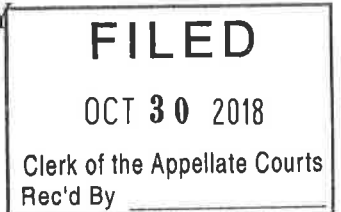


IN THE SUPREME COURT OF TENNESSEE  
SPECIAL WORKERS' COMPENSATION APPEALS PANEL  
AT KNOXVILLE  
August 6, 2018 Session

**ALCOA, INC. v. GEORGETTE MCCROSKEY, INDIVIDUALLY AND AS  
SURVIVING SPOUSE OF MARCUS MCCROSKEY**

**Appeal from the Circuit Court for Blount County  
No. L-18617 David R. Duggan, Judge**

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**No. E2018-00087-SC-R3-WC – Mailed September 24, 2018**

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Georgette McCroskey alleged her deceased husband, Marcus McCroskey (“Employee”), died from pancreatic cancer on June 15, 2012, as the result of work-related exposure to coal tar pitch while employed by Alcoa, Inc. (“Employer”). Following the trial, the trial court held Mrs. McCroskey had not carried her burden of proof on the issue of whether or not Employee’s pancreatic cancer was caused by his work-related exposure to coal tar pitch. Mrs. McCroskey appeals the decision, arguing the preponderance of evidence supports the conclusion Employee’s work-related exposure was a substantial contributing factor in his development of pancreatic cancer and death. The appeal has been referred to the Special Workers’ Compensation Appeals Panel for a hearing and a report of findings of fact and conclusions of law pursuant to Tennessee Supreme Court Rule 51. We affirm the judgment.

**Tenn. Code Ann. § 50-6-225(e) (2014) (applicable to injuries  
occurring prior to July 1, 2014) Appeal as of Right;  
Judgment of the Circuit Court Affirmed**

DON R. ASH, SR.J., delivered the opinion of the Court, in which SHARON G. LEE, J., and WILLIAM B. ACREE, JR., SR.J., joined.

J. Anthony Farmer and Christopher H. Hayes, Knoxville, Tennessee, for the appellant, Georgette McCroskey.

James E. Wagner, Knoxville, Tennessee, for the appellee, Alcoa, Inc.

## OPINION

### Factual and Procedural Background

Employee was employed by Employer from January 17, 1966, through December 1, 1996. During his employment, Employee worked in a number of capacities, including brick mason helper and equipment worker.

Between 1978 and 1996, Employer conducted the process of producing primary aluminum from alumina at its South Plant. During this time, Employer primarily used the “prebake” smelting process to produce aluminum.

Wayne Crisp, Employee’s coworker for approximately thirty years, testified Employee worked as a “small equipment operator” and “brick mason’s helper.” He agreed he and Employee worked “in and out of the potrooms . . . [o]n a regular basis . . . where the actual aluminum smelting process occurs at [Employer’s] South Plant[.]” He further agreed “coal tar pitch is used in the process of aluminum smelting” and he saw “the coal tar pitch present where [he and Employee] were working[.]”

Employer does not contest Employee was exposed to coal tar pitch or at times he worked in areas involved in the smelting process and production of aluminum during his employment.

Employee was diagnosed with stage two pancreatic cancer in 2004 and underwent surgery and chemotherapy. In 2007, Employee was diagnosed with recurrent pancreatic cancer with metastases to the lung, which necessitated surgery. Employee died on June 15, 2012, from complications of his lung and pancreatic cancers.

Employee retired, with thirty years of service, on February 1, 1996. He later received a letter from the “Alcoa Corporate Center” dated June 2, 2008, addressed to “Dear Retiree/Former Employee.” The letter included a description of the “health care screening program<sup>1</sup> for employees and retirees who were exposed to coal tar pitch, a material used in the aluminum-making process.” It also included a “discussion guide” regarding Employer’s free coal tar pitch screening program for him to “share with [his] doctor.” The “discussion guide” referenced a “series of studies regarding coal tar pitch” sponsored by Employer in the 1990s “undertaken to determine whether there were risks for cancer at the lower levels of CTP [coal tar pitch] which might still be occurring in the aluminum industry” and the published results which “suggest that some cancer risk may exist at exposure levels lower than previously believed to be a risk.”

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<sup>1</sup> Employer initiated the “health care screening program” for former employees in 1999.

The “Physician Discussion Guide” also included a cautionary statement regarding “increased risks . . . reported for other organs from occupational exposures to CTP [coal tar pitch] in the aluminum smelting industry[.]” The “Physician Discussion Guide” included specific references to information from the International Agency for Research on Cancer (IARC) regarding the “increased risks . . . from occupational exposures to [coal tar pitch]” associated with “the pancreas and kidney.” With respect to pancreatic cancer, the “Physician Discussion Guide” stated:

According to International Agency for Research on Cancer (IARC), increased risks have been reported for other organs from occupational exposures to CTP [coal tar pitch] in the aluminum smelting industry; namely the pancreas and kidney. However, the scientific literature remains inconclusive.

At trial, the parties presented medical testimony by deposition: Dr. Theron Blickenstaff for Mrs. McCroskey and Dr. Michael Morse for Employer.

Dr. Blickenstaff is a board certified specialist in occupational medicine, with expertise in epidemiology. He worked for Eastman Chemical Company for seventeen years, including eight to ten years devoted to applied toxicology and the interpretation of epidemiological studies.

Dr. Blickenstaff discussed generally the field of epidemiology and the study of the causes/distribution of diseases and the risk factors for chronic diseases, including exposure to chemical substances. Dr. Blickenstaff explained, “[I]f a given risk factor shows up often enough and in a consistent way and meets some of the criteria that are used for determining causation, then it will be accepted as being a risk factor, legitimate risk factor for that disease.” Dr. Blickenstaff acknowledged, however, this gets “tricky” when trying to apply data from a group to an individual.<sup>2</sup>

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<sup>2</sup> General causation addresses whether a particular set of circumstances—e.g., exposure to a specific substance—has scientifically been established as a cause of a particular disease or condition. Specific causation addresses whether the medical or scientific expert proof establishes the particular set of circumstances—e.g., exposure to a specific substance—was the cause of the condition or disease in a particular individual. See, e.g., Pluck v. B.P. Oil Pipeline Co., 640 F.3d 671, 676-77 (6th Cir. 2011). Neither the parties nor the trial court expressly addressed this case in terms of general and specific causation. However, this case centers on the sufficiency of general causation evidence linking coal tar pitch exposure and pancreatic cancer to support Dr. Blickenstaff’s specific causation opinion linking Employee’s exposure to coal tar pitch and his subsequent development of pancreatic cancer.

Dr. Blickenstaff acknowledged Employer's 2008 letter primarily concerned screening for bladder cancer and there was, in fact, no screening procedure for pancreatic cancer.

Dr. Blickenstaff testified the most recent and thorough review of the studies addressing causation is a 2014 article/review "Cancer Risks in Aluminum Reduction Plant Workers/A Review," authored by Graham W. Gibbs, PhD and France Labreche, PhD, and published in the Journal of Occupational and Environmental Medicine, Vol. 56, Number 55 (May 2014). According to Dr. Blickenstaff, this article was a "main influence" in the formulation of his opinions in this case. In addition, Dr. Blickenstaff reviewed Employee's medical records and the testimony of a coworker with respect to their work.

Dr. Blickenstaff opined as follows regarding the cause of Employee's pancreatic cancer: "[T]he totality of all of that evidence says to me that he was at a significantly increased risk of developing pancreatic cancer because of his work exposures." He further opined Employee's work-related exposure was a substantial contributing factor to his development of pancreatic cancer.

On cross-examination, Dr. Blickenstaff acknowledged he has no prior experience with coal tar pitch exposure and he has never treated patients with pancreatic cancer; indeed, he does not treat patients. This is his first case involving pancreatic cancer, coal tar pitch, or an aluminum worker. Dr. Blickenstaff further acknowledged limiting language within the article upon which he relied regarding a causal relationship between coal tar pitch and pancreatic cancer:

**Objective and Methods:** This review examines epidemiological evidence relating to cancers in the primary aluminum industry where most of what is known relates to Soderberg operations or to mixed Soderberg/prebake operations. **Results and Conclusions:** Increased lung and bladder cancer risks have been reported in Soderberg workers from several countries, but not in all. After adjustment for smoking, those cancer risks still increase with cumulative exposure to benzo(a)pyrene, used as an index of coal tar pitch volatiles exposure. *Limited evidence has been gathered in several cohorts for an increased risk of tumors at other sites, including stomach, pancreas, rectum/rectosigmoid junction, larynx, buccal cavity/pharynx, kidney, brain/nervous system, prostate, and lymphatic/hematopoietic tissues (in particular non-Hodgkin lymphoma, Hodgkin disease, and leukemia). Nevertheless, for most of these tumor sites, the relationship with specific exposures has not been demonstrated clearly and further follow-up of workers is warranted.*

...  
**AVAILABLE EVIDENCE BY CANCER SITE**  
...

**Pancreatic cancer:** consistent evidence (exposure unclear). Although pancreatic cancer has now been reported in cohorts in several countries, *there is no clear consistency in results*. It is interesting to note that in the US study, there was a clear excess of pancreatic cancer mortality in workers over working in the potrooms (SMR = 138) and carbon plant (SMR = 142.1). The excess was significant for workers spending more than 5 years in the potrooms, and the highest risk was in prebake operations. In Italy also, the excess was larger in carbon plant workers and it was also reported that previous work as a farmer and hyperglycemia were associated with the increased risk. In Norway, the increased risk was found in mixed prebake and Soderberg plants (with higher risks with a 20-year lag), whereas in Quebec, the highest risk was found in one small plant with risks being essentially at background in much larger plants. *This cancer needs further investigation in several countries and also in prebake operations, especially with adequate control of known risk factors. So far, this cancer site has not been associated with sufficient evidence to conclude that it is related to a specific exposure found in potrooms.*

(Emphasis added) (Footnotes omitted). According to Dr. Blickenstaff, the article provides a sufficient causal connection between coal tar pitch exposure and pancreatic cancer to support his opinions in Employee's case, despite the limitations noted in the article itself.

Dr. Blickenstaff conceded pancreatic cancer can occur without known risk factors. He further conceded Employee exhibited several recognized risk factors; however, he characterized these risk factors as "weak."

Dr. Morse is a physician board certified in internal medicine and medical oncology. He practices at Duke Medical Center, where he predominantly treats patients with gastrointestinal cancers, including pancreatic cancer. Dr. Morse sees approximately fifty pancreatic cancer cases each year. He performs research in the management and treatment of pancreatic cancer and also studies the biology of cancer. While he understands the epidemiology of diseases, and has limited training in, and uses, epidemiology in his clinical practice, Dr. Morse is not a specialist in the fields of epidemiology or occupational medicine. Like with Dr. Blickenstaff, this is Dr. Morse's first aluminum smelting exposure case.

Dr. Morse reviewed the relevant literature, including the article relied upon by Dr. Blickenstaff. He opined the literature regarding exposure to coal tar pitch and pancreatic cancer remains inconclusive. Although some data exists, its quality and proper interpretation remain in question. While the literature does identify workplace exposures leading to a potential increased risk of pancreatic cancer, the data is inconclusive.

According to Dr. Morse, most patients, including Employee, possess more-scientifically-established risk factors which are a more likely cause of pancreatic cancer. Employee possessed a number of well-established risk factors: diabetes, overweight to obese, diminished physical activity, diet, age, and male gender. Dr. Morse stated these risk factors “absolutely” were enough to cause his pancreatic cancer absent any risk factors at work. Noting the existence of literature indicating a possible association between coal tar pitch and pancreatic cancer, Dr. Morse could not eliminate coal tar pitch exposure as contributing to the development of pancreatic cancer. However, given the inconclusive scientific evidence and data, he found no medical and scientific proof such exposure was/is a cause of pancreatic cancer.

On April 1, 2014, Employer filed suit against Employee’s surviving spouse, Mrs. McCroskey. She filed an answer and counter-claim alleging Employee had suffered a work-related occupational disease as a result of exposure to substances, including coal tar pitch, in his work with Employer. The trial court held a bench trial on December 14, 2017, and rendered its decision on December 15, 2017. The trial court held Mrs. McCroskey had failed to meet her burden of proving causation. Mrs. McCroskey appeals.

### **Analysis**

The applicable standard of review in this case is set forth in Tenn. Code Ann. § 50-6-225(e) (2008): “Review of the trial court’s findings of fact shall be de novo upon the record of the trial court, accompanied by a presumption of the correctness of the finding, unless the preponderance of the evidence is otherwise.” The trial court’s factual findings are entitled to considerable deference. When the competing expert medical testimony differs, it is within the trial court’s discretion to accept the opinion of one expert over another. The reviewing court, however, may draw its own conclusions about the weight and credibility to be given to expert testimony when all of the medical proof is by deposition; deference need not be afforded to a trial court’s findings based upon documentary evidence such as depositions. Tryon v. Saturn Corp., 254 S.W.3d 321, 327 (Tenn. 2008) (citation omitted); Fritts v. Safety Nat. Cas. Corp., 163 S.W.3d 673, 679 (Tenn. 2005) (citations omitted).

This is an occupational disease/death case in which the exposure, development of the disease, and death all occurred prior to July 1, 2014. The sole issue is causation, which turns on the competing testimonies of the parties' respective expert witnesses, both of whom testified by deposition. The Supreme Court has previously noted with respect to causation in such cases:

The Tennessee Legislature has established the following six elements that must be satisfied to sustain a workers' compensation occupational disease claim:

As used in this chapter, "occupational diseases" means all diseases arising out of and in the course of employment. A disease shall be deemed to arise out of the employment only if:

- (1) It can be determined to have followed as a natural incident of the work as a result of the exposure occasioned by the nature of the employment;
- (2) It can be fairly traced to the employment as a proximate cause;
- (3) It has not originated from a hazard to which workers would have been equally exposed outside of the employment;
- (4) It is incidental to the character of the employment and not independent of the relation of employer and employee;
- (5) It originated from a risk connected with the employment and flowed from that source as a natural consequence, though it need not have been foreseen or expected prior to its contraction; and
- (6) There is a direct causal connection between the conditions under which the work is performed and the occupational disease. Diseases of the heart, lung, and hypertension arising out of and in the course of any type of employment shall be deemed to be occupational diseases.

Tenn. Code Ann. § 50-6-301.

Excel Polymers, LLC v. Broyles, 302 S.W.3d 268, 274 (Tenn. 2009).

The Court has further explained:

Generally speaking, a workers' compensation claimant must establish by expert medical evidence the causal relationship between the alleged injury and the claimant's employment activity, "[e]xcept in the most obvious, simple and routine cases." The claimant must establish causation by the preponderance of the expert medical testimony, as supplemented by the evidence of lay witnesses. As we observed in Cloyd v. Hartco Flooring Co., 274 S.W.3d 638, 643 (Tenn. 2008)], the claimant is granted the benefit of all reasonable doubts regarding causation of his or her injury:

"Although causation in a workers' compensation case cannot be based upon speculative or conjectural proof, absolute certainty is not required because medical proof can rarely be certain. . . ." All reasonable doubts as to the causation of an injury and whether the injury arose out of the employment should be resolved in favor of the employee.

The trial court may properly award benefits based upon medical testimony that the employment "could or might have been the cause" of the employee's injury when there is also lay testimony supporting a reasonable inference of causation.

Id. at 274-75 (citations omitted).

The trial court found the testimony of Employer's expert, Dr. Morse, more persuasive than the testimony of Mrs. McCroskey's expert, Dr. Blickenstaff. It did so on the ground that the single article relied upon by Dr. Blickenstaff—for the proposition exposure to coal tar pitch is causally linked to the development of pancreatic cancer—itsself counsels against such a conclusion. Again, the article cautions although "[l]imited evidence has been gathered in several cohorts for an increased risk of tumors at other sites, including . . . pancreas . . . [n]evertheless, for most of these tumor sites, the relationship with specific exposures has not been demonstrated clearly and further follow-up of workers is warranted." It further cautions "[pancreatic] cancer needs further investigation in several countries and also in prebake operations, especially with adequate control of known risk factors. So far, this cancer site has not been associated with sufficient evidence to conclude that it is related to a specific exposure found in potrooms." The article expressly states "there is no clear consistency in results" with respect to data regarding exposure to coal tar pitch and pancreatic cancer.

In contrast, Employer's expert, Dr. Morse, testified Employee possessed recognized risk factors for the development of pancreatic cancer which were wholly



unrelated to his work exposure to coal tar pitch. Dr. Morse testified unequivocally these risk factors—not any work-place exposure—caused Employee’s pancreatic cancer.

The evidence in the record does not preponderate against the trial court’s determination Mrs. McCroskey failed to meet her burden to establish causation. The article underlying Dr. Blickenstaff’s causation opinion expressly notes its evidentiary deficiencies. His opinion, therefore, is insufficient to establish a causal connection between Employee’s coal tar pitch exposure and development of pancreatic cancer.

**Conclusion**

The judgment of the trial court is affirmed. Costs are taxed to Georgette McCroskey, for which execution may issue if necessary.

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DON R. ASH, SENIOR JUDGE

IN THE SUPREME COURT OF TENNESSEE  
SPECIAL WORKERS' COMPENSATION APPEALS PANEL  
AT KNOXVILLE

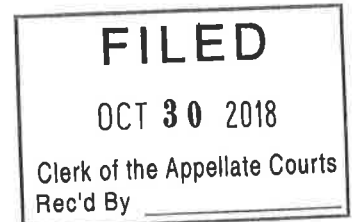
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**JUDGMENT ORDER**

This case is before the Court upon the entire record, including the order of referral to the Special Workers' Compensation Appeals Panel, and the Panel's Memorandum Opinion setting forth its findings of fact and conclusions of law, which are incorporated herein by reference.

Whereupon, it appears to the Court that the Memorandum Opinion of the Panel should be accepted and approved; and

It is, therefore, ordered that the Panel's findings of fact and conclusions of law are adopted and affirmed, and the decision of the Panel is made the judgment of the Court.

Costs are assessed to Georgette McCroskey, for which execution may issue if necessary.

It is so ORDERED.

PER CURIAM