SUPERIOR COURT OF NEW JERSEY
APPELLATE DIVISION
DOCKET NOS. A-0047-20
A-0048-20
A-0049-20
A-0050-20

ROSLYN BARDEN, individually and as Executrix and Executrix Ad Prosequendum of the Estate of DOUGLAS BARDEN, ESTATE OF DOUGLAS BARDEN, DARLENE PASTORE ETHERIDGE, individually and as Executrix and Executrix Ad Prosequendum of the Estate of DAVID CHARLES ETHERIDGE, ESTATE OF DAVID CHARLES ETHERIDGE, D'ANGELA M. MCNEILL-GEORGE, and ELIZABETH RONNING, individually and as Executrix and Executrix Ad Prosequendum of the Estate of WILLIAM RONNING, and the ESTATE OF WILLIAM RONNING,

Plaintiffs-Respondents,

v.

BRENNTAG NORTH AMERICA, INC., individually and as Successor-in-Interest to MINERAL PIGMENT SOLUTIONS, INC., as Successor-in-Interest to WHITTAKER CLARK & DANIELS, INC., BRENNTAG SPECIALTIES, INC.,

f/k/a/ MINERAL PIGMENT SOLUTIONS, INC., as Successor-in-Interest to WHITTAKER, CLARK & DANIELS, INC., CYPRUS AMAX MINERALS COMPANY, individually and as Successor-in-Interest to AMERICAN TALC COMPANY, METROPOLITAN TALC COMPANY, INC, CHARLES MATHIEU, INC., RESOURCE PROCESSORS, INC., SIERRA TALC COMPANY, UNITED TALC COMPANY, IMERYS TALC AMERICA, INC., f/k/a LUZENAC AMERICA, INC., individually and as Successor-in-Interest to WINDSOR MINERALS, INC., AMERICAN TALC COMPANY, METROPOLITAN TALC COMPANY, INC., CHARLES MATHIEU, INC., RESOURCE PROCESSORS, INC., IMERYS U.S.A., INC., IMERYS TALC VERMONT, INC., WHITTAKER CLARK & DANIELS, INC., individually and as Successor-in-Interest to AMERICAN TALC COMPANY, METROPOLITAN TALC COMPANY, INC., CHARLES MATHIEU, INC., and RESOURCE PROCESSORS, INC., UNION CARBIDE CORPORATION,

Defendants,

and

JOHNSON & JOHNSON, JOHNSON & JOHNSON CONSUMER, INC., f/k/a JOHNSON & JOHNSON CONSUMER COMPANIES, INC.,

Defendants-Appellants.

Argued September 27, 2023 – Decided October 3, 2023

Before Judges Haas, Gooden Brown and Puglisi.

On appeal from the Superior Court of New Jersey, Law Division, Middlesex County, Docket Nos. L-1809-17, L-0932-17, L-7049-16, and L-6040-17.

Peter G. Verniero argued the cause for appellants (McCarter & English, LLP, and Sills Cummis & Gross, PC, attorneys; Peter G. Verniero, John C. Garde, and Michael S. Carucci, on the briefs).

Denyse Clancy (Kazan, McClain, Satterley & Greenwood) of the California bar, admitted pro hac vice, argued the cause for respondents (Szaferman, Lakind, Blumstein & Blader, PC, and Cohen, Placitella & Roth, PC, Denyse Clancy, and Chris J. Panatier (Simon Greenstone Panatier, PC) of the Texas, California, and Pennsylvania bars, admitted pro hac vice, attorneys; Moshe Maimon, Denyse Clancy, Christopher Placitella, Chris J. Panatier, and Robert E. Lytle, on the brief).

PER CURIAM

In these consolidated appeals, Johnson & Johnson (J&J) and Johnson & Johnson Consumer, Inc. (J&JCI) (collectively defendants) appeal from

judgments dated July 24, 2020, which awarded plaintiffs[1] compensatory damages totaling $37,300,000 and punitive damages totaling $186,500,000. For the reasons that follow, we reverse and remand the matter to the trial court for a new trial.

I.

We begin by briefly summarizing the procedural history most pertinent to the issues raised on appeal.

Plaintiffs filed complaints alleging that defendants were involved in mining and processing asbestos-containing products, including Johnson's Baby Powder (JBP) and Shower to Shower (STS), which were sold and caused them to develop mesothelioma following their long-term use of these products.[2] On February 1, 2019, the trial court issued a sua sponte order consolidating the four cases for trial.

By the time of trial, the only remaining claims against defendants were under the New Jersey Products Liability Act (PLA), N.J.S.A. 2A:58C-1 to -11,

[1] The four primary plaintiffs were D'Angela M. McNeill George, David Charles Etheridge, Douglas Barden, and William Ronning. Etheridge, Barden, and Ronning passed away during the course of the proceedings and their estates were substituted as plaintiffs.

[2] Etheridge's, Barden's and Ronning's respective spouses also filed claims for loss of consortium.

premised upon a failure to warn and design defect theories. In addition, McNeill-George presented a claim for defective manufacturing. Beginning on June 29, 2019, and lasting for approximately thirty-three non-consecutive days, the trial court conducted the liability and compensatory damages phase of the jury trial.[3]

On July 11, 2019, the trial court granted plaintiffs' motion in limine to preclude comments by defense counsel aimed at prejudicing the jury against plaintiffs' counsel. During the course of the trial, the court reiterated the terms of this order to defense counsel.

On July 15, 2019, the trial court denied defendants' motion in limine to exclude expert opinion from James Webber, Ph.D., and also denied defendants' request for an N.J.R.E. 104 hearing. Ten days later, the court denied defendants' motion in limine to exclude expert testimony from Jacqueline M. Moline, M.D. The court also denied defendants' request for an N.J.R.E. 104 hearing.

On August 5, 2019, the trial court denied defendants' motion to exclude expert testimony from William E. Longo, Ph.D. and their request for a N.J.R.E. 104 hearing. On that same date, the court denied defendants' motions to strike

[3] The parties did not include the transcripts of the trial court's jury voir dire. As a result, the total number of trial days is unclear from the record on appeal.

Webber's and Moline's expert opinions. The court later denied defendants' motion to strike Longo's expert opinion.

In response to remarks defense counsel made during closing arguments, the trial court struck defense counsel's entire summation for violating its prior rulings concerning the conduct of the attorneys. The court denied defendants' motion for a mistrial.

On September 11, 2019, the jury returned verdicts in favor of plaintiffs and awarded them compensatory damages in varying amounts.[4] The trial court then excused the jury, having determined that the punitive damages phase of the trial would proceed before a new jury panel.[5] On February 9, 2020, the jury rendered verdicts awarding punitive damages to plaintiffs. The court denied defendants' motion for a new punitive damages trial. Later, the court reduced the amount of the punitive damages awards. These appeals followed.

On appeal, defendants allege that the trial court erred during the evidentiary trial when it: allowed plaintiffs' experts to testify that non-

[4] The trial court later calculated prejudgment interest, which was added to each award.

[5] The punitive damages phase of the trial lasted approximately sixteen non-consecutive days. Again, the total number of trial days is unclear from the appellate record.

asbestiform versions of the six asbestiform minerals, called "cleavage fragments," could cause mesothelioma; sua sponte consolidated the trials of the four groups of plaintiffs; struck defendants' entire closing argument; and made cumulative errors as to the admission of evidence that enticed the jury to accept plaintiffs' allegations that defendants' products contained asbestos and caused plaintiffs' mesothelioma. As to the punitive damages phase of the proceedings, defendants contend that the court erred when it: empaneled a new jury to decide punitive damages; denied defendants' motion for a new punitive damages trial; and failed to conduct an appropriate post-trial review of the punitive damages awards.

II.

Defendants' primary argument is that the trial court erred by admitting expert testimony from Webber, Moline, and Longo. Specifically, defendants allege that the court abused its discretion when it denied their motions seeking N.J.R.E. 104 hearings because the testimony of Webber, Moline, and Longo was unreliable, not supported by generally accepted methodologies, and unsupported by the facts in the record. Additionally, defendants contend that the court failed to make sufficient findings under In re Accutane Litigation, 234 N.J. 340, 388 (2018), to justify its decision to admit the experts' opinions. Defendants rely on

our decision in Lanzo v. Cyprus Amax Minerals Co., 467 N.J. Super. 476, 504-18 (App. Div. 2021) to further support these arguments.

Having considered defendants' contentions on this point in light of the record and the applicable law, we agree that the trial court misapplied the well-established judicial gatekeeping procedures required by our courts and that the error was not harmless in regard to the testimony of Webber, Moline, and Longo. Therefore, we reverse and remand for a new trial.

A. STANDARD OF REVIEW AND THE TRIAL COURT'S GATEKEEPER ROLE IN THE ADMISSION OF EXPERT TESTIMONY

A reviewing court will apply an abuse of discretion standard of review when "assessing whether a trial court has properly admitted or excluded expert scientific testimony in a civil case." Accutane, 234 N.J. at 348, 392. On appeal, the trial court's ruling should be reversed only if it was "so wide off the mark that a manifest denial of justice resulted." Green v. N.J. Mfrs. Ins. Co., 160 N.J. 480, 492 (1999). Notably, harmless error should be disregarded and, instead, only errors "clearly capable of producing an unjust result" will cause the reversal of a jury verdict. Velazquez v. City of Camden, 447 N.J. Super. 224, 232 (App. Div. 2016) (quoting R. 2:10-2). A trial court's failure to perform its gatekeeping function by allowing experts to testify concerning untested opinions is error clearly capable of producing an unjust result. Lanzo, 467 N.J. Super. at 517-18.

Expert testimony is governed by N.J.R.E. 702, which states that "[i]f 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." There are three prerequisites to determine whether expert testimony is admissible, namely:

> (1) the intended testimony must concern a subject matter that is beyond the ken of the average juror; (2) the field testified to must be at a state of the art such that an expert's testimony could be sufficiently reliable; and (3) the witness must have sufficient expertise to offer the intended testimony.
>
> [Accutane, 234 N.J. at 348 (quoting State v. Kelly, 97 N.J. 178, 223 (1984) (Handler, J., concurring in part and dissenting in part).]

Importantly, the Accutane Court touched on an important distinction when a court is charged with determining whether to admit expert testimony: a trial court is tasked with making legal determinations about the reliability of an expert's methodology, which is not to be confused with a credibility determination in the province of the jury. Id. at 388. As a result, the Accutane Court "clarif[ied] and reinforce[d] the proper role for the trial court as the gatekeeper of expert witness testimony." Id. at 389. It instructed the trial courts "to assess both the methodology used by the expert to arrive at an opinion and

the underlying data used in the formation of the opinion." Id. at 396-97. This "rigorous" role is critical because the court's gatekeeping function prevents the jury from exposure to unsound science that is labeled expert or scientific. Id. at 390.

When engaging in this analysis, the court must determine whether comparable experts accept the soundness of the presented methodology and evaluate the reasonableness of relying on the type of data and information underlying the expert's opinion. Id. at 390, 396-97. To aid in the evaluation of an expert's methodology, the Accutane Court encouraged trial courts to incorporate the Daubert[6] factors, which are both helpful and non-exhaustive. Id. at 398.

In general, several of the pertinent Daubert factors include:

> 1) Whether the scientific theory can be, or at any time has been, tested;
>
> 2) Whether the scientific theory has been subjected to peer review and publication, noting that publication is one form of peer review but is not a "sine qua non";
>
> 3) Whether there is any known or potential rate of error and whether there exist any standards for

[6] Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 593-95 (1993). Recently, in State v. Olenowski, 253 N.J. 133, 151-52 (2023), our Court adopted the Daubert principles in criminal cases.

> maintaining or controlling the technique's operation; and
>
> 4) Whether there does exist a general acceptance in the scientific community about the scientific theory.
>
> [Ibid.]

Thus, under the standard set forth in Accutane, the party seeking to admit the testimony must show that the expert "applies his or her scientifically recognized methodology in a way that others in the field practice the methodology." Id. at 399-400. Notably, an expert should not selectively choose from the scientific landscape. Id. at 400.

The Court has also provided guidance for evaluating expert testimony in Rubanick v. Witco Chemical Corp., 125 N.J. 421, 449 (1991), when it held that "a scientific theory of causation that has not yet reached general acceptance may be found to be sufficiently reliable if it is based on a sound, adequately-founded scientific methodology involving data and information of the type reasonably relied on by experts in the scientific field." It emphasized that "[t]he critical determination is whether comparable experts accept the soundness of the methodology, including the reasonableness of relying on this type of underlying data and information." Id. at 451.

Overall, the proposed expert's testimony should be excluded when it does not satisfy our Court's standards for a sound methodology and the reasonable reliance on the type of data and information used by other experts in the field. Accutane, 234 N.J. at 400. When an expert's opinion lacks the requisite foundation, it is an inadmissible net opinion or a bare opinion that has no support in factual evidence or similar data. Pomerantz Paper Corp. v. New Cmty. Corp., 207 N.J. 344, 372 (2011).

B. DEFENDANTS' CHALLENGE TO WEBBER'S TESTIMONY

Defendants claim that Webber provided unreliable opinions that non-asbestiform cleavage fragments cause cancer. Specifically, defendants contend that the court erred when it allowed Webber to testify that asbestos can include non-asbestiform minerals and all fibers and, also, that non-asbestiform cleavage fragments can cause cancer. Defendants allege that the court should have held an N.J.R.E. 104 hearing, Webber's opinions were unreliable, and his statements on these topics were unreliable net opinions unsupported by data or a sound methodology.

i. Webber's testimony at trial

After hearing oral argument on defendants' motion to exclude Webber's testimony and request for an N.J.R.E. 104 hearing, the court denied defendants'

motion without analysis and stated that defendants' concerns could be addressed during cross-examination. During oral argument, plaintiffs' counsel noted that Webber had testified before the same court in other matters and that Webber's testimony would be "exactly" what he had done in Lanzo in terms of giving an opinion as to whether there is asbestos in JBP.

At trial, Webber testified that the geological definition of "asbestos" is a particle that contains long thin fibers that are flexible and have high tensile strength. However, Webber stated that a fiber that lacks high tensile strength and good flexibility can still be asbestos, be dangerous, and cause mesothelioma, but it would not be as commercially useful. For example, he claimed that "tremolite fibers" are asbestos.

Webber further explained that the definition of "regulated asbestos" is long, thin, individual fibers with an aspect ratio of 3:1 or greater and with substantially parallel sides. Fibers that meet the definition of regulated asbestos have been related to asbestos disease. Later in his testimony, Webber stated that "non-talc needles," elongated particles with parallel sides, are considered fibers by the regulated asbestos definition.

When asked about cleavage fragments, Webber testified that they could form by breaking an amphibole rock. Occasionally, an amphibole rock could

break into elongated particles that could meet the definition of a fiber if the particles have an aspect ratio of greater than 3:1 and parallel sides. Webber explained that these particles would be counted as asbestos fibers because there would be no way to differentiate whether the particle came from a crushed amphibole rock or a fiber of asbestos.

Webber explained that he was aware of arguments about the hazardousness, toxicity, or dangerousness of the cleavage fragment fibers. He stated that a cleavage fragment lacks the properties associated with a geologist's definition of asbestiform. Also, a cleavage fragment would not meet the definition of asbestos or be hazardous in instances where a cleavage fragment formed a chunk and lacked the problematic aspect ratio. However, when a cleavage fragment forms a fiber, it would be considered hazardous from an environmental health perspective because it has an aspect ratio of greater than 3:1 and essentially parallel sides. Moreover, although most cleavage fragments would not be small enough to reach the alveoli part of the lungs, Webber stated that a cleavage fragment that was a fiber could reach the alveoli and be hazardous.

To reach his conclusions, Webber generally relied upon "Surface Charge Measurements of Amphibole Cleavage Fragments and Fibers" published by the

Bureau of Mines in 1980 (the Surface Charge Article). Webber did not discuss the details of the publication, the parameters of the study, or any of the scientific analysis. Without specifying, Webber stated that there is "some evidence" in the literature that the surface charge of a particle is a bio-activator that can cause the mesothelium or alveoli to react and lead to cancer. Webber cited only to the abstract of the publication to support his conclusion that the surface charge of asbestos fibers was the same as those of elongated cleavage fragments with the same aspect ratio.

Next, Webber generally cited to a United States Geological Survey entitled "Mineralogy and Morphology of Amphiboles Observed in Soils and Rocks in El Dorado Hills, California" dated 2006 (the 2006 Geological Survey). A small portion of the discussion section of the survey was read to the jury, and this passage stated that the definition of asbestos can vary based on the source of the particles and the purpose of the particles in an industry. Without discussing the details of the publication or any studies contained therein, Webber concluded that when a person is trying to define asbestos in environmental terms, an analyst must look at the aspects of fibers that are pertinent to human health.

Next, over defendants' objections, Webber relied upon a United States Environmental Protection Agency (EPA) Region 9 report dated April 20, 2006, entitled "Response to the November 2005 National Stone, Sand, & Gravel Association Report Prepared by the R.J. Lee Group, Inc. 'Evaluation of EPA's Analytical Data from the El Dorado Hills Asbestos Evaluation Project'" (the 2006 EPA Region 9 Response) when forming his conclusions that the EPA made no distinction between fibers and cleavage fragments of comparable chemical composition, size, and shape. To support this conclusion, Webber merely read the same sentence from the publication to the jury and stated that he agreed with it. Further, to validate his notion that cleavage fragments could impact human health, Webber selected a few other sentences from the report that stated the cleavage fragment hypothesis needed to be studied further before experts could conclude that such particles are benign.

Again over defendants' objections, Webber next relied upon a 2009 article by Gregory Meeker from the United States Geological Survey (the Meeker article) as the basis for his conclusion that using the term "asbestiform" to differentiate a hazardous from a non-hazardous substance has no foundational basis in medical sciences. During cross-examination, Webber admitted that: he did not perform any exposure analysis or research to see if there were any trace

amounts of asbestos in JBP; there was no scientific study published in peer review literature that concludes that JBP or STS increases a person's risk of mesothelioma; and there have never been any published papers or studies that have concluded that cleavage fragments have the same health effects as asbestos or increase a person's risk for mesothelioma.

In addition, Webber admitted that: the Occupational Safety and Health Administration (OSHA) concluded that there was not enough substantial evidence to conclude that non-asbestiform versions of tremolite, anthophyllite, and actinolite present the same health effects as asbestos; and OSHA concluded that cleavage fragments do not have similar health effects as asbestos. Finally, when confronted with his prior publication from 2004 where he stated that not all particles with 3:1 aspect ratios are asbestos fibers, Webber explained that his prior statement was not "well-advised."

ii. The Lanzo court's analysis of Webber's prior testimony

In Lanzo, we agreed with J&JCI and Imerys Talc America, Inc., the defendants in that case, that the trial court erred by abusing its discretion, and that the error was not harmless, when it allowed the jury to hear Webber's opinion that non-asbestiform minerals that are similar in size to asbestiform minerals can cause mesothelioma. Lanzo, 467 N.J. Super. at 503. During that

trial, the court did not hold an N.J.R.E. 104 hearing to perform the analysis required by Accutane, failed to assess Webber's methodology, and did not consider Webber's underlying data. Id. at 507.

In front of the Lanzo jury, Webber stated that cleavage fragments had the same potential to cause disease as asbestos fibers with similar aerodynamic dimensions and, also, that he was not aware of any studies showing that non-asbestiform cleavage fragments can cause mesothelioma. Id. at 508-09. Further, Webber failed to cite to any authority for his claims that cleavage fragments present the same risk as asbestos fibers because of their identical chemical composition and bio-durability. Ibid.

We further took issue with the sources that Webber relied upon. Id. at 509. First, we held that a study by the pathologist Victor Roggli was insufficient to support the conclusion that non-asbestiform tremolite causes mesothelioma because the study did not distinguish between asbestiform and non-asbestiform fibers. Ibid. Second, we found that Webber's decision to cite a single quote from a paper entitled "Differentiating Non-Asbestiform Amphibole and Amphibole Asbestos by Size Characteristics" published in the December 2008 Journal of Occupational and Environmental Hygiene co-authored by Dr. Martin Harper and the National Institute of Occupational Safety and Health (NIOSH)

was insufficient to explain the scientific basis for Webber's opinion that non-asbestiform amphibole particles could meet the definition for a fiber. Ibid. Moreover, a later NIOSH publication clarified that the inclusion of non-asbestiform minerals in the definition of airborne asbestos fibers was based on inconclusive evidence. Id. at 509-10.

Third, we ruled that Webber's reliance on the 2009 Meeker article was flawed. Id. at 510. In particular, the 2009 Meeker article's claim that using the term asbestiform to differentiate between hazardous and non-hazardous substances had no basis in the medical science. Ibid. Meeker failed to report a scientific study and the article was not peer reviewed. Ibid. Finally, we held that Webber's reliance on the 2006 EPA Region 9 Response was problematic because the publication claimed that the EPA made no distinction between fibers and cleavage fragments of the same chemical composition, size, and shape. Ibid. Notably, the EPA publication did not cite to any studies and Webber failed to discuss any details in his testimony. Ibid.

As to Webber's testimony specifically, we explained that his opinion that non-asbestiform cleavage fragments could cause mesothelioma was untested and he failed to show that his theory was generally accepted in the scientific community. Id. at 511. Further, we ruled that the trial court erred because it

failed to establish that Webber's methodology involved data and information of the type reasonably relied upon by experts in the field, failed to assess Webber's methodology, and failed to consider the underlying data that Webber used to form his opinion. Ibid.

iii. In the present case, the trial court erred by admitting Webber's expert testimony and the admission of this testimony was not harmless error

Here, as in Lanzo, the trial court failed to perform its gatekeeping role in assessing the underlying reasonableness of Webber's methodology and underlying data in forming his opinion. When citing to a limited number of publications, Webber failed to identify the data he used to form his opinion and did not discuss how the authorities he relied upon provided comparable data from other experts in the same field. Rather he only generally stated, without explanation or discussion, that the sources he relied upon were similarly relied upon by other unspecified experts.

Tellingly, when discussing the Surface Charge article, Webber did not discuss the details of the study or the parameters under which surface charges were evaluated. Webber only briefly referenced one sentence from the abstract to support his conclusion that cleavage fragments could cause cancer. Similarly, when discussing the 2006 Geological Survey, Webber extrapolated his idea that

when studying asbestos in the environment, an analyst should look at the effects of asbestos on human health. There was no support in Webber's testimony that the 2006 Geological Survey made this connection or explained how he reached his conclusion.

Significantly, two of Webber's sources in the present case were explicitly criticized in Lanzo: the 2009 Meeker article; and the 2006 EPA Region 9 Response. In Lanzo, we stated that the 2009 Meeker article did not report the results of a scientific study, was not peer reviewed, made controversial claims, and did not support the proposition that non-asbestiform minerals can cause cancer. Id. at 510-11. Further, we explained that the 2006 EPA Region 9 Response provided no details of any studies, made no distinctions between asbestiform fibers and cleavage fragments; and did not state that exposure to cleavage fragments caused mesothelioma. Ibid. Webber's testimony as to these two sources is similarly faulty in the present case.

As to the trial court's gatekeeping function, it failed to hold an N.J.R.E. 104 hearing and made no legal determinations of reliability about Webber's methodology. Rather, the court allowed the jury to hear unsound science labeled as expert and scientific when it allowed the jury to make credibility determinations, contrary to the explicit instructions in Accutane.

Further, an application of the Daubert factors does not support the admission of Webber's testimony as his theories were untested, not subject to peer-review, and not generally accepted in the scientific community. Importantly, Webber did not explain the standards he applied to reach his conclusions and instead set forth bare conclusion in the form of an unsupported opinion. For the court's part, it did not assess Webber's methodology or underlying data used to form his opinion. Therefore, the court mistakenly exercised its discretion when it admitted Webber's testimony.

The trial court's error in admitting the testimony was harmful error because it was "so wide off the mark that a manifest denial of justice resulted." Green, 160 N.J. at 492. Webber theorized that cleavage fragments could cause mesothelioma without support and the testimony bolstered plaintiffs' claims that their illnesses were linked to particles that could have been present in talcum powder. Although Webber did not opine that cleavage fragments were in JBP or STS, he linked the existence of cleavage fragments to mesothelioma.

Moreover, the jury heard testimony from Longo, another of plaintiffs' experts, that the tool he used to identify fibers[7] could not distinguish between

[7] Longo testified he used a transmission electron microscope (TEM) to conduct his analysis.

whether a fiber was asbestiform or non-asbestiform. As a result, the implication is that all fibers could cause mesothelioma if either asbestiform fiber particles or fiber-shaped non-asbestiform cleavage fragments can cause cancer. Thus, the jury heard unsupported theories that cleavage fragments could cause cancer and we are satisfied this error was "clearly capable of producing an unjust result." Velazquez, 447 N.J. Super. at 232. As a result, the jury verdict must be overturned and a new trial held.

C. DEFENDANTS' CHALLENGE TO MOLINE'S TESTIMONY

Defendants also allege that the trial court should have precluded or stricken Moline's expert testimony. Specifically, defendants contend that the court erred when it allowed Moline to testify that non-asbestiform cleavage fragments and asbestiform fibers have the same health effects and, also, that defendants' products caused plaintiffs' mesothelioma.

i. Moline's testimony at trial

After hearing oral argument, the trial court denied defendants' motion seeking an N.J.R.E. 104 hearing and to exclude Moline's testimony regarding cleavage fragments. It held that Moline's testimony was not cumulative and confined her testimony to the parameters of her expert report regarding cleavage fragments. The court noted that Moline had "apparently cited to literature and

different agencies" with regard to her opinions on cleavage fragments. Moreover, without further analysis, the court stated generally that there "are geological definitions that defendants point to and they have their experts in that regard, and there is a body of agencies and opinions relative . . . toward the discussion of what does it all mean, in terms of medicine and . . . the effect on the body."

At the outset of her testimony, Moline explained that asbestos is a fiber and that there are six regulated types of asbestos. She stated that she relied on a 2019 article from the Finnish Institute of Occupational Health entitled "Asbestos risk management guidelines for mines" (the 2019 Finnish article). She generally explained that the article supported her definition of asbestos as being any particle that has a minimum "length-to-thickness ratio" of 3:1. Moreover, she claimed without specificity that from an occupational medicine and public health point of view, fibers that are longer than they are wide are hazardous, cause cancer, and lead to pulmonary diseases.

Moline stated that she relied on a 2014 article by "Gordon, Fitzgerald, and Millette" entitled "Asbestos in commercial cosmetic talcum powder as a cause of mesothelioma in woman" (the 2014 Gordon article) to support her conclusion

that exposure to talc, including defendants' talc, can cause mesothelioma. However, she did not discuss the details of the study, the data, or the results.

Later in her testimony, Moline again relied generally on the 2019 Finnish article when she concluded that all types of asbestos could cause mesothelioma. Without explaining the scientific basis for her theory, she stated that asbestos fibers that meet the size criteria pose a health risk regardless of how they are characterized by a geologist or mineralogist.

When discussing whether defendants' products caused plaintiffs' mesothelioma, Moline stated that she had reviewed "papers" showing that asbestos can become airborne when using talcum powders. She again briefly referred to the 2014 Gordon article, an untitled paper by "Rohl," and an unnamed study by "Mattenklott." At no point in Moline's testimony did she explain the details or specifics of the Rohl and Mattenklott studies. Rather, she would generally refer to these three papers throughout her testimony without describing the specific parameters of the studies to support her conclusion that billions of particles of asbestos can become airborne when small amounts of talcum powder were used.

On cross-examination, Moline admitted that she had never concluded that talcum powder caused mesothelioma prior to being hired by plaintiffs' attorneys.

Moreover, she admitted that she issued her opinion that defendants' products caused plaintiffs' mesothelioma prior to interviewing or examining Barden and Etheridge and, also, without interviewing or examining McNeill-George and Ronning.

ii. The Lanzo court's analysis of Moline's prior trial testimony

In Lanzo, we concluded that Moline's expert testimony that non-asbestiform minerals can cause mesothelioma suffered from similar defects as Webber's opinions at trial. Lanzo, 467 N.J. Super at 511-12. We held that the trial court failed to assess Moline's methodology and the underlying data that she used to form her opinions. Id. at 513. Accordingly, we reversed and remanded for a new trial because the court failed to perform its gatekeeping function. Ibid.

For example, Moline relied on the 2006 EPA Region 9 Response when she concluded that there was no difference between asbestiform fibers and non-asbestiform cleavage fragments with the same dimensions and chemical compositions in terms of their ability to cause disease. Id. at 512. Moline failed to support her claims that there had been published literature and, also, studies to form the basis for her conclusions that non-asbestiform amphiboles cause mesothelioma. Ibid. Moreover, although she claimed that she reviewed

additional studies and found information to support her statement that non-asbestiform minerals were carcinogenic, she failed to identify these studies. Id. at 512-13.

Moline's expert report stated, without support, that the EPA, Centers for Disease Control (CDC), and American Thoracic Society rejected the notion that there is biological significance to labeling anthophyllite or tremolite as either non-asbestiform or cleavage fragments. Id. at 512. She also failed to cite her sources for her claim that miners and millers of talc in New York had mesothelioma caused by talc containing approximately 50% non-asbestiform anthophyllite and tremolite. Ibid.

iii. In the present case, the trial court erred by admitting Moline's expert testimony and the admission of this testimony was not harmless error

Again, as in Lanzo, the trial court failed to perform its gatekeeping role in assessing the underlying reasonableness of Moline's methodology and underlying data in forming her opinion. Moline failed to identify the data she used to develop her opinion, did not discuss how the authorities she relied upon provided comparable data from other experts in the same field, and in some instances failed to adequately identify her sources. For example, she repeatedly cited to studies by Rohl and Mattenklott which may have had the effect of

bolstering her statements to the jury as being more reliable despite Moline failing to discuss any details of such studies.

Further, Moline failed to explain her methodology or data as it related to her use of the 2019 Finnish article to support her claim that from a public health point of view, fibers that are longer than they are wide are hazardous, cause cancer, and lead to pulmonary diseases. Similarly, she failed to explain the link between her theories about the causes of mesothelioma and the 2014 Gordon article because she did not explain the article including the data relied upon and the analysis.

As to the trial court's gatekeeping function, it again failed to hold an N.J.R.E. 104 hearing and made no legal determinations of reliability about Moline's methodology. The court also permitted the jury to make credibility determinations as to the quality of the expert testimony instead of first determining whether Moline's opinion was based on sound and adequately founded scientific methodology.

For the same reasons stated above regarding the admission of Webber's testimony, the trial court's failure to adequately perform its gatekeeping function was harmful error because it was "so wide off the mark that a manifest denial of justice resulted." Green, 160 N.J. at 492. Moline theorized that cleavage

fragments could cause mesothelioma, but did not opine that cleavage fragments were in JBP or STS. However, her testimony bolstered plaintiffs' claims that they could have been exposed to substances that caused their mesothelioma. What is more, the jury could associate Moline's statements with Longo's testimony to conclude that all fibers could cause mesothelioma if either asbestiform fiber particles or fiber-shaped non-asbestiform cleavage fragments can cause cancer. Thus, via Moline's testimony, the jury heard unsupported theories that cleavage fragments could cause cancer. Because this error was "clearly capable of producing an unjust result," Velazquez, 447 N.J. Super. at 232, we reverse and remand for a new trial.

D. DEFENDANTS' CHALLENGE TO LONGO'S EXTRAPOLATION TESTIMONY

Defendants also raise several arguments concerning the trial court's admission of Longo's expert testimony. We will address defendants' contentions concerning Longo's extrapolation testimony because that testimony represents another occasion where the court failed to discharge its gatekeeping function as required by Accutane.

i. The trial court's decision

After hearing oral argument, the trial court denied defendants' motion to hold an N.J.R.E. 104 hearing and exclude Longo's trial testimony concerning his

"exposure calculations" where he extrapolated the number of ten-ounce containers of defendants' products that each plaintiff used in their lifetime. As to Longo's extrapolation testimony, the court merely stated that it was "something that Dr. Longo has done in this courtroom during the course of trials, where he takes the testimony . . . of the plaintiff and he does an extrapolation." The court stated that it had seen Longo use data on "some" J&J documents previously. On the basis of those statements, the court concluded that there would be no prejudice in allowing Longo to testify as to extrapolation because "he's done it on other trials." Instead of analyzing the matter further in accordance with the Accutane mandates, the court stated that any issues with Longo's testimony on this subject could be resolved on cross-examination.

ii. Longo's testimony regarding extrapolation

Longo explained that he reviewed the deposition testimony of McNeill-George, Etheridge, Barden, and Ronning. He believed that their description of how they used J&J's products was fair because based on J&J's own studies, most users of J&J's products used them after showering as plaintiffs had. Based on J&J's own studies, people used about eight grams per application.

Based upon that ambiguous data, Longo estimated that McNeill-George would have had 13,578 exposures to JBP and STS made with talc from the

Vermont and Chinese mines and those exposures would have been substantial. He opined that Etheridge would have had approximately 8,180 applications of JBP, was exposed to substantial amounts of asbestos, and would have been exposed to the Vermont and Chinese talc.

According to Longo's analysis, Barden used JBP for approximately 23,449 applications, was exposed to substantial amounts of asbestos by virtue of his use of JBP, and that the talc came from the Italian and Vermont mines based on the timing of his usage. Finally, Longo told the jury that Ronning had approximately 6,787 applications of JBP with talc from the Vermont and Chinese mines, which would have represented a substantial exposure.

On cross-examination, Longo explained that he counted the number of applications, counted the amount of talcum powder used per person, and provided a potential range of exposure when he concluded that it was more likely than not that each plaintiff had substantial exposure to asbestos from defendants' products. He based his extrapolation data on a sample from a bottle of defendants' product that had been obtained on eBay. This bottle had the highest concentration of asbestos of any of the sample bottles Longo examined. Longo testified he used this unique sample bottle because the concentration of asbestos

in it was similar to a published paper that had an analogous amount of asbestos and he wanted to compare the two.

During cross-examination, defense counsel asked how Longo determined whether someone experienced "substantial exposure" to asbestos and alleged his testimony contradicted his expert testimony in other matters. In particular, in a prior case, Longo testified about an individual's use of crocidolite filters used in "Kent Micronite" brand cigarettes and, also, that same individual's possible asbestos exposure from mixing cement with asbestos. At the time of that case, Longo did not believe that the asbestos in the cement would cause significant asbestos exposure. He admitted that the asbestos in the mixing cement was in excess of the asbestos found in JBP, but explained that the exposure to the asbestos in JBP was higher because it was being used as a hygiene product.

iii. The trial court erred by admitting Longo's extrapolation testimony and the admission of this testimony was not harmless error

As set forth above, Longo estimated the number of exposures McNeill-George, Etheridge, Barden, and Ronning each had to defendants' products based upon: their deposition testimony about the number of times they used defendants' products per day; J&J's own studies about the amount of talcum powder a person used per application; and the length of time each plaintiff used defendants' products as presented in their respective deposition testimony. In

permitting this testimony without first conducting an N.J.R.E. 104 hearing and subjecting Longo's claims to the standards set forth in Accutane and Daubert, the trial court clearly erred in its judicial gatekeeping and abused its discretion.

There is insufficient evidence in the record to conclude that Longo's extrapolation methodology was based on a sound, adequately founded scientific methodology involving data reasonably relied upon by experts in the scientific field. Further, it is unclear if Longo's extrapolation method had been tested, subjected to peer review or publication, subjected to standards for controlling the technique, or accepted in the scientific community.

Tellingly, the trial court's analysis of the extrapolation method only consisted of recognizing that Longo had presented similar data in prior cases and had used J&J's documents in his analysis. This meager "finding" plainly did not comply with the strictures of Accutane and Daubert.

The trial court's admission of Longo's extrapolation testimony was harmful because it lent significant weight to plaintiffs' assertions that defendants' products were a substantial factor in causing plaintiffs' mesothelioma. This error was clearly capable of producing an unjust result. Therefore, the matter must be reversed and remanded for a new trial.

E. CONCLUSION

In sum, the trial court erred when it admitted Webber's and Moline's testimony about cleavage fragments, and Longo's extrapolation testimony. These errors, taken singularly or collectively, were harmful and require the reversal of the jury verdict. See Lanzo, 467 N.J. Super. at 517-18 (holding that trial court's failure to perform its gatekeeping function by allowing experts to testify concerning untested opinions is error clearly capable of producing unjust result). Therefore, we reverse the July 24, 2020, orders of final judgment and remand the matter for new trials.

In view of our decision, we need not address the other issues that defendants have raised on appeal, including their contentions that the trial court erred by: striking their closing argument; consolidating the four matters for trial; committing other evidentiary and trial errors; empaneling a new jury for the punitive damages phase of the trial; denying their motion for a new trial on punitive damages; and failing to conduct an appropriate post-trial review of the punitive damages awards.

Reversed and remanded to the trial court for further proceedings in accordance with this opinion. We do not retain jurisdiction.