

FOR PUBLICATION

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**IN THE
COURT OF APPEALS OF INDIANA**

NORFOLK SOUTHERN RAILWAY)
COMPANY,)
)
Appellant-Defendant,)

vs.)

No. 50A03-0403-CV-110

THE ESTATE OF ROBERT G. WAGERS, SR.,)
TRACY WAGERS, PERSONAL)
REPRESENTATIVE,)
)
Appellee-Plaintiff.)

APPEAL FROM THE MARSHALL CIRCUIT COURT
The Honorable Michael D Cook, Judge
Cause No. 50C01-0205-PL-11

August 25, 2005

OPINION - FOR PUBLICATION

KIRSCH, Chief Judge

Norfolk Southern Railway Company (“Norfolk”) appeals the trial court’s denial of its motion to strike and its motion for summary judgment in the suit brought against it by The Estate of Robert G. Wagers, Sr., Tracy Wagers, Personal Representative (“the Estate”), raising the following issues for review:

- I. Whether the trial court should have stricken the testimony of the Estate’s expert witness on causation, Dr. David K. Parkinson, because Parkinson’s testimony does not meet the standard for admissibility of expert testimony in toxic exposure cases.
- II. Whether the trial court erred in denying Norfolk’s motion for summary judgment because the Estate has failed to present any evidence on the amount or “dose” of the decedent’s exposure.

We affirm.

FACTS AND PROCEDURAL HISTORY¹

Robert Wagers, Sr. (“Wagers”) worked for Norfolk as a track laborer and backhoe operator. In September 1999, he was diagnosed with small cell carcinoma of the lung. He died of lung cancer in May 2000. The Estate filed its complaint against Norfolk under the Federal Employer’s Liability Act (FELA), contending that Wagers’s lung cancer was caused by his workplace exposure to asbestos fibers, diesel fumes and exhaust, and herbicides. Wagers also had a significant history of smoking cigarettes. The Estate relied on the opinion of Parkinson, who acknowledged in an opinion letter that Wagers had both personal and work-related exposures that can cause lung cancer. He stated that “Mr. Wagers[’] exposure to diesel fumes and asbestos played a significant role in the induction of his lung cancer. I

¹ We held oral argument on this case on January 19, 2005 in West Lafayette, Indiana at Krannert Center on the campus of Purdue University. We thank our host, the Krannert Executive Education Program, and we commend counsel on the quality of their written and oral advocacy.

cannot estimate what proportion of risk was to cigarette smoking and what proportion to his exposures in the workplace.” *Appellant’s Appendix* at 488. Subsequently, Parkinson was deposed and testified that he had no knowledge about the frequency with which Wagers may have encountered or used materials containing asbestos and that he assumed, based on his review of Wagers’s co-workers’ depositions, that Wagers would have worked with diesel equipment four to five hours per day. Parkinson agreed that some dosage level is required before a person would develop asbestosis, but that he did not know at what level Wagers was exposed. He testified that he could not state to any reasonable degree of medical certainty² that Wagers would not have developed lung cancer if he had not been exposed to any asbestos or diesel fumes. He further stated that he had no specific quantitative data about Wagers’s exposure to asbestos and diesel fumes.³

In October 2003, Norfolk filed a Motion to Exclude and Motion for Summary Judgment. It argued that Parkinson’s opinion on the cause of Wagers’s lung cancer should be excluded under Indiana Rules of Evidence 702(b), 401, 402, and 403. In addition, it argued that because the Estate offered no admissible expert testimony as to medical causation, it was entitled to summary judgment. In January 2004, the trial court denied Norfolk’s Motion to Exclude and Motion for Summary Judgment. In February 2004, the trial court certified its order for interlocutory appeal, and we accepted jurisdiction of the case.

² We note that medical certainty is not the threshold for admissibility of expert witness testimony. *See Kaminski v. Cooper*, 508 N.E.2d 2d 29, 30 (Ind. Ct. App. 1987).

³ Parkinson’s opinion does not mention herbicides. At oral argument, counsel for the Estate abandoned its claim as to herbicide exposure.

DISCUSSION AND DECISION

The Estate has brought its claim against Norfolk under FELA. FELA imposes upon the railroad a non-delegable duty to use reasonable care in furnishing employees with a safe place to work and promulgates a statutory remedy for injured railroad workers. *N. Indiana Commuter Transp. Dist. v. Marron*, 812 N.E.2d 185, 188 (Ind. Ct. App. 2004); *Baltimore & Ohio Ry. Co. v. Taylor*, 589 N.E.2d 267, 272 (Ind. Ct. App. 1992), *trans. denied*. FELA is to be liberally construed, but it is not a workers' compensation statute. *Bethlehem Steel Corp. v. Consol. Rail Corp.*, 740 N.E.2d 900, 907 (Ind. Ct. App. 2000), *trans. denied* (citing *Consol. Rail Corp. v. Gottshall*, 512 U.S. 532, 543, 114 S. Ct. 2396, 129 L. Ed. 2d 427 (1994)). Moreover, FELA does not make the employer the insurer of the safety of its employees while they are on duty. *Id.*; *Baltimore & Ohio Ry. Co.*, 589 N.E.2d at 271. Rather, the basis of an employer's liability is its negligence, not the fact that injuries occur. *Bethlehem Steel Corp.*, 740 N.E.2d at 907; *Baltimore & Ohio Ry. Co.*, 589 N.E.2d at 271.

A railroad employer breaches its duty to provide a safe workplace when it knows or should know of a potential hazard in the workplace, yet fails to exercise reasonable care to inform and protect its employees. *Baltimore & Ohio Ry. Co.*, 589 N.E.2d at 272. The catalyst that ignites this duty is knowledge, either actual or constructive. *Id.* Thus an employer is not liable if it has no reasonable way of knowing that a potential hazard exists because FELA was never intended to hold an employer absolutely liable for workplace injuries. *Id.* However, if an employer learns or should learn of a potential hazard, it must

take reasonable steps to investigate and to inform and protect its employees, or it will be liable when injury occurs. *Id.*

To recover under FELA, the plaintiff must still prove that the employer was negligent. *Schultz v. Hodus*, 535 N.E.2d 1235, 1237 (Ind. Ct. App. 1989), *trans. denied*. In this respect, a plaintiff's prima facie case under FELA must include all the same elements as are found in a common law negligence action. *Id.* However, the standard of causation under FELA is substantially more liberal than that governing ordinary common-law negligence actions. *See Baltimore & Ohio Ry. Co.*, 372 U.S. 108, 116 (1963). Thus, FELA imposes liability upon railroad employers if the railroad's negligence played any part, even the slightest, in the employee's death or injury. *Id.* The railroad/tortfeasor must compensate its victim for even the improbable or unexpectedly severe consequences of its wrongful act. *Id.* Further, a finding of contributory negligence, even in excess of 50%, does not bar recovery under FELA. *Gouge v. Indiana Commuter Transp. Dist.*, 670 N.E.2d 363, 369 (Ind. Ct. App. 1996).

In FELA negligence actions, the role of the jury is much greater than in common-law negligence actions; the right of the factfinder to pass upon the question of the employer's liability must be most liberally viewed. *Baltimore & Ohio Ry. Co.*, 589 N.E.2d at 271. Moreover, under FELA, the factfinder's power to draw inferences is greater than in common-law actions. *Id.*

I. Motion to Strike

Norfolk argues that the trial court should have stricken Parkinson's testimony because his testimony does not meet the standard for admissibility of expert testimony in toxic exposure cases.

A trial court has broad discretion in ruling on a motion to strike. *In re Remonstrance Appealing Ordinance Nos. 98-004, 98-005, 98-006, 98-007 and 98-008, of Town of Lizton*, 769 N.E.2d 622, 631 (Ind. Ct. App. 2002). Generally, we review a trial court's decision to admit or exclude evidence for an abuse of discretion. *Meyer v. Marine Builders, Inc.*, 797 N.E.2d 760, 767 (Ind. Ct. App. 2003); *In re Remonstrance*, 769 N.E.2d at 631. This standard also applies to decisions to admit or exclude expert testimony. *Hannan v. Pest Control Servs., Inc.*, 734 N.E.2d 674, 679 (Ind. Ct. App. 2000), *trans. denied* (2001); *Wallace v. Meadow Acre Manufactured Housing, Inc.*, 730 N.E.2d 809, 812 (Ind. Ct. App. 2000), *trans. denied* (2001). We reverse a trial court's decision to admit or exclude evidence only if that decision is clearly against the logic and effect of the facts and circumstances before the court, or the reasonable, probable, and actual deductions to be drawn therefrom. *Hannan*, 734 N.E.2d at 679; *Wallace*, 730 N.E.2d at 812; *Ford Motor Co. v. Ammerman*, 705 N.E.2d 539, 550 (Ind. Ct. App. 1999), *trans. denied, cert. denied*, 529 U.S. 1021, 120 S. Ct. 1424, 146 L. Ed. 2d 315 (2000). Further, the trial court's decision will not be reversed unless prejudicial error is clearly shown. *In re Remonstrance*, 769 N.E.2d at 631.

The trial court acknowledged Norfolk's "compelling" arguments that Parkinson's opinion should be excluded under Evid. R. 702(b). *Appellant's Appendix* at 673. However, it found controlling the Estate's argument that actions under FELA require less evidence of

causation to establish liability than ordinary negligence actions and that a relaxed standard of causation in FELA actions also lowers the threshold of admissibility for expert testimony. Norfolk contends that the trial court erred in determining that this lower standard of admissibility applies in FELA cases. We need not decide whether a lower standard of admissibility applies, however, because Parkinson's testimony meets the requirements of Evid. R. 702(b).

A. Is Parkinson's testimony admissible under Evid. R. 702?

When FELA actions are adjudicated in state courts, they follow state procedural rules, even though the proceedings are governed by federal substantive law. *Eversole v. Consol. Rail Corp.*, 551 N.E.2d 846, 850 (Ind. Ct. App. 1990), *trans. denied*. Accordingly, state law governs the admissibility of evidence in such cases. *Gouge*, 670 N.E.2d at 369 n.4.

Evid. R. 702 relates to the admissibility of expert testimony. It assigns to the trial court a gatekeeping function of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand. *Lytle v. Ford Motor Co.*, 814 N.E.2d 301, 309 (Ind. Ct. App. 2004); *Hannan*, 734 N.E.2d at 679; *Hottinger v. Trugreen Corp.*, 665 N.E.2d 593, 596 (Ind. Ct. App. 1996), *overruled on other grounds by Dow Chemical Co. v. Ebling*, 753 N.E.2d 633 (Ind. 2001). In other words, the trial court's function is to control the admission of proffered expert testimony rather than merely admitting whatever is offered and leaving it to the jury to determine what weight it should be given. *State Dep't of Transp. v. Hoffman*, 721 N.E.2d 356, 359 (Ind. Ct. App. 1999).

Evid. R. 702 states:

“(a) If scientific, technical, or other specialized knowledge will 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 thereto in the form of an opinion or otherwise.

(b) Expert scientific testimony is admissible only if the court is satisfied that the scientific principles upon which the expert testimony rests are reliable.”

Accordingly, two requirements must be met in order for a witness to qualify as an expert. *Hannan*, 734 N.E.2d at 679. First, the subject matter must be distinctly related to some scientific field, business, or profession beyond the knowledge of the average layperson; and second, the witness must be shown to have sufficient skill, knowledge, or experience in that area so that the opinion will aid the trier of fact. *Id.* The proponent of expert testimony bears the burden of establishing the foundation and reliability of the scientific principles and tests upon which the expert’s testimony is based. *Lytte*, 814 N.E.2d at 308; *Hannan*, 734 N.E.2d at 679; *Wallace*, 730 N.E.2d at 812; *Ford Motor Co.*, 705 N.E.2d at 550. Where an expert’s testimony is based upon the expert’s skill or experience rather than on the application of scientific principles, the proponent of the testimony must only demonstrate that the subject matter is related to some field beyond the knowledge of lay persons and that the witness possesses sufficient skill, knowledge or experience in the field to assist the trier of fact to understand the evidence or to determine a fact in issue. *Lytte*, 814 N.E.2d at 308-09. However, when the expert’s testimony is based upon scientific principles, the proponent of the testimony must also establish that the scientific principles upon which the testimony rests are reliable. *Id.* at 309.

The Federal Rules of Evidence do not have a counterpart to Evid. R. 702(b), which was adopted before the United States Supreme Court's decision in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed. 2d 469 (1993), which in turn addressed the trial court's gatekeeping function of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand. *Indiana Michigan Power Co. v. Runge*, 717 N.E.2d 216, 236 (Ind. Ct. App. 1999). However, the Indiana Supreme Court has held that the federal evidence law of *Daubert* and its progeny are helpful in applying Indiana's Evid. R. 702. *Id.*; *Hottinger*, 665 N.E.2d at 596. The trial court's determination regarding the admissibility of expert testimony under Evid. R. 702 will not be disturbed unless the trial court's application of the *Daubert* framework is manifestly erroneous. *Runge*, 717 N.E.2d at 236; *Hottinger*, 665 N.E.2d at 596.

About Evid. R. 702, our supreme court has explained:

“In adopting Evidence Rule 702, this Court did not intend to interpose an unnecessarily burdensome procedure or methodology for trial courts. By requiring trial courts to be satisfied that expert opinions will assist the fact-finder and that the underlying scientific principles are reliable, Rule 702 guides the admission of expert scientific testimony. Although it authorizes the exclusion of purported scientific evidence when the trial court finds that it is based on unreliable principles, the adoption of Rule 702 reflected an intent to liberalize, rather than to constrict, the admission of reliable scientific evidence.”

Sears Roebuck & Co. v. Manuilov, 742 N.E.2d 453, 460 (Ind. 2001). Before Evid. R. 702(b), Indiana courts applied the test originating from *Frye v. United States*, 293 F. 1013, 1014 (1923), which determined the admissibility of novel scientific evidence based upon its general acceptance in the scientific community. *Manuilov*, 742 N.E.2d at 460. Evid. R. 702(b) is broader than the *Frye* test in that it permits trial courts to consider factors other than

general acceptance and thus may permit expert testimony in new, innovative areas even though general acceptance may not yet have been achieved but which are otherwise found to be based on reliable scientific principles. *Id.* at 460-61. This is analogous to the liberalizing of the *Frye* rule achieved at the federal level by *Daubert*. *Id.* Given that the thrust of our Evid. R. 702(b) was to liberalize admissibility of reliable scientific evidence, it is most improbable that a generally accepted scientific principle would be too unreliable to be admitted into evidence. *Id.* at 461.

“If applied to separately evaluate every subsidiary point made during the testimony of a qualified expert regarding matters based on reliable science, Rule 702(b) can become excessively burdensome to the fair and efficient administration of justice.” *Id.* Instead, it directs the trial court to consider the underlying reliability of the general principles involved in the subject matter of the testimony, but it does not require the trial court to re-evaluate and micromanage each subsidiary element of an expert’s testimony within the subject. *Id.* Once the trial court is satisfied that the expert’s testimony will assist the trier of fact and that the expert’s general methodology is based on reliable scientific principles, then the accuracy, consistency, and credibility of the expert’s opinions may properly be left to vigorous cross-examination, presentation of contrary evidence, argument of counsel, and resolution by the trier of fact. *Id.*

Accordingly, when faced with a proffer of expert scientific testimony, the court must make a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and whether that reasoning or methodology properly can be applied to the facts in issue. *Lytle*, 814 N.E.2d at 309; *Runge*, 717 N.E.2d at 236; *Hottinger*,

665 N.E.2d at 596. Scientific knowledge admissible under Evid. R. 702 connotes more than subjective belief or unsupported speculation. *Lytle*, 814 N.E.2d at 309; *Clark v. Sporre*, 777 N.E.2d 1166, 1170 (Ind. Ct. App. 2002); *Hannan*, 734 N.E.2d at 679. This court has explained: “Pseudoscientific conjectures that are probably wrong are of little use in the project of reaching a quick, final, and binding legal judgment.” *Hottinger*, 665 N.E.2d at 596 (citations omitted). Moreover, to be admissible, an expert’s opinion that an event caused a particular injury must be based on something more than coincidence. *Clark*, 777 N.E.2d at 1170-71. Thus, expert testimony must be supported by appropriate validation or good grounds based on what is known, establishing a standard of evidentiary reliability. *Lytle*, 814 N.E.2d at 309; *Hannan*, 734 N.E.2d at 679.

Ordinarily, a key question to be answered in determining whether a theory or technique is scientific knowledge that will assist the trier of fact will be whether it can be empirically tested. *Lytle*, 814 N.E.2d at 309; *Armstrong v. Cerestar USA, Inc.*, 775 N.E.2d 360, 366 (Ind. Ct. App. 2002), *trans. denied* (2003). Another pertinent consideration is whether the theory or technique has been subjected to peer review and publication. *Lytle*, 814 N.E.2d at 309; *Armstrong*, 775 N.E.2d at 366. Widespread acceptance can also be an important factor in ruling whether particular evidence is admissible under Indiana Evidence Rule 702, and a technique which has attracted only minimal support may properly be viewed with skepticism. *Lytle*, 814 N.E.2d at 309; *Armstrong*, 775 N.E.2d at 366. Other relevant factors are whether there is a known or potential rate of error, as well as the existence and maintenance of standards controlling the theory or technique’s operation. *Armstrong*, 775 N.E.2d at 366. We also note, however, that while such factors are useful, there is no specific

test that must be considered in order to satisfy the requirements of Evid. R. 702(b). *Lytle*, 814 N.E.2d at 309; *Hannan*, 734 N.E.2d at 680.

The inquiry envisioned by Evid. R. 702 is a flexible one with scientific validity--and thus the evidentiary relevance and reliability--of the principles that underlie a proposed submission as its overarching subject. *Hottinger*, 665 N.E.2d at 596. The focus is solely on principles and methodology, not on the conclusions that they generate. *Id.* at 596-97.

The Estate contends that Parkinson's testimony meets Evid. R. 702(b)'s requirements. It argues that Parkinson "utilized the generally accepted methodology for determining medical causation in evaluating Robert Wagers' case." *Appellee's Brief* at 48. This methodology consisted of obtaining a history of Wagers's chemical exposure by reviewing the depositions of Wagers's co-workers and a review of Wagers's medical records, reviewing the relevant medical literature, and conducting a differential diagnosis considering all of the potential causal factors in Wagers's case. Because Norfolk does not attack Parkinson's qualifications⁴ or the premise that asbestos and diesel fumes can cause lung cancer, the Estate characterizes Norfolk's argument as "more an attack on the weight of the evidence rather than the admissibility of Dr. Parkinson's opinion evidence." *Appellee's Brief* at 50.

Norfolk looks to cases in which this court has found expert testimony in toxic exposure cases failed to meet Evid. R. 702(b)'s threshold. Specifically, Norfolk's criticism of Parkinson's testimony regarding the cause of Wagers's lung cancer is that it is unreliable

⁴ Evid. R. 702(a) requires that the expert be qualified by knowledge, skill, experience, training or education. *Hannan*, 734 N.E.2d at 679. An expert must have sufficient skill in the particular area of expert testimony before the expert can offer opinions in that area. *Id.* Norfolk does not challenge Parkinson's testimony on this basis.

because it is not based on any specific information regarding Wagers's level of exposure to, i.e., the dose of, asbestos and diesel fumes.

In *Hottinger*, 665 N.E.2d at 597-98, a plaintiff alleged that she suffered injuries from exposure to the defendant's herbicide. She presented the testimony of Dr. Heuser, a Ph.D. and medical doctor specializing in internal medicine with an emphasis on movement disorders, recurrent headaches, chronic pain, endocrine problems, and toxic exposure. Heuser conducted a literature search to determine whether any illnesses or injuries had been found to be associated with the herbicide and found articles documenting findings of peripheral neuropathy and nervous system injury after exposure. Heuser also submitted a paper of his own which had been accepted for publication in a scientific journal that outlined a methodology for confirming the effects of toxic chemical exposure upon the brain.

Heuser reviewed the plaintiff's medical history and determined that, before her exposure to the herbicide, she had had some mild chemical sensitivity that had not interfered with her ability to work full-time or to live a normal life. However, after her exposure, she had brain, peripheral nerve, and immune function deficits consistent with toxic exposure to the herbicide. Before her exposure, the plaintiff had had a serum test used to diagnose autoimmune disorders, the results of which had been normal. However, the same test performed after her exposure to the herbicide showed abnormal results.

The plaintiff's brain scan showed patterns consistent with other brain scan findings in patients exposed to neurotoxic chemicals, and other tests revealed that she had organic brain deficits compatible with toxic exposure. Heuser ordered several diagnostic tests that ruled out causes other than toxic exposure as the cause of the plaintiff's symptoms. He thus

concluded that the plaintiff had suffered a chemical injury as the result of her exposure to the defendant's herbicide. His opinion was based upon the temporal proximity of the onset of the plaintiff's symptoms to her exposure to the herbicide, her medical history both before and after exposure, his examination, the diagnostic evaluations performed, and his own education and experience. Moreover, his opinion that the plaintiff's injuries were caused by her exposure to the herbicide were supported by the scientific publications subjected to peer review as well as the temporal congruity of the onset of her symptoms with her exposure.

We concluded that the scientific principles upon which Heuser's opinion were based were sufficiently reliable such that it would assist the trier of fact in its determination of whether the plaintiff's injuries and continuing disabilities were caused by her exposure to the herbicide, even though there was no evidence as to the dose or level of the plaintiff's exposure. We therefore concluded that the trial court abused its discretion in determining that Heuser's opinion failed to satisfy the standards of Evid. R. 702 for admissibility. *Id.*

We have also found an expert's opinion that was not based on dose or exposure level to be sufficient to withstand summary judgment. In *Femco, Inc. v. Colman*, 651 N.E.2d 790, 793-94 (Ind. Ct. App. 1995), a plaintiff contended that she suffered injuries from her exposure to a cleaning product she used in her work as a school custodian. The defendant moved for summary judgment on her claims. In response, the plaintiff presented the affidavit of Dr. Drew, a medical doctor who was the plaintiff's physician at the time she was exposed to the cleaning product, who testified that he examined her and treated her for her symptoms, that he reviewed both her medical records and the Material Safety Data Sheet for the cleaner, and that he was certain that the plaintiff's exposure to the cleaner caused her injuries. We

noted that the Material Safety Data Sheet listed the ingredients of the cleaner and several symptoms and ailments that excessive inhalation of its vapors could cause.

The defendant argued that Drew's affidavit was insufficient because it lacked any foundation for his conclusion that exposure to the cleaner was the cause of the plaintiff's ailments and was therefore conclusory. We noted that in addition to Drew's affidavit, the court had before it the Material Safety Data Sheet for the cleaner, noting its possible toxic effects, and the manufacturer's answers to interrogatories that established that all of the ingredients of the cleaner were toxic and that possible harmful effects included many symptoms of which the plaintiff complained. We held that this combination of materials sufficiently raised a material issue of fact as to the issue of causation, and the trial court did not err in denying the defendant's motion for summary judgment. *Id.* See also *Harbin v. Burlington N. R.R. Co.*, 921 F.2d 129, 132 (7th Cir. 1990) (in FELA case for exposure to airborne contaminants, plaintiff "need not identify the specific composition and density of soot present in his work environment to survive a summary judgment motion").

By contrast, Norfolk points to *Outlaw v. Erbrich Prods. Co., Inc.*, 777 N.E.2d 14, 28-31 (Ind. Ct. App. 2002), *trans. denied* (2003) and *Hannan*, 734 N.E.2d at 680-83, arguing that these cases support the proposition that in toxic exposure cases, expert opinions not based on empirical evidence about the dose or level of exposure are not sufficiently reliable to be admissible under Evid. R. 702(b).

In *Outlaw*, 777 N.E.2d at 28-31, an employee sought worker's compensation benefits based on her workplace exposure to chemicals. In that case, the claimant manufactured toilet bowl cleaner and other consumer products containing chemicals and eventually developed a

respiratory condition. She faced the burden of proving that her respiratory condition arose out of her employment by establishing a causal connection between her work and the condition. We explained that an expert opinion was necessary to establish such a causal connection and that such an opinion must exhibit reasonable certainty or probability. Moreover, we explained that an expert's opinion is insufficient to establish causation when it is based only upon a temporal relationship between an event and a subsequent medical condition. We addressed the need for an expert's testimony in such a case to address the level of the plaintiff's exposure:

“In particular, when an expert witness testifies in a chemical exposure case that the exposure has caused a particular condition because the plaintiff was exposed and later experienced symptoms, without having analyzed the level, concentration or duration of the exposure to the chemicals in question, and without sufficiently accounting for the possibility of alternative causes, the expert's opinion is insufficient to establish causation because it is based primarily on the existence of a temporal relationship between the exposure and the condition and amounts to subjective belief and unsupported speculation.”

Id. at 29. Ultimately, we held that the Worker's Compensation Board did not err in finding that the plaintiff did not meet her burden of proof where one medical expert testified that the plaintiff's exposure to unspecified harmful agents caused her condition, but another testified that her injuries could not have occurred from inhaling fumes from the toilet bowl cleaner, but more likely were the result of her cigarette smoking. *Id.*

In this case, however, unlike in *Outlaw*, the chemicals at issue are known. The *Outlaw* plaintiff was speculating about what chemicals were present in the cleaner that could have caused her respiratory disease. Here, evidence shows that Wagers was exposed to diesel fumes and asbestos, and Parkinson based his opinion on exposure to these two

chemicals. Further, it is undisputed that both chemicals are carcinogens. Moreover, Parkinson did not attempt to exclude cigarette smoking as one of the causes of Wagers's lung cancer, but stated that it also could have been a contributing factor. Finally, Parkinson's opinion was based on a specified level of exposure.

In *Hannan*, 734 N.E.2d at 680-83, the plaintiffs sued for injuries they allegedly received from exposure to the defendant's pesticides in their home. At trial, the trial court excluded the proposed testimony of several of their proffered experts who would have testified that the plaintiffs' adverse health effects were caused by the defendant's chemicals. On appeal, the plaintiffs argued that the trial court abused its discretion in excluding them.

We reviewed the qualifications, opinion, and methodology of each expert in turn. The first, Dr. Johnson, would have testified that the plaintiffs suffered from multiple chemical sensitivity triggered by their exposure to the defendant's products. We noted that Johnson was an osteopathic physician who was not board certified in any relevant specialty. We observed that in order to arrive at his diagnosis, Johnson physically examined and interviewed one of the plaintiffs, but did not perform any testing, nor did he determine whether a chemical caused a particular illness. He also failed to include an analysis of the exposure levels or the dose of the chemical received by the plaintiffs. In fact, he had no information regarding the exposure level of the chemical in the plaintiffs' house or the dose allegedly received by any of them and had not attempted to calculate it. He had never visited their home, had no knowledge of the floor plan, size, dimensions, or window locations, and was not aware of the concentration and duration of exposure to the chemicals. Moreover, laboratory tests on one of the plaintiffs revealed normal exposure to all tested toxins.

Johnson explained that his diagnosis of chemical sensitivity was based on the plaintiffs' symptoms but admitted that the symptoms could have been caused by other ailments which he did not exclude.

The second expert, Dr. Evans, sought to testify that organophosphate exposure caused the plaintiffs' symptoms. We observed that Evans, who held a doctorate of philosophy in toxicology, did not have a medical degree, and by his own admission was not qualified to examine patients, define human medical diagnoses based upon neurological symptoms, or testify regarding medical causation. We also noted that Evans had no information regarding the exposure level of the chemicals or the actual dose received by any of the plaintiffs. Like Johnson, Evans had never inspected the plaintiffs' residence and was unaware of any specific information about it. He acknowledged that if the chemicals had been properly applied, the plaintiffs would not have suffered any medical effects from them, and further conceded that without evidence that the chemical was misapplied, there was no cause-and-effect basis to conclude that the plaintiffs were overexposed to the chemical.

Finally, Dr. Kelly contended that the plaintiffs acquired immunologic abnormalities as a result of the chemicals that the defendant applied to the residence. He based his conclusion on blood tests that had been taken five years after the exposure. However, Kelly conceded that the symptoms and alleged exposure did not satisfy the generally accepted and required criteria for his diagnosis, and there was no medical or scientific literature that supported the conclusion that the chemicals in question could cause the ailments at issue at any dose. Like the other experts, Kelly's diagnosis was devoid of any analysis of the exposure levels or the

dose of the pesticides received by the plaintiffs, despite his admission that such figures are relevant in the scientific methodology.

We concluded that the experts' opinions were based on a mere temporal coincidence of the pesticide application and the plaintiffs' alleged illness. We concluded that this relationship was insufficient to establish a prima facie case on the element of causation. We explained that none of the purported experts performed any testing that would rule out alternative causes of the plaintiffs' ailments ("differential diagnosis" testing) and noted that doing so is important in toxic tort cases so that other causes may be negated. Rather, we characterized the opinions of the plaintiffs' experts as tantamount to subjective belief or unsupported speculation because they failed to address or rule out other potential causes and were based on incomplete information. *Id.*

Norfolk also relies on cases from other jurisdictions brought under FELA where courts have excluded evidence that was not based on the dose or exposure level. For instance, in *Schmaltz v. Norfolk & W. Ry. Co.*, 878 F. Supp. 1119 (N.D. Ill. 1995), the court, applying *Daubert*, found that the plaintiff's experts' opinions were not grounded in the scientific method. Specifically, the court noted that the experts knew of no documented case where exposure to the herbicides at issue caused the plaintiff's illness, that they never tested the plaintiff for exposure to the herbicides, and that they were not aware of the concentration of the herbicide to which the plaintiff was exposed. The court observed that the experts' causation opinion appeared to be based on a temporal relationship and reiterated that this is insufficient to be admitted under Federal Rule of Evidence 702. *Id.*

Here, however, the Estate provided evidence as to the quantity of Wagers's exposure to asbestos and diesel fumes. Based on the depositions of Wagers's co-workers, Parkinson could have reasonably inferred that Wagers was "exposed on a daily basis to diesel fumes and diesel exhaust approximately five hours per day over a period of 21 years." *Appellee's Brief* at 54. Admittedly, Parkinson's opinion that workplace chemical exposure was a contributing cause of Wagers's lung cancer was not based on the results of any medical tests or the examination of x-rays or medical records that reveals any asbestos exposure. However, the evidence indicates that Wagers had more than a casual exposure to diesel fumes. Moreover, Parkinson testified that the scientific evidence absolutely demonstrates that diesel fumes are carcinogenic. Parkinson testified in his deposition about stacks of articles in scientific journals that support this conclusion. Parkinson relied on his review of the exposure evidence and his knowledge of the deleterious effects of diesel fumes to come to his conclusions. We hold that this testimony was admissible under Evid. R. 702.

B. Is the testimony relevant?

Norfolk further contends that Parkinson's testimony is inadmissible under Evid. R. 401 and 402 because it is not relevant. Specifically, it maintains that his testimony did not establish causation and therefore was not relevant.

This court employed a relevancy analysis to determine whether expert testimony should be admitted in *Runge*, 717 N.E.2d at 230-39. There, the plaintiffs claimed damages from injuries they alleged occurred as a result of their exposure to electric and magnetic fields (EMF) from the defendant's power lines. The defendant moved for summary

judgment. The defendant contended that the plaintiffs' scientific experts' opinions were not based on reliable scientific principles and should be excluded.

The defendant designated testimony from the plaintiffs' treating physicians, all of whom stated that they did not diagnose EMF exposure as the cause of the plaintiffs' medical complaints. The defendant also presented testimony from various experts that they could not offer an opinion that EMF exposure caused the plaintiffs' injuries.

The plaintiffs relied on the opinion of Smith, a Ph.D. in anatomy but not a medical doctor, to establish causation. Although the parties debated the admissibility of scientific expert testimony under Evid. R. 702, we looked first to Ind. Evidence Rule 401 to determine whether the evidence was relevant. We explained that evidence establishing a mere possibility of cause or which lacks reasonable certainty or probability is not sufficient evidence by itself to support a verdict and that civil liability may not be predicated purely on speculation. We observed that regardless of Smith's qualifications to offer expert opinions under Evid. R. 702, his opinions to the issue of medical causation and the facts in issue were of doubtful relevance because an expert's opinion that something is possible is insufficient by itself to support a material factual question. We concluded that Smith's testimony regarding the possible effects of EMF on the plaintiffs' health was not relevant to the determination of causation, because he failed both to examine the plaintiffs' medical conditions and histories and to rule out other contributing factors.

We then examined the admissibility of the expert testimony under Evid. R. 702 and concluded that his testimony could not assist the trier of fact to understand the evidence or to determine a fact in issue with respect to the issue of causation. We observed that Smith did

not have a medical degree or detailed knowledge of the plaintiffs' current medical conditions and past medical histories that would form the critical factual basis for his expert opinions. We further noted that he failed to account for other possible contributing factors to the plaintiffs' alleged injuries and failed to particularize his opinions to reflect the facts of the case at bar. Accordingly, we concluded that Smith's testimony was inadmissible and that the plaintiffs therefore failed to demonstrate the existence of a genuine issue of material fact regarding causation of their alleged injuries.

We then examined the testimony of another expert, Dahlberg, and found the same flaws. We noted that Dahlberg did not have a medical degree or any medical training, had neither reviewed the plaintiffs' medical records nor spoken with their treating physicians, had not conducted an independent evaluation of whether health risks actually existed on the plaintiffs' property, and had acknowledged uncertainty in determining cause and effect regarding EMF. We therefore reversed the trial court's denial of the defendant's motion to exclude Smith and Dahlberg's testimony. *Id.*

However, unlike the experts in *Runge*, Parkinson's testimony is not based on any novel scientific theory. Further, Parkinson's expertise is directly related to one of the central facts at issue, namely, whether Wagers's exposure to diesel fumes and asbestos had a causal relationship to his lung cancer. Moreover, in light of the lower burden of proof on the Estate in this FELA case, Parkinson's testimony has the tendency to make the existence of a "fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." Ind. Evidence Rule 401. Apportioning fault between

Norfolk for the chemical exposures and Wagers for his cigarette smoking is a function for the jury.

C. Is the testimony unduly prejudicial?

Finally, Norfolk asserts that Parkinson's testimony is inadmissible under Evid. R. 403 because the danger of unfair prejudice substantially outweighs its probative value. In *Ollis v. Knecht*, 751 N.E.2d 825, 831 (Ind. Ct. App. 2001), *trans. denied* (2002), we explained that "[i]ntroduction of evidence with an unknown probative value regarding the only issue to be decided by the jury could be prejudicial to the opposing party and could cause confusion amongst the jury by giving them extraneous information to consider." *Id.* Norfolk contends that Parkinson's testimony consists of "conjectures that are probably wrong," *Appellant's Brief* at 50, and which would only confuse the jury. While we agree that while Parkinson's testimony is "prejudicial" to Norfolk in the sense that it is damaging to its position that it is not at fault, it is not unduly so. Norfolk's argument goes to the weight of the evidence and not its admissibility. Evid. R. 403 is not a bar to the admission of Parkinson's testimony.

II. Motion for Summary Judgment

Norfolk argues that the trial court erred in denying its motion for summary judgment because the Estate failed to present any evidence on the amount or "dose" of Wagers's exposure to diesel fumes and asbestos.

In reviewing the grant or denial of a motion for summary judgment, this court stands in the shoes of the trial court, applying the same standards in deciding whether to affirm or reverse summary judgment. *Wilson v. Lincoln Fed. Sav. Bank*, 790 N.E.2d 1042, 1046 (Ind. Ct. App. 2003); *Ross v. Indiana State Bd. of Nursing*, 790 N.E.2d 110, 115-16 (Ind. Ct. App.

2003). We do not weigh evidence, but will liberally construe the facts in the light most favorable to the nonmoving party. *Wilson*, 790 N.E.2d at 1046; *Ross*, 790 N.E.2d at 116. Summary judgment should be granted only when the designated evidence shows that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law. Ind. Trial Rule 56(C); *Poznanski ex rel. Poznanski v. Horvath*, 788 N.E.2d 1255, 1258 (Ind. 2003); *Reeder v. Harper*, 788 N.E.2d 1236, 1240 (Ind. 2003). Accordingly, on appeal, we must determine whether there is a genuine issue of material fact and whether the trial court has correctly applied the law. *Wilson*, 790 N.E.2d at 1046. The party appealing the grant of summary judgment has the burden of persuading this court on appeal that the trial court's ruling was improper. *Id.*; *Ross*, 790 N.E.2d at 116; *New Albany-Floyd County Educ. Ass'n v. Ammerman*, 724 N.E.2d 251, 256-57 (Ind. Ct. App. 2000).

When the defendant is the moving party, the defendant must show that the undisputed facts negate at least one element of the plaintiff's cause of action or that the defendant has a factually unchallenged affirmative defense that bars the plaintiff's claim. *Runge*, 717 N.E.2d at 226.

Essentially, Norfolk argues that if Parkinson's testimony is stricken, the Estate has presented no evidence of causation, one of the elements for which it has the burden of proof. Where expert testimony is advanced to establish causation, summary judgment is properly entered in favor of the defendant where that testimony fails to meet the admissibility requirements of Evid. R. 702. *Hannan*, 734 N.E.2d at 678. However, because we find that the trial court did not err in admitting Parkinson's testimony, the Estate presented sufficient evidence of causation to withstand summary judgment.

Affirmed.

SULLIVAN, J., and ROBB, J., concur.