railroad knew or should have known that the switch was not operating properly on the day of the incident.”

2003 WL 1233536

Only the Westlaw citation is currently available.

SEE COURT OF APPEALS RULES 11 AND 12

Court of Appeals of Tennessee.

Hellen M. WILSON,

v.

CSX TRANSPORTATION, INC.

No. E2002-00291-COA-R9-CV. | March
18, 2003. | Application for Permission to
Appeal Denied by Supreme Court May 27, 2003.

Appeal from the Circuit Court for Hamilton County, No.
97CV1509; W. Neil Thomas, III, Judge.

Attorneys and Law Firms

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HOUSTON M. GODDARD, P.J., delivered the opinion of the
court, in which Herschel P. Franks and D. Michael Swiney,
JJ., joined.

OPINION

HOUSTON M. GODDARD, P.J.

*1 This interlocutory appeal raises the question of the admissibility of the testimony of three expert witnesses which the Plaintiff, Hellen M. Wilson, sought to present at trial. The Trial Court excluded the expert testimony of Dr. William J. Nassetta and certified pursuant to T.R.A.P. Rule 9 the following question for this Court: "whether the testimony of the expert witness, William J. Nassetta, M.D., as reflected in [his] attached affidavit, ... is admissible under the doctrine of the Tennessee Supreme Court decision in *McDaniel v. CSX Transportation, Inc.*" The Trial Court also granted permission to CSX Transportation (CSXT) to appeal its ruling admitting the testimony of two other expert witnesses offered by the Plaintiff. We hold that the testimony of all three expert witnesses is admissible under the principles enunciated in *McDaniel*.

Mrs. Wilson brought this action against CSXT under the Federal Employer's Liability Act (FELA), seeking damages for the death of her husband, Ricky J. Wilson, who was employed by CSXT as a carman. Mr. Wilson died on November 12, 1996 as a result of a malignant brain tumor known as a glioblastoma multiforme, and acute myelogenous leukemia. Mr. Wilson was diagnosed with brain cancer at age 40 and died at age 42. Mrs. Wilson alleges several theories of negligence in connection with his exposure to various chemicals at his workplace, which she asserts caused or contributed to cause his brain cancer and leukemia.

CSXT moved for summary judgment on November 9, 2001, alleging no genuine issue of material fact regarding causation of Mr. Wilson's injuries and death. CSXT presented the testimony of several experts in support of its assertion that there is no proven causal connection between the chemicals to which Mr. Wilson was exposed and his brain cancer and leukemia.

In support of her opposition to summary judgment, Mrs. Wilson presented the testimony of Dr. James E. Girard, a chemist, who opined, *inter alia*, as follows:

It is my expert opinion, to a reasonable degree of scientific certainty that Mr. Ricky Wilson's sickness and death, were caused by his exposure to chemicals while he was employed as a carman [for] CSX Transportation. He was exposed repeatedly to diesel exhaust. The chemicals which have been described above, namely benzene, toluene, xylene and methylene diisocyanate, toluene diisocyanate, cadmium, and perchloroethylene are all inhalation hazards and can also be absorbed through the skin. According to DuPont Chemical Company, "repeated or prolonged overexposure to solvents may lead to permanent brain and nervous system damage."

Mr. Wilson was exposed to benzene, a known carcinogen. Benzene exposure is recognized as a cause of acute myelogenous leukemia, and has been shown to increase the incidence of neoplasms at multiple sites in chronic inhalation and gavage studies in rodents. He was also exposed to cadmium, a known carcinogen. Cadmium and cadmium compounds are known to be human carcinogens based on sufficient evidence of carcinogenicity from studies in humans including epidemiological and mechanistic information which indicate a causal relationship between exposure to cadmium and cadmium compounds and human cancer.

He was also exposed to toluene diisocyanate. Toluene diisocyanate is *reasonably anticipated to be a human carcinogen* based on sufficient evidence of carcinogenicity in experimental animals.

*2 (Emphasis in original). Dr. Vincent F. Garry, a pathologist and toxicologist, testified that in his opinion the group of chemicals to which Mr. Wilson was exposed "was eminently involved in a causal relationship to his cancer."

The Trial Court ruled that the expert testimony of Drs. Girard and Garry was admissible and sufficient to create a genuine issue of fact as to causation. The Court treated CSXT's arguments with regard to the testimony of Plaintiff's expert Dr. William J. Nassetta as a motion in limine to exclude Dr. Nassetta's testimony. The Court ruled Dr. Nassetta's testimony inadmissible, stating the following in regard to his affidavit:

I think if you take the medical terminology out of the affidavit, Dr. Nassetta, regardless of what he says in his last paragraph, Dr. Nassetta's affidavit can be boiled down to say, we have a hunch. We don't have any studies or statistical data. We have a hunch and we think at sometime in the future this malady will connected with these compounds.

I don't think that's enough, I really don't, so I'm going to grant the Motion in Limine with respect to Dr. Nassetta.

[Counsel for Plaintiff]: Dr. Nassetta is not allowed to testify at all?

Court: Right. I just think it's too speculative, Pat. I really do.

The Trial Court granted Mrs. Wilson's motion seeking permission for an interlocutory appeal under Tenn. R.App. P. 9. CSXT filed a similar motion which also was granted, and this Court granted an interlocutory appeal to both parties.

We will first address CSXT's argument made in its brief that "pursuant to Rule 56.03 [of the Tennessee Rules of Civil Procedure], the court should have taken all of the statements set forth in CSXT's Concise Statement of Material Facts and Supplemental Concise Statement of Material Facts as true because the Plaintiff did not, as required by that rule, file any pleading disputing the Concise Statements of Facts filed by CSXT."

Mrs. Wilson's response to CSXT's motion for summary judgment was styled "Plaintiff's additional concise statement of facts and memorandum of law in opposition to Defendant's Motion for Summary Judgment." Although her response does not, in corresponding numbered paragraphs, separately respond to each claimed undisputed fact set forth in the motion for summary judgment, it does set forth at length the facts Mrs. Wilson claims are established by the record, and her assertions as to why they establish a genuine issue of material fact for trial.

This Court was recently presented with an argument very similar to that presented by CSXT in the case of *First Citizens Bank of Cleveland v. Cross*, 55 S.W.3d 564 (Tenn.Ct.App.2001). The *Cross* Court stated as follows:

The appellees argue that summary judgment was properly granted to them because, so the argument goes, Cross failed to comply with various provisions of Tenn.R.Civ.P. 56. First, they contend that Cross did not comply with Tenn.R.Civ.P. 56.03, which requires a non-moving party to respond to each fact set forth by the moving party by either (1) agreeing that the fact is undisputed; (2) agreeing that the fact is undisputed for the purposes of the motion only; or (3) demonstrating, with specific citations to the record, that the fact is disputed.

*3 We find that Cross' response is substantially in compliance with the requirements of Rule 56.03. Cross' response adequately sets forth the facts that are undisputed. Furthermore, it adequately sets forth, with appropriate citations, those facts that she alleges are in dispute.

Cross, 55 S.W.3d at 571. In the case at bar, we have reviewed Mrs. Wilson's response and find it is substantially in compliance with Rule 56.03.

In its appeal, CSXT argues that the Trial Court erred in finding the testimony of Dr. Girard and Dr. Garry admissible and sufficient to establish a genuine issue of material fact regarding causation of Mr. Wilson's death. In the case of *McDaniel v. CSX Transportation, Inc.*, 955 S.W.2d 257 (Tenn.1997), the Supreme Court addressed in depth the admissibility of expert testimony as contemplated by Rule 702 and 703 of the Tennessee Rules of Evidence. In *McDaniel*, which was also a FELA case, the Court stated as follows:

After examining the basic legal principles governing the admissibility of scientific evidence and the change in direction by the federal courts, we turn to Tennessee to clarify our standard of admissibility.

In general, questions regarding the admissibility, qualifications, relevancy and competency of expert testimony are left to the discretion of the trial court. *State v. Ballard*, 855 S.W.2d 557, 562 (Tenn.1993). The trial court's ruling in this regard may only be overturned if the discretion is arbitrarily exercised or abused. *Id.* The specific rules of evidence that govern the issue of admissibility of scientific proof in Tennessee are Tenn. R. Evid. 702 and 703. The former provides:

If scientific, technical, or other specialized knowledge will substantially assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise.

And Tenn. R. Evid. 703 states:

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. 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. The court shall disallow testimony in the form of an opinion or inference if the underlying facts or data indicate lack of trustworthiness.

The plaintiffs contend that the expert testimony in this case is reliable and that it will substantially assist the jury on the issue of causation. The defendant argues that irrespective of *Frye* or *Daubert*, there must be adherence to the strict requirements contained in the language of the rules and also a reasonable standard for proving causation. It contends that the plaintiffs' scientific evidence is unreliable and must be excluded. The defendant argues that an epidemiological study must show a relative risk of greater than 2.0, which several courts have said means that a disease more likely than not was caused by the specific agent or event.¹ See *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311 (9th Cir.1995), cert. denied, 516 U.S. 869, 116 S.Ct. 189, 133 L.Ed.2d 126 (1995); *DeLuca v. Merrell Dow Pharmaceuticals, Inc.*, 791 F.Supp. 1042 (D.N.J.1992), aff'd, 6 F.3d 778 (3rd Cir.1993). As discussed herein, the

factor is certainly relevant but we reject the contention that it should be adopted as matter of law.

*4 Although the advisory comments to Rule 702 indicate that Tennessee has followed the *Frye* test in analyzing the admissibility of scientific evidence, one commentator, recognizing the similarity between Tennessee Rule 702 and Federal Rule Evid. 702, has raised the question of whether the *Frye* test of "general acceptance" should be abolished in Tennessee. N. Cohen, S. Sheppard, and D. Paine, *Tennessee Law of Evidence*, § 401.20 at 124, n. 233. Indeed, as the trial court in this case noted, there is some evidence of a departure from the strict adherence to the *Frye* test by courts in this State.

In our view, determining the standard for the admissibility of scientific evidence requires an analysis of the unique language found in Rules 702 and 703 of the Tennessee Rules of Evidence. For instance, Tenn. R. Evid. 702 requires that the scientific evidence "substantially assist the trier of fact," while its federal counterpart requires only that the evidence "assist the trier of fact." Fed.R.Evid. 702. This distinction indicates that the probative force of the testimony must be stronger before it is admitted in Tennessee. See, e.g., Weinstein, *Rule 702 of the Federal Rules of Evidence is Sound; It Should Not Be Amended*, 138 F.R.D. 631, 636 (1991).

Similarly, Tenn. R. Evid. 703 states that "[t]he court shall disallow testimony in the form of an opinion or inference if the underlying facts or data indicate lack of trustworthiness." There is no similar restriction in the federal rule. Fed.R.Evid. 703. Thus, as one writer has observed, "the additional language ... [in the Tennessee rule] is obviously designed to encourage trial courts to take a more active role in evaluating the reasonableness of the expert's reliance upon the particular basis for his or her testimony." R. Banks, *Some Comparisons Between the New Tennessee Rules of Evidence and the Federal Rules of Evidence, Part II*, 20 Mem.S.U. L.Rev. 499, 559 (1990). In sum, even though the facts and data need not be admissible, they must be reviewed and found to be trustworthy by the trial court.

Based on the foregoing analysis, we conclude that Tennessee's adoption of Rules 702 and 703 in 1991 as part of the Rules of Evidence supersede the general acceptance test of *Frye*. In Tennessee, under the recent rules, a trial court must determine whether the evidence

will substantially assist the trier of fact to determine a fact in issue and whether the facts and data underlying the evidence indicate a lack of trustworthiness. The rules together necessarily require a determination as to the scientific validity or reliability of the evidence. Simply put, unless the scientific evidence is valid, it will not substantially assist the trier of fact, nor will its underlying facts and data appear to be trustworthy, but there is no requirement in the rule that it be generally accepted.

Although we do not expressly adopt *Daubert*, the non-exclusive list of factors to determine reliability are useful in applying our Rules 702 and 703. A Tennessee trial court may consider in determining reliability: (1) whether scientific evidence has been tested and the methodology with which it has been tested; (2) whether the evidence has been subjected to peer review or publication; (3) whether a potential rate of error is known; (4) whether, as formerly required by *Frye*, the evidence is generally accepted in the scientific community; and (5) whether the expert's research in the field has been conducted independent of litigation.

*5 Although the trial court must analyze the science and not merely the qualifications, demeanor or conclusions of experts, the court need not weigh or choose between two legitimate but conflicting scientific views. The court instead must assure itself that the opinions are based on relevant scientific methods, processes, and data, and not upon an expert's mere speculation. *See, e.g., Joiner*, 78 F.3d at 530. The trial court should keep in mind that the preliminary question under Tenn. R. Evid. 104 is one of admissibility of the evidence. Once the evidence is admitted, it will thereafter be tested with the crucible of vigorous cross-examination and countervailing proof. After that occurs, a defendant may, of course, challenge the sufficiency of the evidence by moving for a directed verdict at the appropriate times. *See* Tenn. R. Civ. P. 50. Yet it is important to emphasize that the weight to be given to stated scientific theories, and the resolution of legitimate but competing scientific views, are matters appropriately entrusted to the trier of fact. *See Joiner*, 78 F.3d at 534-35 (Birch, J., concurring).

We recognize that the burden placed on trial courts to analyze and to screen novel scientific evidence is a significant one. No framework exists that provides for simple and practical application in every case; the

complexity and diversity of potential scientific evidence is simply too vast for the application of a single test. *See Developments in the Law-Confronting the New Challenges of Scientific Evidence*, 108 Harv.L.Rev. 1481, 1513-1516 (1995). Nonetheless, the preliminary questions must be addressed by the trial court, *see*, Tenn. R. Evid. 104, and they must be addressed within the framework of rules 702 and 703.

APPLICATION OF STANDARD

The trial court correctly foresaw the trend away from *Frye* and also used the factors set forth in *Daubert* as a framework for analysis. As it observed, the scientific theory that exposure to solvents may cause toxic encephalopathy has been tested frequently over a period of 25 years. Because no precise diagnostic device or biological mechanism can isolate the causal factor, the relevant tests have been epidemiological studies. The experts in this case testified at length about the field of epidemiology and the use of cohort and case-control studies. The experts agreed that epidemiological studies have been used to test the hypothesis that exposure to solvents causes encephalopathy and that numerous studies support a causal relationship. These studies have been reviewed, reconstructed, published in leading journals in the field, and subjected to peer review. Although the "positive" studies have been criticized for failing to account for confounding factors, the diagnosis is recognized in medical textbooks and journals as well as by several national and world health organizations. We also observe that the research in this area, including that of several of the plaintiffs' experts, was conducted independently of this litigation.

*6 Accordingly, we agree with the trial court's finding that the evidence will substantially assist the jury to understand the evidence and to determine a fact in issue. We also agree with the trial court's conclusion that the methodology and principles underlying the scientific evidence are sufficiently trustworthy and reliable to be presented to the trier of fact. The trial court is not required to determine whether it agrees with the evidence and should not substitute its view for the trier of fact. It should allow the jury to consider legitimate but conflicting views about the scientific proof. Provided the evidence is scientifically valid, criticisms of it and opposing views may be elicited on cross examination

and/or established in the defendant's case. That is the essence of the lawsuit.

CONCLUSION

We have concluded that the scientific evidence proffered by the plaintiffs satisfies the requirements of Tenn. R. Evid. 702 and 703, and that the trial court did not abuse its discretion in admitting it into evidence.

McDaniel, 955 S.W.2d 257, 263-66 (Tenn.1997)(footnotes omitted); see also *Hand v. Norfolk Southern Ry. Co.*, an unreported opinion of this Court filed in Knoxville on June 2, 1998.

Our review of the evidence in light of the foregoing, including the reaffirmation of the discretion accorded trial judges in the admission of expert testimony, persuades us that in this case the Trial Judge was correct in finding that the expert witness testimony of Dr. Garry and Dr. Girard offered on behalf of the Plaintiff met the requirements of Rule 702 and 703 of the Tennessee Rules of Evidence, and that the Trial Court did not abuse its discretion in the admission thereof.

We now turn our attention to the proffered expert testimony of Dr. Nassetta. In its order granting permission to Mrs. Wilson to seek an interlocutory appeal, the Trial Court certified the following question to be answered by this Court:

Whether the testimony of the expert witness, William J. Nassetta, M.D., as reflected in the attached affidavit of Dr. William J. Nassetta is admissible under the doctrine of the Tennessee Supreme Court decision in *McDaniel v. CSX Transportation, Inc.*, 955 S.W.2d 257 (Tenn.1997).

We first address Dr. Nassetta's qualifications as an expert witness. CSXT argues that Dr. Nassetta was not shown to be, in the words of Tenn.R.Evid. 702, "a witness qualified as an expert by knowledge, skill, experience, training, or education." CSXT's attack on Dr. Nassetta is based solely upon its argument that he is unqualified as an expert, as it states in its brief that "the issue before this court, is the qualification of Dr. Nassetta himself, as opposed to the validity of his scientific studies," and "the question does not revolve around the validity of the science but rather around Dr. Nassetta's qualifications to present the opinions."

It is clear to us from both the Court's comments and its wording of the question certified for appeal that its ruling

was based on the finding that Dr. Nassetta's affidavit was too speculative and that it did not rely on any studies or statistical data to support his opinions. There is nothing in the record to suggest that the Court found Dr. Nassetta unqualified to give an opinion at all; in fact, the Court ruled that CSXT's "Motion to Strike the affidavit of Dr. Nassetta is not well taken. The court has considered the affidavit of Dr. Nassetta."

*7 Nevertheless, we have reviewed the qualifications of Dr. Nassetta as contained in his curriculum vitae, affidavit and deposition. Dr. Nassetta is a medical doctor licensed to practice medicine in five states who also holds a master's degree in public health. He is board-certified in internal medicine and board-eligible in occupational and environmental medicine. He testified that he is actively involved, on a daily basis, in doing occupational medicine through his work for an occupational toxicology consulting company and an occupational medical staffing and consultation company.

Dr. Nassetta's affidavit further states as follows:

I have reviewed material safety data sheets, scientific literature, and other toxicological references with regard to the chemicals Mr. Wilson was exposed to during his employment with CSXT, a detailed description of the various employment tasks Mr. Wilson performed while working for CSXT in Birmingham, Alabama, as well as the medical history of Mr. Wilson. I have personally visited the CSXT facility in Birmingham, Alabama where Mr. Wilson worked. I have also reviewed numerous epidemiologic, toxicologic, and other scientific and medical studies involving the various chemicals to which Mr. Wilson was exposed.

Based on our review of the record, we find that Dr. Nassetta meets the requirements of Tenn.R.Evid. 702 and is qualified to render an expert opinion in this case. CSXT's arguments to the contrary, including the fact that Dr. Nassetta has never published a paper about brain cancer, pertain to the weight afforded to his testimony by the trier of fact, and not its admissibility.

According to the Supreme Court's teaching in *McDaniel*, "the trial court must analyze the science and not merely the qualifications, demeanor or conclusions of experts." The *McDaniel* Court stated that the Trial Court "must assure itself that the opinions are based on relevant scientific methods, processes, and data, and not upon an expert's mere speculation." 955 S.W.2d at 265. Accordingly, we examine Dr. Nassetta's testimony to determine if it is based on valid and relevant science, and not merely a speculative conclusion.

Dr. Nassetta's affidavit states the following in relevant part:

Ricky Wilson, a black male, was diagnosed with brain cancer at the age of 40. Brain cancer is more common in white males (glioblastoma specifically) and peaks at an older age. Therefore, in the case of Mr. Wilson, it leads one to consider possible occupational, environmental or genetic predispositions as more likely in the causative analysis.

Brain gliomas (these include astrocytomas), in particular appear to be more related to occupational risk factors than other types of brain cancer.

* * *

Although the etiology of brain tumors in adults remains largely unknown, a large number of studies have examined the relationship between the environment and occurrence of brain tumors. Despite this, only two unequivocal risk factors have been identified: ionizing radiation and immuno-suppression. Other studies have identified possible environmental risk factors related to brain tumors. These include exposure to such things as: organic solvents, lubricating oils, polyaromatic hydrocarbons, motor exhaust, welding fumes, insecticides, vinyl chloride monomer, formaldehyde, rubber industry, work in electrical occupations, magnetic fields, fungicides and herbicides. Established risk factors for brain cancer, such as genetic predisposition and ionizing radiation can explain only a small proportion of the disease. Conventional lifestyle factors, such as tobacco smoking, alcohol drinking, and dietary intakes, have not been or are only modestly associated with brain cancer risk.

*8 The occupational exposures pursuant to the available historic information were substantial, chronic and without provision for personal protection, resulting in an optimal environment for the development of tumors, including brain tumors.

It does not appear from the occupational history available that Mr. Wilson was exposed to ionizing radiation or was immuno-suppressed in some way prior to the development of his brain cancer; however, there is ample evidence of his exposure to organic solvents, polyaromatic hydrocarbons, motor exhaust and welding fumes.

Therefore, it is my opinion within a reasonable degree of medical certainty that these factors and Mr. Wilson's occupational exposures caused, or contributed to the cause, of Mr. Wilson's development of brain cancer and leukemia.

Dr. Nassetta admitted in his deposition that he did not have any quantitative information about the amount of exposure or dosage² Mr. Wilson had to the various chemicals at issue in this case. He testified as follows regarding his qualitative exposure assessment:

Q: Do you have any information at all about what dosage Mr. Wilson had of any chemicals involved in this lawsuit?

A: No. This is very typical of almost every case in occupational medicine. There is almost never opportunity to have a quantitative dose.

Q: Without knowing dosage can you testify to a reasonable degree of medical or scientific certainty that any of these chemicals caused or contributed to brain cancer?

A: I believe so from a qualitative exposure assessment.

Q: Is that qualitative exposure assessment as a basis for your opinion something that is reasonably accepted in the scientific community?

A: Yes. In fact, if you read most of the epidemiological literature, you'll find that's how most of the studies are done.

* * *

Q: Do you know of any literature that links any of the chemicals to which Mr. Wilson was exposed to brain cancer?

A: It links them, yes. I think I mentioned those in my opinions.

There are numerous epidemiological studies cited in Dr. Nassetta's opinion, but the one upon which he and

Plaintiff primarily rely upon is cited and discussed in a textbook entitled *Occupational Neurology and Clinical Neurotoxicology* (Williams and Wilkins 1994), in a chapter called *Primary Brain Tumors Associated With Chemical Exposure*, which reviews epidemiological studies concerning the association between occupational chemical exposure and brain tumors.

Dr. Nassetta cites and relies upon a study referred to as the *Howe* study, which found as follows:

An examination of cancer mortality between 1965 and 1977 among 44,000 pensioned Canadian railroad workers exposed to PAHs [polycyclic aromatic hydrocarbons] in diesel fumes indicated a significantly elevated brain cancer mortality risk among those who had worked as welders (SMR = 3.18).

The *Howe* study further found an SMR (standardized mortality ratio) of 2.78 for brain cancer among those employees with the job classification "carman." It is not disputed that the SMR, or risk factor relative to the general population, reported in this study (2.78) is statistically significant. Mr. Wilson worked as a carman for CSXT, and his employment involved a large amount of welding.

Dr. Nassetta testified in his deposition that "the body of literature considered as a whole conclude[s] that there's a strong association, a strong relative risk, associated with these particular groups of chemicals and the exposures and the outcome that we're looking at in cancer."

*9 While the experts presented by CSXT naturally offer opinions in opposition to that presented by Dr. Nassetta, CSXT does not in its brief challenge or dispute the scientific validity of the *Howe* study or the other literature relied upon by Dr. Nassetta. As the *McDaniel* Court noted, "it is important to emphasize that the weight given to stated scientific theories, and the resolution of legitimate but competing scientific views, are matters appropriately entrusted to the trier of fact." 955 S.W.2d at 265.

We have reviewed the testimony of Dr. Nassetta in light of the factors enunciated in *McDaniel* for determining reliability and admissibility under Tennessee Rules of Evidence 702 and 703, and find it admissible under these authorities.

For the foregoing reasons the judgment of the Trial Court allowing the expert testimony of Drs. Girard and Garry is affirmed, the judgment holding Dr. Nassetta's testimony inadmissible is reversed, and the cause is remanded for trial. Costs of appeal are adjudged against CSX Transportation, Inc.

Footnotes

- 1 A relative risk of 2.0 means essentially that the group which is studied has a risk which is twice that of the general population of contracting the disease under study.
- 2 Dr. Nassetta explained the difference between the concepts of "exposure" and "dose" as follows: "exposure is the potential for coming into contact with a chemical. Dose implies that [the] chemical has actually gone across the interface of the human body."