

Mark May appeals the decision of the Full Worker's Compensation Board (the Board) denying his claim for benefits. May challenges a number of the Board's findings of fact and its ultimate conclusion that May failed to establish his sphenoid sinus cancer arose out of his employment with Ashley F. Ward, Inc. (Ashley Ward).

We reverse and remand.

May was employed at Ashley Ward (a machine shop with about thirty employees) from approximately 1997 to February 2005. He worked in various capacities in the Acme-Gridley screw machine area, ultimately becoming a working supervisor his last three years with the company.

Throughout his time at Ashley Ward, May's job duties included using grinders for about an hour and a half per day to sharpen the carbide tools from the screw machines. The tools were made of various heavy metals¹ and required periodic sharpening. The grinders used to sharpen the tools were spaced six to eight feet apart. For his first several years of employment, the grinders were not equipped with any type of ventilation or vacuum system and were located in a separate small room at the facility. Sometime during the first five years of May's employment, Ashley Ward acquired new, used grinders from another company which it placed along a wall in the back of the facility. Three large exhaust fans were placed ten to fifteen feet above the grinding machines. Within six months of acquiring the grinders, Ashley Ward equipped them with a vacuum system that suctioned away and collected dust/fines during the grinding process. The collection tubes for the vacuum system were

¹ The parties stipulated in this regard as follows: "The carbide tools were manufactured by a variety of companies. Material Data Safety Sheets maintained by Ashley F. Ward and admitted by Stipulation list several heavy metals which the cutting tools were made of." *Appendix* at 14.

located directly adjacent to the grinding wheels.² In addition to the exhaust fans and vacuum system for the grinding area, the facility had “very large exhaust fans for like in the summertime.” *Id.* at 127.

Employees at Ashley Ward were not mandated to wear any type of dust or ventilation masks while grinding. Further, according to Tirota, “the amount of dust or fines that are apparent to the individual is just not noticeable.” *Id.* at 131. Although Tirota was not aware of any air-quality studies over the past two decades, he indicated generally that OSHA had visited the facility in the past and had not taken issue with the grinding area.

In the fall of 2004, May began having headaches and coughing up blood. Despite prior efforts, his ailment was not diagnosed until he was admitted to the ER on February 10, 2005 with a severe headache. On that date, Michael Agostino, M.D.,³ discovered a large tumor in May’s sphenoid sinus. Dr. Agostino immediately biopsied the majority of the tumor which he opined had been developing for about seventeen months. The pathologist initially described the tumor as an undifferentiated carcinoma. Additional testing ruled out the possibility that the tumor resulted from melanoma, lymphoma, germ cell, or neuroendocrine. Further, testing revealed that the tumor was a surface cell type, not small cell type, meaning that the cancer “developed in the surface of the cell.” *Id.* at 280.

² According to the Director of Operations for Ashley Ward, Todd Tirota, this vacuum system “doesn’t do anything as far as the actual air. It just sucks the actual grinding dust away from the machine itself and then contains it.” *Appendix* at 128. This is unlike the Smog-Hog ventilation systems at each screw machine that “vacuums the mist out of the machine and transforms it into clean air.” *Id.* at 124.

³ Dr. Agostino is a surgeon specializing in Otolaryngology (head and neck surgery), with training in diagnosing and treating head and neck cancer.

Following the biopsy, May underwent chemotherapy and radiation treatment. Although treatment resolved the tumor, May suffered long-term side effects rendering him totally disabled. He had additional sinus surgery at the University of Pittsburg Medical Center in August 2006. May will continue to require future medical treatment to monitor for reoccurrence of cancer and to deal with the permanent side effects from his prior surgeries, chemotherapy, and radiation.

In October 2005, May filed his application for adjustment of claim. The matter was eventually submitted by written stipulation and briefs to a single hearing member of the Board. On April 16, 2010, the hearing member issued findings and conclusions and denied May's application for adjustment of claim. Specifically, the hearing member concluded, "Plaintiff has not demonstrated that his sphenoid sinus cancer was the result of an accident which arose out of and occurred in the course of his employment with Defendant". *Appendix* at 13. Thereafter, May filed for review by the Full Board. The Board held a hearing on August 30, 2010. The Board upheld the decision of the single hearing member modifying the award as follows:

AWARD

IT IS, THEREFORE, CONSIDERED, ORDERED AND ADJUDGED by the Single Hearing Member of the Worker's Compensation Board of Indiana that Plaintiff has not demonstrated that his sphenoid cancer was the result of an accident which arose out of and occurred in the course of his employment with Defendant, *and that this was not an occupational disease situation*, therefore, that Plaintiff is not entitled to any benefits and his Application for Adjustment of Claim is denied.

Id. at 8 (modification emphasized). May now appeals.

When reviewing a decision of the Board, we do not reweigh the evidence or judge the

credibility of witnesses but only determine whether substantial evidence, together with any reasonable inferences that flow from such evidence, support the Board's findings and conclusion. *Bertoch v. NBD Corp.*, 813 N.E.2d 1159 (Ind. 2004). "Only if the evidence is of a character that reasonable [people] would be compelled to reach a conclusion contrary to the decision of the Board will it be overturned." *Outlaw v. Ebrich Prods. Co., Inc.*, 777 N.E.2d 14, 26 (Ind. Ct. App. 2002) (quoting *Perez v. U.S. Steel Corp.*, 428 N.E.2d 212, 216 (Ind. 1981)), *trans. denied*.

A claimant bears the burden to prove a right to compensation. *Triplett v. USX Corp.*, 893 N.E.2d 1107 (Ind. Ct. App. 2008), *trans. denied*. The Board, as trier of fact, has the obligation to issue findings that reveal its analysis of the evidence and are specific enough to permit intelligent review of its decision. *Id.* When it renders a negative judgment, as in the instant case, the Board's decision need only be supported by findings related to the issue of proof, not the factual question presented by the particular case. In other words, "[t]he Board is not obligated to make findings demonstrating that a claimant is not entitled to benefits; rather, the Board need only determine that the claimant has failed to prove entitlement to benefits." *Id.* at 1116.

The negative award in this case resulted from the Board's determination that May failed to prove causation (i.e., that his cancer developed as a result of certain exposure in the workplace). May's claim was submitted for an alleged occupational disease, which is defined in Ind. Code Ann. § 22-3-7-10 (West, Westlaw through 2011 Pub. Laws approved & effective through 5/10/2011) as follows:

- (a) As used in this chapter, "occupational disease" means a disease

arising out of and in the course of the employment. Ordinary diseases of life to which the general public is exposed outside of the employment shall not be compensable, except where such diseases follow as an incident of an occupational disease as defined in this section.

(b) A disease arises out of the employment only if there is apparent to the rational mind, upon consideration of all of the circumstances, a direct causal connection between the conditions under which the work is performed and the occupational disease, and which can be seen to have followed as a natural incident of the work as a result of the exposure occasioned by the nature of the employment, and which can be fairly traced to the employment as the proximate cause, and which does not come from a hazard to which workers would have been equally exposed outside of the employment. The disease must be incidental to the character of the business and not independent of the relation of employer and employee. The disease need not have been foreseen or expected but after its contraction it must appear to have had its origin in a risk connected with the employment and to have flowed from that source as a rational consequence.

Ashley Ward does not dispute that the only expert witness in the case opined that May's sinus cancer resulted from his exposure to energized heavy metal during the grinding process. Ashley Ward claims, as it did below, that the doctor's opinion is based on pure speculation and conjecture, not objective evidence, that May inhaled dust generated during the process of tool sharpening. Ashley Ward asserts, "May could not see any airborne dust particles and had no evidence to prove that he inhaled activated metal dust particles through his nose during the course of his employment with Ashley Ward." *Appellee's Brief* at 11.

Along these lines, the Board made the following findings:

7. That the ventilation system for the grinders is separate and distinct from any other ventilation system at Ashley Ward.
8. That the Defendant's building has very large exhaust fans as part of the overall ventilation system.
9. That the grinding process takes anywhere from five to twenty minutes, depending on the tool being sharpened.
10. That employees for Defendant are not mandated to wear any type of dust or ventilation mask, nor are such masks needed because the amount of dust apparent to such individuals is not noticeable.

11. That Defendant has been inspected by OSHA and has never had any issues with safety regulations, including no issues with grinding dust, ventilation or safety masks.

12. That there are no manufacturing processes at Defendant that result in airborne dust particles.

13. That Defendant has never had any employees who experienced any type of respiratory or breathing problems as a result of using the bench grinders or screw machines.

14. Plaintiff testified that he could not see any dust particles in the air during the grinding process.

* * *

19. That there was no testing done of the tumor removed from Plaintiff's sinus to determine the cause of the tumor.

20. That there was no direct evidence of any heavy metal present in the tumor.

21. That the tumor was described by pathologist Dr. Kim as being an undifferentiated carcinoma, which means that the origin of the type of tumor is not known from looking at the cell types.

* * *

Appendix at 11-12.

In light of the record before us, we find that it strains reason to conclude that May failed to establish he was exposed to activated heavy metals in the workplace. This is true regardless of the fact that the grinders at Ashley Ward were at some point equipped with a vacuum system and separate exhaust fans.⁴ The undisputed evidence reveals that for the first several years in which May worked at the facility this was not the case, as the old grinders were in a separate 20 by 16 room with no ventilation or vacuum system, and the entire room was covered with dust from grinding. Even after new grinders were obtained, Ashley Ward

⁴ Tirota explained that the vacuum system “doesn’t do anything as far as the actual air. It just sucks the actual grinding dust away from the machine itself and then contains it.” *Id.* at 128.

took about six months to install the vacuum system. Moreover, Ashley Ward employees were never required to wear respirators while working.

The Material Safety Data Sheets (MSDSs) for the various tools being sharpened indicate the danger of heavy metal exposure in grinding areas like this. For example, the MSDS from Empire Tool Company for its Tungsten Carbide Tipped cutting tools warns that although the products are not hazardous in the form sold, “[s]ubsequent operations such as...grinding may cause some of the ingredients to change to a form which could effect [sic] exposed workers.” *Id.* at 156. With respect to certain ingredients, the MSDS notes that “CHROMIUM has a high pulmonary toxicity, is an experimental cause of neoplasm(s), and is a carcinogen”, *id.* at 158, and “NICKLE (sic) is a potential carcinogen and can cause neoplasm(s) via inhalation”.⁵ *Id.* at 159. Further, this MSDS, as well as several others in the record, recommends adequate ventilation and warns that approved respirators should be used in certain circumstances.

In sum, while the amount of exposure might be up for debate, it cannot be reasonably disputed that May was exposed to activated heavy metals on a consistent basis while working at Ashley Ward. Moreover, the record clearly reveals that during the first several years of his employment, May was exposed to substantially more heavy metal dust because the old grinders did not have separate ventilation or vacuums.

⁵ Another MSDS in the record lists under hazards due to long-term exposure: “Chromium, cobalt and nickel in various chemical compounds have been identified as suspect human carcinogens”. *Id.* at 213.

May's treating physician, Dr. Agostino, presented expert testimony linking May's workplace exposure to his sphenoid sinus cancer, an uncommon cancer. Dr. Agostino testified that as a head and neck surgeon, he has training and experience in treating, diagnosing, and establishing a cause with respect to various forms of head and neck cancer. The doctor explained that sinus cancers such as May's are not typically associated with smoke or secondhand smoke and that "heavy metal exposure is one of the reasons that patients develop sinus cancers." *Id.* at 253. Dr. Agostino indicated that it was his practice when diagnosing and treating sinus cancers to inquire about the patient's vocational, medical, and family history to determine possible causes of the cancer. According to Dr. Agostino, he asked patients if they smoked, whether they had received radiation for acne or tonsil disease when they were children, or whether "they had any other exposure to known carcinogens" such as "cutting a lot of wood", which exposes those in the timber industry to certain oils in the wood that can cause cancer. *Id.* at 265. Dr. Agostino indicated that he questioned May on these matters. Dr. Agostino emphasized, "one of the first questions I ask when someone has a cancer in their sphenoid sinuses is 'Are you ever exposed to any heavy metals?'" *Id.* at 265. When he asked May this question, May responded that he "grind[s] with cobalt all the time." *Id.* The doctor then requested to see the various MSDSs from Ashley Ward to determine the types of heavy metals to which May had been exposed.

In addition to May's cancer being consistent with exposure to activated heavy metals at the workplace, Dr. Agostino explained how May's anatomy may have made him more susceptible to cancer developing in this way. Particularly,

he has a very low left septal deviation, almost a shelf that angles up at about 30

degrees. And if you go straight back 30 degrees up from his nostril, that's where the opening to the sphenoid sinus would be. And so with his anatomy and breathing in, that most likely the area that he would breathe in particulate matter that would be heavy and be caught in the nose would go to the sphenoid sinus.

Id. at 266.

Following the biopsy, the pathologist was initially unable to determine the origin of the tumor, describing it as an undifferentiated carcinoma. A number of additional tests were performed which ruled out several types of cancer and indicated that the tumor was a surface cell type, indicating that the cancer originated in May's sinus and did not spread through the blood or other areas of his body.⁶

When asked whether the amount of dust in the workplace would affect his analysis on the cause of May's tumor, Dr. Agostino testified:

[A]gain, the most likely cause of his tumor was some type of heavy metal exposure. The question is what's the most likely cause of that, I believe is his job. If you told me he really was a cotton candy salesman and never was around metal, it would probably change my mind. But if he tells me that he is around heavy metal, he is around heavy metal in an excited phase, in which we know from basic physics and chemistry, which I have had, when you apply added energy to these heavy metals they can become unstable and generate isotopes and can cause radioactive decay.... And whether there was a lot of dust or not, if he is breathing in heavy metals that are energized because they are being exposed to a grinding material or the friction of grinding, which excites the electrons in these heavy metals, I would reasonably conclude that that's the most likely source of where he had heavy metal contamination that produces cancer.

Appendix at 267-68.

⁶ To the extent Ashley Ward argues that certain testing of the tumor existed that "would have produced direct evidence as to whether or not the tumor was related to heavy metal exposure," we find no support in the record for this assertion. *Appellee's Brief* at 13. Ashley Ward was free to present expert evidence in this regard, but it did not do so.

Finally, the doctor was asked during the deposition to address the fact that no other employee of Ashley Ward had developed similar cancer. He explained, “given the rarity of this type of tumor in an individual, one would likely suspect that the incidents of these types of tumors are gonna be low.” *Id.* at 273. He noted that “the whole incident of maxillary sinus cancer is pretty rare, probably maybe one in a 100,000 or more.” *Id.* at 274. When an individual is exposed to environmental factors in the workplace (such as heavy metal or timbering), the likelihood of such cancer, according to Dr. Agostino, is increased to “one in several thousand to 10,000 probably.” *Id.* Thus, the fact that none of Ashley Ward’s other thirty some employees have been similarly affected means nothing. Moreover, we can find no support in the record for Ashley Ward’s broad, general assertion that “May’s condition is unique within the machine shop industry”. *Appellant’s Brief* at 13.

In sum, Dr. Agostino’s expert medical opinion was based on his training and experience in the area of head and neck cancers, his treatment of May from the time of diagnosis, May’s employment, and the information obtained from the MSDSs.⁷ When taken

⁷ Contrary to Ashley Wards’s assertions on appeal, Dr. Agostino’s opinion was not “merely based on a temporal relationship with an assumed exposure”, nor did it consist of “nothing more than speculation.” *Appellee’s Brief* at 15. As set forth above, the doctor knew which heavy metals May was exposed to based on his review of the MSDSs, and the undisputed evidence reveals that May worked with these materials daily at Ashley Ward. Further, the doctor explained the rarity of this type of cancer, its link to heavy metal exposure, and the fact that he ruled out several other potential causes. Finally, Dr. Agostino testified that further testing of the cancer cells revealed that the tumor originated in May’s sinus area. The fact that he did not know May’s level of daily exposure (which most likely fluctuated over the years) does not make his expert opinion speculative. *See Norfolk S. Ry. Co. v. Estate of Wagers*, 833 N.E.2d 93 (Ind. Ct. App. 2005), *trans. denied*.

The instant case is distinguishable from *Outlaw v. Ebrich Prods. Co., Inc.*, 777 N.E.2d 14, in which we found that the Board was free to reject the expert’s opinion because it was so lacking in probative value as to be insufficient to prove the existence of a causal relationship. *Id.* at 29 (“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”). In *Outlaw*, the chemicals at issue were unknown, the employer directly refuted the expert’s testimony with its own expert, and the expert had not sufficiently accounted for the possibility of alternative causes. Because the expert’s opinion was based primarily on the existence of a temporal

together, the evidence presented in this case by stipulation reasonably establishes a direct causal link between May's cancer and his employment. In other words, his rare form of cancer "can be fairly traced to [his] employment as the proximate cause". I.C. § 22-3-7-10. Further, Ashley Ward presented no expert testimony in opposition to Dr. Agostino's testimony.

In light of the record before us, we conclude that the evidence is undisputed and leads inescapably to a result contrary to the Board's conclusion that May failed in his burden of establishing causation. May adequately established that his cancer was the result of an occupational disease. Accordingly, we reverse the decision of the Board and remand for further proceedings consistent with this opinion.

Reversed and remanded.

BAILEY, J., and BROWN, J., concur.

relationship, we found that it amounted to subjective belief and unsupported speculation. *Outlaw v. Ebrich Prods. Co., Inc.*, 777 N.E.2d 14. Such is not the case here.