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 United States District Court, M.D. Florida.

STACEY DOOLIN, as the Personal Representative
 of the Estate of Richard E. Doolin, Plaintiff,
 v.
 FORD MOTOR COMPANY, et al., Defendants.

Case No. 3:16-cv-778-J-34PDB
 |
 09/25/2018

ORDER

*1 **THIS CAUSE** is before the Court as a products liability action pertaining to Defendants' **asbestos**-containing automotive products. Richard E. Doolin (the Decedent), was diagnosed with **mesothelioma** in approximately June of 2013, and died as a result of the **mesothelioma** on June 22, 2014, at the age of forty-three. His wife, Plaintiff Stacey Doolin (Plaintiff), maintains that the Decedent developed **mesothelioma** because of his exposure to "**asbestos**-containing products manufactured, sold, supplied and/or distributed" by Defendants. See Plaintiff's Amended Wrongful Death Complaint and Demand for Jury Trial (Doc. 4; Amended Complaint) ¶ 3. Plaintiff, as the personal representative of her husband's estate, initiated this action on June 22, 2016, and filed the Amended Complaint on July 8, 2016. According to the Amended Complaint, the Decedent was exposed to **asbestos** as a child when he would visit the automotive workshop where his father was employed. *Id.* ¶ 4. In addition, Plaintiff maintains that the Decedent continued to perform automotive work throughout his life, although not professionally, further exposing him to **asbestos**. *Id.* ¶ 8. Plaintiff asserts causes of action for state law negligence and strict liability premised on design defect and a failure to warn. See Amended Complaint at 6-13. Currently, the remaining Defendants in this action are Ford Motor Company (Ford) and Pneumo Abex LLC (Abex).¹

Ford and Abex have filed several Daubert² motions seeking to exclude the testimony of various experts, as well as motions for summary judgment pursuant to [Rule 56, Federal Rules of Civil Procedure](#) (Rule(s)). Upon review of these various

motions, the Court determines that the dispositive issue in this case is that of causation. As such, in this Order, the Court first addresses Ford and Abex's motions to exclude the opinions of Plaintiff's causation experts, Arnold R. Brody, Ph.D., and Richard L. Kradin, M.D., D.T.M. & H. See Pneumo Abex LLC's Daubert Motion to Exclude the Testimony of Plaintiffs' [sic] Causation Experts, Dr. Kradin and Dr. Brody and Memorandum of Law (Doc. 118; Abex Motion to Exclude), filed November 13, 2017; Ford Motor Company's Amended Daubert Motion to Exclude the Testimony of Plaintiff's Causation Experts Drs. Arnold Brody and Richard Kradin (Doc. 181; Ford Motion to Exclude), filed April 6, 2018. Plaintiff responded to these Motions on December 4, 2017, and April 25, 2018. See Plaintiff's Response to Defendant Pneumo Abex LLC's Daubert Motion to Exclude the Testimony of Plaintiff's Causation Experts, Dr. Kradin and Dr. Brody (Doc. 143; Response to Abex Motion to Exclude); Plaintiff's Response to Defendant Ford Motor Company's Amended Daubert Motion to Exclude the Testimony of Plaintiff's Causation Experts, Dr. Kradin and Dr. Brody (Doc. 182; Response to Ford Motion to Exclude). After considering the record and the arguments of the parties, the Court finds, for the reasons set forth below, that the expert testimony on specific causation lacks reliability under Daubert. In light of this conclusion, the Court finds it appropriate to turn next to Ford and Abex's motions for summary judgment to the extent they challenge causation. See Pneumo Abex LLC's Motion for Summary Judgment (Dispositive Motion) (Doc. 122; Abex MSJ) and Ford Motor Company's Motion for Summary Judgment on All Claims and, Alternatively, for Partial Summary Judgment on Plaintiff's Loss of Consortium Claims and Supporting Memorandum of Law (Doc. 127; Ford MSJ), both filed November 13, 2017. Plaintiff responded to these Motions on December 14, 2017. See Plaintiff's Response to Defendant Ford Motor Company's Motion for Summary Judgment (Doc. 152; Response to Ford MSJ); Plaintiff's Response to Defendant Pneumo Abex LLC's Motion for Summary Judgment (Doc. 153; Response to Abex MSJ). With leave of Court, Abex and Ford both filed replies in support of their Motions for Summary Judgment on January 10, 2017. See Pneumo Abex LLC's Reply in Support of Motion for Summary Judgment (Doc. 167; Abex Reply); Ford Motor Company's Reply in Support of its Motion for Summary Judgment on all Claims and, Alternatively, for Partial Summary Judgment on Plaintiff's Loss of Consortium Claims (Doc. 165; Ford Reply). Given the

absence of any reliable expert testimony on the issue of specific causation, the Court finds that Plaintiff fails to demonstrate a genuine issue of material fact on causation, and therefore, determines that summary judgment is due to be entered in favor of Ford and Abex. The Court's reasoning follows.

I. Factual Background

*2 The Decedent was born in 1970, the youngest of Edward and Linda Doolin's three children. *See* Ford MSJ, Ex. B: Deposition of Edward Doolin Volume 1 (Doc. 127-2; Ed Doolin Dep. Vol. 1) at 17. In 1973, the Decedent's father, Edward Doolin (Ed Doolin), began working in Pennsylvania for Teen Challenge, a non-profit, faith-based ministry focused on teenage alcoholics and drug addicts. *Id.* at 16, 19, 71. Ed Doolin worked for Teen Challenge as the head of the shop department where he would teach basic auto mechanic skills to the teenagers in the program. *Id.* at 71-73. Ed Doolin spent at least six hours a day, Monday through Friday, working in the shop or in the classroom adjoining the shop. *Id.* at 71, 73-74. He remained in this position for approximately ten years, leaving in 1983. *Id.* at 20-21.

In the Teen Challenge workshop, Ed Doolin, and approximately three assistants, would work with around six to ten students at a time performing basic auto mechanic procedures. *Id.* at 71, 73. The vehicles used for this work were owned by the Teen Challenge ministry itself or by members of the staff, although on rare occasions a vehicle came from someone outside the organization. *Id.* at 80. Ed Doolin testified that there was at least one, and usually several vehicles in the shop on any given day. *Id.* at 85. Over the ten-year span that Ed Doolin worked at Teen Challenge, he recalls the ministry owning two GMC buses, several Ford pick-up trucks, a Chevrolet and a Dodge pick-up truck, as well as a new Ford 15-passenger van. *Id.* at 85-86, 88-89. He also recalls that “[s]ome of the staff had—had new Fords. One—one—I think they mostly were smaller, like F150 size pickup trucks, F100 or F150,” but he is not sure how many. *Id.* at 89. Ed Doolin also remembers that when he first began working at Teen Challenge the ministry owned “10 Ford smaller vans, the Econoline vans,” dating back to the 1960s, which were phased out over time. *Id.* at 90-91. According to Ed Doolin, the people at the Ministry “were pretty much Ford people when I started there.” *Id.* at 91. In addition, Ed Doolin recalls working on one Ford tractor while at Teen Challenge. *Id.* at 92-93.

Ed Doolin testified that brake work was “pretty common” during his time at Teen Challenge, and such work was being done “probably at least once a week and [he] wouldn't be surprised if it was more than that.” *Id.* at 103.³ Ed Doolin specifically recalls performing brake work on the Ford Econoline vans but does not know whether he ever worked on the Ford tractor's brakes. *Id.* at 93. Ed Doolin was also in charge of ordering replacement parts while he worked at Teen Challenge and would order replacement brakes from A&G Automotive, a NAPA store. *Id.* at 96-97. According to Ed Doolin, he never bought replacement brakes from a Ford dealership. *Id.* at 98. He testified that he would place a brake order based on the year and make of the vehicle, without requesting any particular brand, and he would generally receive Bendix or Rayloc brakes, more often Rayloc, and possibly other brands as well. *Id.* at 100-03.⁴ Ed Doolin recalls briefly sanding or grinding brake linings while at Teen Challenge, to “rough them up,” “probably” every time he replaced brakes. *See* Ford MSJ, Ex. C: Deposition of Edward Doolin Volume 2 (Doc. 127-3; Ed Doolin Dep. Vol. 2) at 95. He also testified that he used compressed air to blow out dust when performing brake work. *Id.* In addition, Ed Doolin testified that he recalls doing clutch work while at Teen Challenge, including sanding the friction material on a clutch plate for “maybe a minute.” *Id.* at 42-43.⁵ This clutch work included using an air hose for ten to fifteen seconds to blow the dust out of the bell housing. *Id.* at 50-51. Clutch work was done “somewhere between once a day and once a month,” and done on a variety of vehicles, “mostly Fords and Chevys and—and some Dodges.” *Id.* at 43, 48.

*3 Beginning around the time he was six years old, the Decedent would occasionally visit his father's workshop at the Teen Challenge facility. *See* Ed Doolin Dep. Vol. 1 at 82. Ed Doolin's best estimate is that the Decedent was there once or twice a week, sometimes more in the summer, sometimes less during the school year, and for varying lengths of time. *Id.* at 80-84. Indeed, the Doolins lived in a house on the Teen Challenge main campus which was very close to the shop, so the Decedent “just had to go across a garden to get from the house to the shop and back and forth.” *Id.* at 23-24, 83. Given this proximity, Ed Doolin testified that when his children were little they liked to “just come around and see what's going on.” *Id.* at 83. At some point, although Ed Doolin does not recall

what age, the Decedent began to help with the work at the auto shop. See Ed Doolin Dep. Vol. 2 at 47. According to Ed Doolin, the Decedent was doing hands-on work when he was twelve, although “[p]robably, not much,” such as washing cars and changing tires, but by thirteen, “he was pretty capable of doing a good bit of automotive work.” Id. at 66-67.

With respect to Ford products, Ed Doolin has no specific recollection of the Decedent being present in the shop while Ed Doolin was working on a Ford product, nor can he specifically recall seeing the Decedent work on a Ford product. See Ed Doolin Dep. Vol. 1 at 95-96; see also Ed Doolin Dep. Vol. 2 at 96 (testifying that he had no specific recollection of the Decedent doing a clutch job or the first brake job on any Ford). Although he does not know how many times, Ed Doolin testified that he can recall his son working with Rayloc brakes “[s]ometimes during that 10-year period when he was a little older,” “because Rayloc was the most common brake and he just liked to—he liked to work. He liked to learn how to do things and—.” See Ed Doolin Dep. Vol. 1 at 108-09. Although he cannot recall a specific occasion when the Decedent sanded or ground a brake lining, he does remember that it “was one of the kind of things he liked [to] do because it was, you know, something you could do when you weren’t very big.” See Ed Doolin Dep. Vol. 2 at 95. Likewise, although Ed Doolin cannot recall any specific incident when the Decedent was present while someone was sanding a clutch plate, “he was there a lot, and over a period of time we did do a lot of that....” Id. at 44-45. And, “that’s the kind of thing he would have done if he had been there. Somebody would say, ‘Hey, run the sandpaper over that.’ And he’d say sure. He was a—he was a budding mechanic at a very young age.” Id. at 47. Ed Doolin also does not recall the Decedent using an air hose to blow the dust out of the bell housing, but does recall the Decedent being present when someone else was doing it to the extent that he recalls the Decedent “being there a lot when these things were going on,” although not any particular occasion. Id. at 51.

In 1983, Ed Doolin left his job with Teen Challenge and the family moved to Louisiana where Ed Doolin began working as a mechanic for S.A. Tarver & Sons. See Ed Doolin Dep. Vol. 1 at 25-26. During their time in Louisiana, Ed Doolin recalls the Decedent working on his own cars at home, specifically a 1964 Chevrolet Impala Super Sport. See id. at 30-31. Although Ed Doolin knows the Decedent did brake and clutch work on the Impala, he

does not know the brand name of any replacement parts the Decedent used. Id. at 32-33.

In 1988, the Decedent enlisted in the United States Air Force. See Ford MSJ, Ex.

D. Soon thereafter, when the Decedent was approximately 18 years old, he was diagnosed with lymphoma for which he spent approximately a year undergoing treatment, including surgery and radiation therapy. See Ed Doolin Dep. Vol. I at 35-37, 39-40; Ford MSJ, Ex. E: Deposition of Stacey Doolin (Doc. 127-5; Stacey Doolin Dep.) at 13; see also Ford MSJ, Ex. D. He was honorably discharged from the military following his lymphoma diagnosis, enrolled in college, and eventually obtained a Ph.D. in Medical Neuroscience. See Ed Doolin Dep. Vol. 2 at 78; Ford MSJ, Ex. A at 4, Ex. D. In 1993, the Decedent met his future wife, Plaintiff Stacey Doolin. See Resp. to Ford MSJ, Ex. J: Affidavit of Stacey Doolin (Doc. 152-10; Doolin Aff.) ¶ 2; Stacey Doolin Dep. at 6. The couple married on May 20, 1995, and lived together in Florida until the Decedent’s death in 2014. See Doolin Aff. ¶ 2; Stacey Doolin Dep. at 4-5, 76; Ford MSJ, Ex. A at 3. During the course of their marriage, the couple had two children, who are currently around eleven and fourteen years of age. See Ford MSJ, Ex. A at 3-4.

*4 Plaintiff contends that, in addition to his childhood exposures at Teen Challenge, the Decedent was also exposed to asbestos from the personal automotive work he performed throughout his adulthood. In support, Plaintiff submits her own affidavit in which she states that since the time that she met the Decedent in 1993, she recalls him “performing brake work on Ford vehicles on multiple occasions while living in Florida.” See Doolin Aff. ¶¶ 2, 4. During her deposition, Plaintiff testified that she recalled the Decedent working on the family’s personal cars, as well as other, “hobby” cars. See Stacey Doolin Dep. at 48-49. According to Plaintiff, the Decedent worked on a 1964 Chevrolet Impala as a hobby, doing “everything,” namely, “[e]ngines, brakes, tires, paint.” Id. at 48. He also had other hobby cars, including other “Chevies, Ford, maybe a Jeep,” although she could not recall the year of the Jeep or Ford hobby cars. Id. at 49. Plaintiff testified that the Decedent also worked on the family cars, including her Ford Escape, with an estimated model year of 2000 or 2001. Id. at 49, 76-77.⁶ Plaintiff recalls the Decedent doing the “oil change, brake change, [and] windshield wiper change,” on the family cars. Id. at 50. However, Plaintiff does not know where the Decedent

bought the replacement parts for those cars, and she is unable to describe the boxes in which such parts were packaged. *Id.* at 74-75, 77.

II. Plaintiff's Causation Experts

A. Brody

Arnold R. Brody, Ph.D., is a Professor Emeritus in the Pathology Department of Tulane University Medical School and an Adjunct Professor at North Carolina State University in the Department of Molecular and Biomedical Sciences. *See* Resp. to Ford MSJ, Ex. K: Expert Report Arnold R. Brody, Ph.D. (Doc. 152-11; Brody Report) ¶ 1. He has a Ph.D. in cell biology and has “practiced for decades in the field of biomedical sciences, focusing on the pathobiology of several lung diseases.” *See id.* ¶ 4. Since the 1970s, Brody has concentrated his research on how **asbestos** causes lung disease, published numerous articles, and spoken at conferences around the world on lung cell biology, **asbestos**, and lung disease. *Id.* ¶ 4-5.

In his Report, Brody offers general background information on the different types of **asbestos** fibers⁷ and identifies the “four major diseases caused by inhalation of **asbestos** fibers: **asbestosis**, **pleural plaques**, **lung cancer**, and **mesothelioma**.” *Id.* ¶¶ 7-8. Brody opines that “[a]ll of the **asbestos** fiber types cause all of these four disease categories.” *Id.* ¶ 8. Brody explains that **mesothelioma** occurs “when a mesothelial cell of the pleural or peritoneal surfaces develops a sufficient number of genetic errors in a set of genes that controls cell growth,” and that “[a]ll of the **asbestos** varieties induce the genetic errors described above and cause this **cancer**.” *Id.* ¶ 16. According to Brody, “[t]he fibers that cause **mesothelioma** reach the pleural surfaces through the lymphatic pathways, and they interact with the target cells of the mesothelial surfaces.” *Id.*⁸ Brody opines that the body has “numerous effective defense mechanisms that destroy genetically defective cells,” such that it “typically takes many decades for a sufficient number of mutations to occur in a single mesothelial cell,” which explains the long latency period for this **cancer**. *Id.* ¶ 17.

*5 Brody’s research has focused on the **process** by which **asbestos** fibers cause disease and his Report includes an extensive description of the way **asbestos** fibers enter the body, encounter the body’s defense mechanisms, disrupt

cell division and damage DNA. *Id.* ¶¶ 20, 22-43. Although the body has defense mechanisms “that operate to limit the scope of DNA damage,” Brody explains that “some cells with genetic damage caused by **asbestos** will replicate” and “[o]ver time, future generations of cells carrying this original genetic error may accumulate additional genetic errors from **asbestos** fibers....” *Id.* ¶ 42. “When a single cell accumulates enough errors,” the number of which varies based on the individual and other factors, “it begins to divide uncontrollably, and **cancer** is the loss of control of cell growth.” *Id.* Given this disease process, Brody opines that:

asbestos-induced **cancers** are dose-response diseases, in that the more **asbestos** a person is exposed to, the more likely that person is to develop disease....As **asbestos** exposures occur over time, some proportion of those fibers are retained in the lungs and can be translocated to the various sites where the diseases develop, and the genetic errors caused by **asbestos** fibers accumulate.

Id. ¶ 44. Defendants do not appear to challenge the foregoing opinions. Rather, Defendants take issue with Brody’s concluding opinion that:

Once a person develops an **asbestos-related cancer**, it is not possible to exclude any of the person’s above-background exposures to **asbestos** from the causal chain. Each and every exposure to **asbestos** that an individual with **mesothelioma** experienced in excess of a background level contributes to the development of the disease.

See id. Brody offers no opinions specific to the Decedent in this case and indeed, he rendered his opinion without any information regarding the quantity of the Decedent’s dose exposures to **asbestos**. *See* Brody Dep. at 18, 22.

B. Kradin

Kradin is a pulmonologist and pathologist, specializing in **pulmonary disease**. *See* Resp. to Ford MSJ, Ex. L: Affidavit of Richard L. Kradin, M.D., D.T.M.&H. (Doc.

152-12; Kradin Aff.) at 1. He is an Associate Physician and Associate Pathologist at Massachusetts General Hospital, and an Associate Professor of Pathology and Associate Professor of Medicine at Harvard Medical School. He has spent decades researching, teaching, writing and presenting on **asbestos**-related topics. He has also cared for patients with **asbestos**-related diseases, reviewed pathology specimens from patients with such diseases, reviewed hundreds of biopsies of **asbestos**-related malignancies, including **mesothelioma**, and performed numerous autopsies on patients with **asbestos**-related diseases. The majority of Kradin's Affidavit recites general principles regarding **asbestos** and **mesothelioma**, similar to those set forth above in Brody's Report. Kradin explains that "[m]esothelioma occurs when **asbestos** fibers cause genetic errors in mesothelial cells within the lining of the chest, abdomen, or around the heart—that is, the pleural, peritoneal, and pericardial membranes." *Id.* at 2. According to Kradin, **mesothelioma** develops after multiple epithelial or mesothelial cells accumulate a series of genetic errors from **asbestos** fibers until eventually, "one of these multiple cells with multiple genetic errors escapes the body's defense mechanisms and replicates to form the **mesothelioma**." *Id.* According to Kradin, "**asbestos** is a complete carcinogen, which means it can both initiate and promote **cancer**," and as such, "the persistent **asbestos** fibers and additional exposures after the initial exposure cannot be discounted in determining causation." *Id.* In Kradin's view, this means that "the cumulative dose of **asbestos** causes **mesothelioma** through both direct and indirect mechanisms over the evolution of the **cancer**." *Id.*

*6 Kradin explains that **mesothelioma** is a rare form of **cancer**, and the "great majority" of **mesotheliomas** are caused by **asbestos**. *Id.* Because of this "firmly established" causal relationship, **mesothelioma** is regarded as a "signal" tumor for **asbestos** exposure, meaning that the presence of **mesothelioma** generally "signals" prior **asbestos** exposure. *Id.* at 2-3. Kradin also opines that **mesothelioma** is a "dose-response disease" meaning that "the more someone is exposed to **asbestos**, the greater their risk for developing **mesothelioma**." *Id.* at 3. In Kradin's view, "[m]esothelioma is a single indivisible disease that is the result of an individual's total and cumulative exposures to **asbestos**," and as such "no occupational exposure can scientifically be discounted or considered irrelevant— all occupational, domestic and para-occupational exposures, which by definition are above background, cause the disease." *Id.*

Like Brody, Kradin opines that all types of **asbestos** can cause all forms of **asbestos**-related diseases, including **mesothelioma**. *Id.* at 3. Indeed, Kradin states that "[a]ll variants of **diffuse malignant mesothelioma**, in any location of the body, can be caused by all forms of **asbestos**, including chrysotile." *Id.* at 4.⁹ Kradin then explains that, in his opinion, to determine the cause of an individual's **mesothelioma** it is not necessary to calculate the quantitative dose of **asbestos** exposure. *Id.* at 6. Rather, Kradin maintains that "[i]t is generally accepted in the medical and scientific community that once you have a medical patient diagnosed with **mesothelioma** with a history of occupational, domestic or para-occupational **asbestos** exposure, the **mesothelioma** is attributed to **asbestos** exposure." *Id.* According to Kradin, quantification of **asbestos** exposure is not necessary because brief, low-level exposures to **asbestos** have been shown to cause **mesothelioma**, and a safe or threshold level of **asbestos** exposure below which **mesothelioma** will not occur has never been identified. *Id.* at 6-8. In support of this causation methodology, Kradin cites an article authored by Laura S. Welch, MD, and signed by fifty-one other **asbestos** experts. *See id.* at 8 (quoting Laura S. Welch, MD, **Asbestos Exposure Causes Mesothelioma, But Not This Asbestos Exposure: An Amicus Brief to the Michigan Supreme Court**, 13 Int'l J. Occupational & Env'tl. Health 318 (2007) (the Welch Article)); *see also* Resp. to Ford Motion to Exclude, Ex. A. The Welch Article was originally prepared as an amicus brief to the Michigan Supreme Court and later published in the International Journal of Occupational and Environmental Health. *See id.* at 8. According to the Welch Article, "the consensus of the scientific community is that any occupational or para-occupational exposure to **asbestos**—even 'brief or low-level exposures'—must be considered causal in an individual with a **mesothelioma**." *See* Kradin Aff. at 8 (quoting Welch Article at 321).

Although Kradin acknowledges that "[b]ackground levels of **asbestos** have not been epidemiologically proven to cause **mesothelioma**," he posits that "[i]t is generally accepted in the medical and scientific community that all levels of **asbestos** exposure above background levels contribute to causing **mesothelioma**." *See* Kradin Aff. at 10. Kradin explains that even low-levels of occupational or para-occupational exposures are "orders of magnitude" greater than background levels, such that, no matter how brief, such exposures "contribute to the

risk of developing **mesothelioma**.” *Id.* at 10-13. According to Kradin:

[i]f a person sustains **asbestos** exposures above background/ambient levels of exposure as reflected by an occupational, para-occupational and/or domestic **asbestos** exposure and goes on to develop **mesothelioma**, it is [his] opinion that the exposures above background levels, taken in context of the individual’s total (cumulative) **asbestos** exposures, are significant and non-trivial, and are medical and scientific causes in the development of the individual’s **mesothelioma**.

*7 *Id.* at 11. Nonetheless, Kradin maintains that it is not his opinion that a “single fiber,” “each and every” or “any” exposure to **asbestos** are a substantial contributing factor. *Id.* Rather, Kradin opines that:

an **asbestos** exposure or exposures can be “significant” or “substantial” if [1]) it is of the nature, type and duration that has been shown to cause **mesothelioma** in the medical and scientific literature; 2) if it is not trivial or insignificant in the context of the individual’s total **asbestos** exposure; or 3) if the **asbestos** exposure was necessary to the development of the actual **asbestos**-related disease the individual was diagnosed with, at the time he or she was diagnosed with it, and not some future hypothetical **asbestos**-related disease he or she may have been diagnosed with later in time.

Id. Kradin explains that “[e]ven minute amounts of **asbestos** contain millions, if not billions of **asbestos** fibers” such that even a brief encounter with **asbestos** exposes an individual to far more fibers than are contained in the ambient, “background” air. *Id.* at 12-13. Significantly, Kradin maintains that determining to what degree a particular exposure to **asbestos** increased a person’s risk of contracting **mesothelioma** has “no bearing on the question of what caused the disease in a person” who has already

been diagnosed with **mesothelioma**. *Id.* at 13. Kradin then lists numerous studies, texts and reports that purportedly “support or form the basis for [his] opinions.” *Id.* at 13-17.

On the penultimate page of his seventeen-page report, Kradin finally turns to the facts of this specific case. As to the Decedent’s case, Kradin completed a review of “limited medical records from Mayo Clinic,” a work history, the Ed Doolin Deposition, a death certificate, “the office note of Dr. P. Patel (07-09-2013)” and three stained slides. *Id.* at 17. Based on this review, Kradin determined that the Decedent “was exposed to **asbestos** from 1973 until 1983,” in that he visited the Teen Challenge auto shop “over 100 times, played in the service bays while his father and others were working with **asbestos**-containing materials, and personally performed 10-20 brake and clutch jobs.” *Id.* at 17. Pursuant to his pathology examination, Kradin determined that “[t]he **pericardial biopsies** show an invasive biphasic **diffuse malignant mesothelioma**.” *Id.* He notes that “[n]o lung or pleural tissues were sampled.” *Id.* Based on the foregoing, Kradin opines “to a reasonable degree of medical probability” that:

[The Decedent] was diagnosed with **diffuse malignant mesothelioma** that caused his death. The medical literature has established a strong association between **asbestos** exposure [sic; presumably, “**mesothelioma**”] and **asbestos** exposure, even at low levels. More recently, there have been studies that link malignant **mesothelioma** to therapeutic radiation delivered to the chest in patients with malignancies, including **Hodgkin’s disease**. Based on these facts, it is my opinion to a reasonable degree of medical probability that [the Decedent’s] malignant **mesothelioma** was caused both by the combined effects of his cumulative exposures to **asbestos** and therapeutic radiation.

See *id.* at 17-18.

III. Applicable Standards

A. Motions to Exclude Expert Opinions

*8 [Rule 702 of the Federal Rules of Evidence](#) (Evidence Rule(s)) provides:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) The expert's scientific technical or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) The testimony is based on sufficient facts or data;
- (c) The testimony is the product of reliable principles and methods; and
- (d) The expert has reliably applied the principles and methods to the facts of the case.

[Fed. R. Evid. 702](#).¹⁰ In [Daubert](#), the Supreme Court explained that Evidence [Rule 702](#) imposes an obligation on a trial court to act as gatekeeper, to ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable. [Daubert v. Merrell Dow Pharm., Inc.](#), 509 U.S. 579, 589 (1993). To determine the admissibility of expert testimony, a trial court must consider if:

- (1) the expert is qualified to testify competently regarding the matters he intends to address;
- (2) the methodology by which the expert reaches his conclusions is sufficiently reliable as determined by the sort of inquiry mandated in [Daubert](#); and
- (3) the testimony assists the trier of fact through the application of scientific, technical, or specialized expertise, to understand the evidence or to determine a fact in issue.

See [United States v. Frazier](#), 387 F.3d 1244, 1260 (11th Cir. 2004). The burden of establishing qualification, reliability and helpfulness lies with the party offering the expert opinion. See [McClain v. Metabolife Int'l, Inc.](#) 401 F.3d 1233, 1238 (11th Cir. 2005). For the purpose of conducting the reliability inquiry mandated by [Daubert](#), the Supreme Court has suggested that a trial court

consider a number of factors, which include: (1) whether the theory or technique can be, and has been, tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the known or potential rate of error; and (4) whether the theory has attained general acceptance in the relevant scientific community. See [Daubert](#), 509 U.S. at 593-94. These factors are not exhaustive, and the Eleventh Circuit Court of Appeals has also considered whether an expert has relied on anecdotal evidence, such as case reports; temporal proximity; and improper extrapolation. See [Allison v. McGhan Med. Corp.](#), 184 F.3d 1300, 1312 (11th Cir. 1999). The Court's inquiry under Evidence Rule 702 must focus on the methodology, not conclusions, but the Court is not required to admit opinion testimony only connected to existing data by an expert's unsupported assertion. See [Daubert](#), 509 U.S. at 595; [Gen. Elec. Co. v. Joiner](#), 522 U.S. 136, 146 (1997).

*9 In addition to determining the reliability of the proposed testimony, [Daubert](#) instructs that Evidence [Rule 702](#) requires the Court to determine whether the evidence or testimony assists the trier of fact in understanding the evidence or determining a fact in issue. See [Daubert](#) 509 U.S. at 591. This consideration focuses on the relevance of the proffered expert testimony or evidence. The Court explained that to satisfy this relevance requirement, the expert testimony must be "relevant to the task at hand." [Daubert](#), 509 U.S. at 591. Because scientific testimony does not assist the trier of fact unless it has a justified scientific relation to the facts, the Eleventh Circuit has opined that "there is no fit where a large analytical leap must be made between the facts and the opinion." [McDowell v. Brown](#), 392 F.3d 1283, 1299 (11th Cir. 2004) (citing [Joiner](#), 522 U.S. at 143-46) (finding too great an analytical gap between data suggesting that one type of cancer was caused in mice and the conclusion or opinion that such data established causation of another type of cancer in humans)).

The proponent of expert testimony need not show that the opinion proffered is scientifically correct, but only, based upon a preponderance of the evidence, that the opinion is reliable. See [Allison](#), 184 F.3d at 1312. Thus, absolute certainty is not required. See [Jones v. Otis Elevator Co.](#), 861 F.2d 655, 662 (11th Cir. 1988). However, an expert must know "facts which enable him to express a reasonably accurate conclusion instead of mere conjecture or speculation," see [id.](#), and an expert's assurances that

he has used generally accepted scientific methodology are insufficient, see [McClain](#), 401 F.3d at 1244.

B. Summary Judgment

Under [Rule 56, Federal Rules of Civil Procedure](#) (Rule(s)), “[t]he court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” [Rule 56\(a\)](#). The record to be considered on a motion for summary judgment may include “depositions, documents, electronically stored information, affidavits or declarations, stipulations (including those made for purposes of the motion only), admissions, interrogatory answers, or other materials.” [Rule 56\(c\)\(1\)\(A\)](#).¹¹ An issue is genuine when the evidence is such that a reasonable jury could return a verdict in favor of the nonmovant. [Mize v. Jefferson City Bd. of Educ.](#), 93 F.3d 739, 742 (11th Cir. 1996) (quoting [Hairston v. Gainesville Sun Publ’g Co.](#), 9 F.3d 913, 919 (11th Cir. 1993)). “[A] mere scintilla of evidence in support of the non-moving party’s position is insufficient to defeat a motion for summary judgment.” [Kesinger ex rel. Estate of Kesinger v. Herrington](#), 381 F.3d 1243, 1247 (11th Cir. 2004) (citing [Anderson v. Liberty Lobby, Inc.](#), 477 U.S. 242, 252 (1986)).

The party seeking summary judgment bears the initial burden of demonstrating to the court, by reference to the record, that there are no genuine issues of material fact to be determined at trial. See [Clark v. Coats & Clark, Inc.](#), 929 F.2d 604, 608 (11th Cir. 1991). “When a moving party has discharged its burden, the non-moving party must then go beyond the pleadings, and by its own affidavits, or by depositions, answers to interrogatories, and admissions on file, designate specific facts showing that there is a genuine issue for trial.” [Jeffery v. Sarasota White Sox, Inc.](#), 64 F.3d 590, 593–94 (11th Cir. 1995) (internal citations and quotation marks omitted). Substantive law determines the materiality of facts, and “[o]nly disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment.” [Anderson](#), 477 U.S. at 248. In determining whether summary judgment is appropriate, a court “must view all evidence and make all reasonable inferences in favor of the party opposing summary judgment.” [Haves v. City of Miami](#), 52 F.3d 918, 921 (11th Cir. 1995) (citing [Dibrell Bros. Int’l, S.A.](#)

[v. Banca Nazionale Del Lavoro](#), 38 F.3d 1571, 1578 (11th Cir. 1994)).

C. Causation

*10 “Florida product liability actions, whether sounding in negligence or strict liability, require proof of proximate cause.” See [Haller v. AstraZeneca Pharm. LP](#), 598 F. Supp. 2d 1271, 1303 (M.D. Fla. 2009) (citing [West v. Caterpillar Tractor Co., Inc.](#), 336 So. 2d 80, 87 (Fla. 1976) and [Rink v. Cheminova, Inc.](#), 400 F.3d 1286, 1295 (11th Cir. 2005)). To establish proximate cause, “Florida courts follow the more likely than not standard of causation and require proof that the negligence probably caused the plaintiff’s injury.” See [Gooding v. Univ. Hosp. Bldg., Inc.](#), 445 So. 2d 1015, 1018 (Fla. 1984); see also [West](#), 336 So. 2d at 90 (explaining that “ordinary rules of causation and the defenses applicable to negligence are available under” Florida’s adoption of strict liability rules). According to the Florida Supreme Court, on the issue of causation a plaintiff

“must introduce evidence which affords a reasonable basis for the conclusion that it is more likely than not that the conduct of the defendant was a substantial factor in bringing about the result. A mere possibility of such causation is not enough; and when the matter remains one of pure speculation or conjecture, or the probabilities are at best evenly balanced, it becomes the duty of the court to direct a verdict for the defendant.”

[Gooding](#), 445 So. 2d at 1018 (emphasis added) (quoting Prosser, [Law of Torts](#) § 41 (4th ed. 1971)); [Guinn v. AstraZeneca Pharm. LP](#), 602 F.3d 1245, 1256 (11th Cir. 2010); see also [Fla. Stat. § 774.204\(a\)](#) (“Physical impairment of the exposed person, to which **asbestos** or silica exposure was a substantial contributing factor, is an essential element of an **asbestos** or silica claim.”). Florida courts have elaborated on these principles as follows:

“[A] defendant’s conduct need not be the only cause of a plaintiff’s injuries, or even fifty-one percent of the cause; rather, the plaintiff must present evidence that the defendant’s conduct, was more likely than not, a ‘substantial factor’ in causing the injury. Thus, the plaintiff is not required to prove that the defendant’s conduct alone was more likely than not the sole proximate cause.”

[Cohen v. Philip Morris USA, Inc.](#), 203 So. 3d 942, 949 (Fla. 4th Dist. Ct. App. 2016) (quoting [Whitney v. R.J.](#)

[Reynolds Tobacco Co.](#), 157 So. 3d 309, 312-14 (Fla. 1st Dist. Ct. App. 2014)). Indeed, the Florida Standard Jury Instruction on Legal Cause in a products liability cases provides as follows:

[A defect in a product] [Negligence] is a legal cause of [loss] [injury] [or] [damage] if it directly and in natural and continuous sequence produces or contributes substantially to producing such [loss] [injury] [or] [damage], so that it can reasonably be said that, but for the [defect] [negligence], the [loss] [injury] [or] [damage] would not have occurred.

See Fla. Std. Jury Instr. § 403.12(a). The Notes On Use for this instruction provide that Jury Instruction § 403.12(b) “must be given whenever there is a contention that some other cause may have contributed, in whole or part, to the occurrence or resulting injury.” See Fla. Std. Jury Instr. § 403.12, Notes On Use ¶ 3. Section 403.12(b) provides that:

In order to be regarded as a legal cause of [loss] [injury] [or] [damage], [a defect in a product] [negligence] need not be the only cause. [A defect in a product] [Negligence] may be a legal cause of [loss] [injury] [or] [damage] even though it operates in combination with [the act of another] [some natural cause] [or] [some other cause] if the [defect] [negligence] contributes substantially to producing such [loss] [injury] [or] [damage].

*11 Fla. Std. Jury Instr. § 403.12(b) (emphasis added). As such, “Florida law’s ‘substantial factor’ requirement is best understood to mean that [Plaintiff] can recover if a jury found that [the Decedent’s exposure to **asbestos** was] a partial or contributing cause of his [mesothelioma.]” See [Hendrix ex rel. G.P. v. Evenflo Co., Inc.](#), 609 F.3d 1183, 1196 n.7 (11th Cir. 2010).

IV. Discussion

A. Expert Testimony

Although Ford and Abex raise a variety of arguments in the myriad pending motions, the central issue at this

stage of the proceedings is whether Plaintiff can satisfy her burden of establishing a genuine issue of fact for trial on the question of causation. See [Celotex Corp. v. Catrett](#), 477 U.S. 317, 322-23 (1986) (“Rule 56(c) mandates the entry of summary judgment, after adequate time for discovery and upon motion, against a party who fails to make a showing sufficient to establish the existence of an element essential to that party’s case, and on which that party will bear the burden of proof at trial.”); see also [Hutcherson v. Progressive Corp.](#), 984 F.2d 1152, 1155 (11th Cir. 1993) (“Although this is a diversity action and [Florida] state law therefore provides the controlling substantive law, federal law governs the sufficiency of the evidence necessary to preclude a grant of summary judgment.”). Indeed, causation is a critical element in each of Plaintiff’s claims, such that Ford and Abex are entitled to judgment as a matter of law on all claims set forth in the Amended Complaint if Plaintiff fails to establish the existence of a genuine issue of material fact with regard to whether the Decedent’s exposure to **asbestos** while working with Ford and Abex products caused him to develop mesothelioma. See [Guinn v. AstraZeneca Pharm. LP](#), 598 F. Supp. 2d 1239, 1242 (M.D. Fla. 2009) aff’d 602 F.3d 1245 (11th Cir. 2010).

As evidence of causation, Plaintiff relies on the testimony of expert witnesses Brody and Kradin. Brody intends to testify as to general causation—the manner and means by which exposure to chrysotile **asbestos** can cause **mesothelioma**, and Kradin is prepared to testify as to specific causation—that the Decedent’s exposure to chrysotile **asbestos** from the automotive work did cause his **mesothelioma**. Ford and Abex contend that Brody and Kradin’s opinions should be excluded because they fail to satisfy the requirements of [Daubert](#) for the admissibility of expert testimony, and that absent this testimony, Ford and Abex are entitled to summary judgment because Plaintiff fails to demonstrate an issue of fact on causation. Alternatively, Ford and Abex contend that even if the Court finds that Brody and Kradin’s opinions are admissible, their testimony is insufficient to establish an issue of fact on causation under Florida law. Plaintiff responds that Brody and Kradin are well-qualified experts whose opinions are generally accepted in the medical and scientific community. Plaintiff maintains that the testimony of these experts establishes that the Decedent’s exposure to **asbestos** from Ford and Abex’s products “substantially increased his risk of contracting **mesothelioma** and substantially contributed to causing his

mesothelioma and death.” See Resp. to Ford MSJ at 14; Resp. to Abex MSJ at 17.

As to general causation, Ford and Abex contend that there is no evidence that exposure to chrysotile asbestos in brake dust causes mesothelioma. Ford and Abex rely on studies indicating that the conditions under which brake pads are used transforms the asbestos on the brake pad into a non-carcinogenic substance. See Ford Motion to Exclude at 26-27; Abex Motion to Exclude at 19-21. Ford and Abex also cite to epidemiological evidence that there is no increased incidence of mesothelioma among automobile mechanics. See Ford Motion to Exclude at 27-28; Abex Motion to Exclude at 21-22. In response, Plaintiff argues that it is well-accepted in the scientific community that chrysotile asbestos causes mesothelioma. See Resp. to Ford Motion at 12-15. Although Plaintiff’s argument focuses on chrysotile asbestos more broadly, rather than brake dust specifically, Plaintiff does cite to the Welch Article in which author Laura S. Welch, M.D. “outlines the evidence supporting the conclusion that asbestos from brakes can and does cause mesothelioma...” See *id.* at 13, Ex. A: Welch Article at 318¹²; see also *Chapin v. A & L Parts, Inc.*, 732 N.W. 2d 578, 587 (Mich. Ct. App. 2007) (finding that both sides “presented scientifically sound expert testimony” on the issue of whether automobile brake dust causes mesothelioma). Notably, neither Kradin nor Brody discuss brake dust in their expert reports, although, during his deposition, Kradin did testify to his opinion that “brakes are a cause of mesothelioma, working with brakes or bystander exposures to brakes are the cause of mesothelioma.” See Kradin Dep. at 17. However, the Court need not determine if the evidence is sufficient, because even if the Court assumes that asbestos-containing brake dust can cause mesothelioma as a matter of general causation, the Court is nonetheless convinced that the expert testimony on the issue of specific causation in this case is not sufficiently reliable.

*12 “Specific causation refers to the issue of whether the plaintiff has demonstrated that the substance actually caused injury in her particular case.” *Guinn*, 602 F.3d at 1248 n.1. Thus, the specific causation question here is: was the Decedent’s exposure to asbestos in the Teen Challenge auto shop a substantial contributing factor to the development of the mesothelioma?¹³ Kradin provides Plaintiff’s sole evidence on the issue of specific causation. See Resp. to Ford MSJ at 13-14; Resp. to Abex MSJ

at 16-17. As stated above, Kradin is prepared to testify that the Decedent’s malignant mesothelioma was caused by both his cumulative exposures to asbestos and the therapeutic radiation he underwent as a teenager. See Kradin Aff. at 17. In support of this opinion Kradin relies on a theory, sometimes referred to as the “each and every” or “any” exposure theory, and in recent variations the “cumulative” exposure theory, that has been extensively discussed and criticized as scientifically unsound by state and federal courts throughout the country.¹⁴ See, e.g., *Krik v. Exxon Mobil Corp.*, 870 F.3d 669, 674-79 (7th Cir. 2017) (affirming exclusion of “cumulative” exposure theory and recognizing that “more than thirty other federal courts and state courts have held that this cumulative/ ‘any exposure’ theory is not reliable”); *Betz v. Pneumo Abex LLC*, 44 A.3d 27, 39-41, 55-58 (Pa. 2012) (finding trial court did not abuse its discretion in excluding any exposure theory) (“While the court did not discount that a single fiber may possibly increase the risk of developing disease, it did not accept that an unquantified (and potentially infinitesimal) increase in risk could serve as proof that a defendant’s product was a substantial cause of a plaintiff’s or decedent’s disease.”); *Rockman v. Union Carbide Corp.*, 266 F. Supp. 3d 839, 848-850 (D. Md. 2017); *Vedros v. Northrop Grumman Shipbuilding, Inc.*, 119 F. Supp. 3d 556, 562-65 (E.D. La. 2015); *Smith v. Ford Motor Co.*, No. 2:08-cv-630, 2013 WL 214378 (D. Utah Jan. 18, 2013) (rejecting “any exposure” theory explaining “[j]ust because we cannot rule anything out does not mean we can rule everything in”); *Yates v. Ford Motor Co.*, 113 F. Supp. 3d 841, 846-47, 849-62 (E.D.N.C. 2015); see also *Crane Co. v. DeLisle*, 206 So. 3d 94, 103-06 (Fla. 4th Dist. Ct. App. 2016). Some courts have found that this expert testimony is simply insufficient to create an issue of fact on causation. See *Moeller v. Garlock Sealing Techs., LLC*, 660 F.3d 950 (6th Cir. 2011) (“Given that the Plaintiff failed to quantify [the decedent’s] exposure to asbestos from [the defendant’s gaskets] and that the Plaintiff concedes that [the decedent] sustained massive exposure to asbestos from [other] sources, there is simply insufficient evidence to infer that [the defendant’s gaskets] probably, as opposed to possibly, were a substantial cause of [the decedent’s] mesothelioma.”); *Lindstrom v. A-C Prod. Liab. Trust*, 424 F.3d 488, 493 (6th Cir. 2005); *Gregg v. V-J Auto Parts, Co.*, 943 A.2d 216, 291 (Pa. 2007) (“[S]uch generalized opinions do not suffice to create a jury question in a case where exposure to the defendant’s product is *de minimus*, particularly in the absence of evidence excluding other

possible sources of exposure (or in the face of evidence of substantial exposure from other sources).”); see also Daly v. Arvinmeritor, Inc., No. 07-19211, 2009 WL 4662280 (Fla. Cir. Ct. Nov. 30, 2009). But, not all courts have taken this view. See Davis v. Honeywell Int’l Inc., 199 Cal.Rptr.3d 583, 591-597 (Cal. Ct. App. 2016); Sheffield v. Owens-Corning Fiberglass Corp., 595 So. 2d 443, 456 (Ala. 1992) (finding summary judgment was inappropriate where evidence showed the decedent worked close to where **asbestos** products were used and expert testified that “each and every” exposure contributes in a causally significant and substantial manner to **asbestos**-related lung impairment); Dugas v. 3M Co., No. 3:14-cv-1096-J-39JBT, 2016 WL 746096, at *2-3 (M.D. Fla. Jan. 11, 2016) (citing Schumacher v. Amtico, No. 2:10-1627, ECF No. 143 (E.D. Pa. Nov. 2, 2010)).

To determine whether Kradin’s “any exposure” theory is a reliable basis for his opinions in this case, the Court will analyze whether it satisfies the scientific criteria for proving causation outlined in McClain. In McClain, the Eleventh Circuit set forth four scientific criteria for proving causation between a chemical exposure and a particular illness in an individual. See McClain, 401 F.3d at 1242. The four criteria are as follows: (1) has the toxic substance in question been demonstrated to cause the type of illness or disease in question (general causation), (2) was the individual exposed to a sufficient amount of the substance in question to elicit the health effect in question (specific causation), (3) is the chronological relationship between exposure and effect biologically plausible (specific causation), and (4) what is the likelihood that the chemical caused the disease or illness in an individual given the other known causes. Id. at 1243. As stated above, for purposes of this decision, the Court assumes without deciding that chrysotile **asbestos** in brake dust as a general matter can cause **mesothelioma**. In addition, as to the third factor, the Decedent’s exposure to **asbestos** and development of **mesothelioma** thirty years later is consistent with the known latency period. As such, the Court focuses its analysis on the second and fourth factors.

*13 Turning to the question of whether the Decedent was exposed to a sufficient amount of chrysotile **asbestos** to elicit **mesothelioma**, the Eleventh Circuit instructs that:

In toxic tort cases, “scientific knowledge of the harmful level of exposure to a chemical plus knowledge that plaintiff was exposed to such quantities are minimal

facts necessary to sustain the plaintiff’s burden....” [T]o carry the burden in a toxic tort case, “a plaintiff must demonstrate the levels of exposure that are hazardous to human beings generally as well as the plaintiff’s actual level of exposure to the defendant’s toxic substance before he or she may recover.”

See McClain, 401 F.3d at 1241 (internal citation omitted) (quoting Allen v. Penn. Eng’g Corp., 102 F.3d 194, 199 (5th Cir. 1996) and Mitchell v. Gencorp, 165 F.3d 778, 781 (10th Cir. 1999)). This requires consideration of the dose-response relationship, defined as the “ ‘relationship in which a change in amount, intensity, or duration of exposure to an agent is associated with a change—either an increase or decrease—in risk of disease.’ ” Id. at 1241-42 (quoting Michael D. Green et al., Reference Guide on Epidemiology, in Reference Manual on Scientific Evidence 392 (Federal Judicial Center, 2d ed. 2000) (the Reference Manual)). Although “precise numbers about a dose-response relationship” are not required, “the expert who avoids or neglects this principle of toxic torts without justification casts suspicion on the reliability of his methodology.” Id. at 1241-42 & n.6.

Kradin does acknowledge that **mesothelioma** is a dose-response disease, such that “the more **asbestos** exposure an individual has, the greater his or her chance of developing **mesothelioma**,” see Kradin Aff. at 3, but he does not attempt to analyze the Decedent’s particular exposure or the degree to which it increased his risk of **mesothelioma**. Kradin’s justification for his disregard of the dose-response relationship is that **mesothelioma** is so strongly associated with **asbestos** exposure that the scientific community does not require a calculation of an individual’s dose in order to link a **mesothelioma** diagnosis with an exposure history. See id. at 2-3, 6. Additionally, Kradin maintains that it is not necessary to determine the amount of the Decedent’s dose because “there is no safe level (or threshold) of exposure to **asbestos** that has been shown not to cause **mesothelioma**.” See id. at 7 (emphasis added). Of course, this is not the same as affirmatively demonstrating that all levels of exposure to all types of **asbestos** can cause **mesothelioma**, nor does it mean that all levels of exposure to all types of **asbestos** carry the same risk. Nonetheless, Kradin maintains that it is not necessary to assess an individual’s risk of contracting **mesothelioma** from **asbestos** because once that person has **mesothelioma** “the risk of contracting disease has tragically already been determined to be 100%.” Id. at 13. This statement reveals the backwards reasoning

underlying Kradin's causation opinion. Kradin starts from the premise that **mesothelioma** is most often caused by exposure to **asbestos**, and from there reasons that the Decedent's exposure to **asbestos** must have been sufficient to cause **mesothelioma** because the Decedent did in fact develop **mesothelioma**. This backwards logic is not a reliable basis for a causation opinion, particularly under the facts of this case. See Cano v. Everest Mineral Corp., 362 F. Supp. 2d 814, 847-50 (W.D. Tex. 2005) (“[I]f a person who smokes has a 30% chance of developing **lung cancer**, the fact that that person did develop **cancer** does not change that risk to 100%, and it cannot be said, based on the existence of **cancer** alone, that the **lung cancer** was caused by the smoking. All that can be said is that smoking may have been a cause, and other evidence is needed to determine whether, more likely than not, it actually was.”).

*14 Kradin's disregard of the need to assess the Decedent's particular dose and attendant risk is particularly problematic here because the Decedent suffered from an unusual form of **mesothelioma** located in the pericardium.¹⁵ Although neither party provided the Court with any medical records, the Decedent's father testified that the Decedent suffered from **pericardial mesothelioma**. See Ed Doolin Dep. Vol. I at 61-62. And, Plaintiff also testified that the Decedent's **mesothelioma** was located in his pericardium. See Stacey Doolin Dep. at 24. In his Affidavit, Kradin examined **pericardial biopsies** in determining that the Decedent suffered from “invasive biphasic **diffuse malignant mesothelioma**,” and notes that no lung or pleural tissues were sampled. See Kradin Aff. at 17. Indeed, Plaintiff does not appear to dispute that the Decedent suffered from **pericardial mesothelioma**.¹⁶

Nonetheless, the very basis of Kradin's “any exposure” causation opinion is the strong, well-established connection between **asbestos** exposure and pleural and **peritoneal mesothelioma**. See Kradin Aff. at 17; Kradin Dep. at 80. Indeed, he explains that for “individuals who are exposed to **asbestos** the link is so strong that one has to consider **asbestos** as a causative agent.” Id. Notably, however, much of the literature on which Kradin relies in his Affidavit is specific to **pleural** or **peritoneal mesothelioma**, and he concedes that none of the articles he cites specifically discuss **pericardial mesothelioma**. See Kradin Dep. at 10. Kradin resolves this discrepancy during his deposition by opining that: 1) he does not have enough information to know for

sure that the Decedent's **mesothelioma** was primary and exclusive to the pericardium,¹⁷ and 2) regardless, **pericardial mesothelioma** is not biologically distinct from other types of **mesothelioma**, and the scientific literature on **pericardial mesothelioma** supports some association to **asbestos**. See Kradin Dep. at 10-11, 21, 31, 33, 37, 38, 44-45, 69. This explanation is unsupported by citation to any scientific or medical literature, and as such, is precisely the type of leap from an accepted scientific premise to an unsupported one that courts are cautioned against. See Allison, 184 F.3d at 1314 (cautioning against “leaping from an accepted scientific premise to an unsupported one”).

*15 During Kradin's deposition, defense counsel questioned Kradin about his awareness of, and response to, articles in which the connection between **asbestos** and pericardial mesothelioma is characterized as unclear or weak. See Kradin Dep. at 32-41. Although familiar with the articles, Kradin nevertheless discounted the importance of their findings because the authors still observed that some cases of pericardial mesothelioma were associated with **asbestos** exposure. See id. at 36-38. Kradin explains that “if you look through all the pericardial mesothelioma literature, which is not epidemiological in nature, virtually all of the articles will indicate that at least some of the cases have been exposed to **asbestos**.” See Kradin Dep. at 69 (emphasis added). Kradin did not cite to this literature in his Affidavit, nor did Plaintiff provide it to the Court, and “[t]he law does not require [this Court] to take him at his word.” See Williams v. Mosaic Fertilizer, LLC, 889 F.3d 1239, 1249 (11th Cir. 2018). Regardless, even if Kradin's assessment is accurate, the “at least some” connection Kradin draws from the literature regarding pericardial mesothelioma is altogether different than the “great majority” connection Kradin relies on in his Affidavit and which is drawn from the literature discussing pleural or peritoneal mesothelioma. See Kradin Aff. at 2. While the Court does not purport to know the views of the scientific and medical community regarding pericardial mesothelioma and **asbestos**, Kradin's failure to address this issue in his Affidavit leaves a large analytical gap in his reasoning. Because Kradin's opinion is premised on data pertaining to pleural and peritoneal mesothelioma, and absent any support for his extrapolation that such data is equally applicable to pericardial mesothelioma, the Court finds that Kradin's causation opinion is not tailored to the facts of this case and as such too unreliable. See Rockman,

266 F. Supp. 3d at 846 (criticizing experts for conflating “data on pleural mesothelioma and amphibole asbestos with data on peritoneal mesothelioma and chrysotile asbestos”); see also Kilpatrick v. Breg, Inc., 613 F.3d 1329, 1338 (11th Cir. 2010) (“[The expert’s] focus on the author’s description of an ‘association’ between [the medical device] and [the disease] is unavailing. [S]howing [an] association is far removed from proving causation.” (fourth and fifth alteration in original) (quoting Allison, 184 F.3d at 1315 n. 16)).

The second problem with Kradin’s reliance on the “any exposure” theory in this case is that it fails to address the fourth factor listed in McClain—the likelihood that asbestos caused the disease in context of the other potential known cause. See McClain, 401 F.3d at 1243 (explaining that “the likelihood that the chemical caused the disease or illness in an individual should be considered in the context of other known causes’ ” (quotation omitted)). Notably, even without the directives of McClain, Kradin’s failure to consider the other potential cause of the Decedent’s mesothelioma contradicts his own espoused methodology for assessing causation. In his Affidavit, Kradin asserts that “[t]he reality of causation with respect to mesothelioma is generally accepted in the scientific community and was summarized in the peer-reviewed [Welch Article.]” See Kradin Aff. at 8. He then quotes a subsection of the Welch Article titled “Accepted Method for Evaluating Disease Causation in an Individual: Generally and as Applied to Asbestos Exposure and Mesothelioma,” which instructs as follows:

Examining the question of causation of disease in an individual generally involves four questions: 1) was the individual exposed to a toxic agent; 2) does the agent cause the disease present in the individual; 3) was the individual exposed to this substance at a level where disease has occurred in other settings; and 4) have other competing explanations for the disease been excluded?

See id. (emphasis added) (quoting Welch Article at 320).¹⁸ Although the fourth prong of the analysis requires a determination of whether “other competing explanations for the disease [have] been excluded,” Kradin fails to conduct such an analysis. The author of the

Welch Article addresses this factor by stating that “there are no well-accepted competing explanations regarding mesothelioma that must be excluded,” see Welch Article at 320, but this statement is not accurate in this particular case. Both Brody and Kradin recognize that therapeutic radiation, such as that received by Decedent to treat his lymphoma, can also cause mesothelioma. Despite this, Kradin fails to make any attempt to exclude this competing explanation as a sole cause. Instead, Kradin acknowledges the Decedent’s history of radiation therapy as a potential cause and then summarily concludes that both radiation and asbestos caused the Decedent’s mesothelioma based on nothing more than his own ipse dixit. See Kradin Aff. at 17-18.

*16 Not only is this analysis inconsistent with Kradin’s stated methodology, but the Eleventh Circuit rejected precisely this same reasoning in Guinn:

An expert, however, cannot merely conclude that all risk factors for a disease are substantial contributing factors in its development. “The fact that exposure to [a substance] may be a risk factor for [a disease] does not make it an actual cause simply because [the disease] developed.” “[A]lthough the differential diagnosis technique is well accepted...[, a finding] that all possible causes are causes does not appear to have gained general acceptance in the medical and scientific communities.”

See Guinn, 602 F.3d at 1255 (internal citation omitted) (alterations in original) (quoting Cano, 362 F. Supp. 2d at 846 (rejecting the “any exposure” theory in toxic tort cases alleging radiation exposure from uranium caused plaintiff’s cancers)); see also Cano, 362 F. Supp. 2d at 844-46 (“The fact that exposure to [a carcinogen] may be a risk factor for cancer does not make it an actual cause simply because cancer developed.”). While the Court acknowledges that an expert need not definitively exclude all other potential causes in order to form an opinion on causation, expert testimony is “properly excluded as unreliable if...‘the defendants pointed to some likely cause of the plaintiff’s illness other than the defendants’ action and [the doctor] offered no reasonable explanation as to why he or she still believed that the defendants’ actions were a substantial factor in bringing about that illness.’ ” See Wilson v. Taser Int’l, Inc., 303 F. App’x 708, 714 (11th Cir. 2008) (second alteration in original). Indeed, an expert must “at least adequately consider each proffered alternative cause, and explain

why it was not the sole cause.” See Haller, 598 F. Supp. 2d at 1299 n. 263 (internal citation omitted); see also Williams, 889 F.3d at 1248-49 (finding expert’s report suffered from methodological errors because he “failed to meaningfully rule out other potential causes of [the plaintiff’s] conditions and symptoms”); Chapman v. Proctor & Gamble Distributing, LLC, 766 F.3d 1296 (11th Cir. 2014) (“The ‘expert must provide reasons for rejecting alternative hypotheses using scientific methods and procedures and the elimination of those hypotheses must be founded on more than subjective beliefs or unsupported speculation.’ ” (quoting Hendrix, 609 F.3d at 1197)).

While Kradin was not required to rule out therapeutic radiation, contrary to the foregoing, Kradin’s opinion lacks any analysis of the competing explanation for the Decedent’s mesothelioma. Kradin undisputedly identified the therapeutic radiation as an alternative cause of mesothelioma. Having done so, he fails to rule it out or provide any explanation as to why, in his opinion, it is not the sole cause. Kradin’s Affidavit contains no discussion of the medical and scientific literature pertaining to therapeutic radiation and mesothelioma, nor did Kradin review or consider the Decedent’s medical records pertaining to his radiation therapy. Kradin did not even go so far as to weigh the Decedent’s risk of developing mesothelioma from the radiation therapy as compared to his risk of developing mesothelioma from the exposure to low-levels of chrysotile **asbestos**. See Guinn, 602 F.3d at 1256 (finding expert’s opinion unsupported by the evidence in part because expert made no attempt to quantify the relative contributions of plaintiff’s risk factors in the development of the disease); Williams, 889 F.3d at 1248-49 (finding expert report suffered from methodological errors where expert stated he eliminated other causes based on their low probability but “never provided the District Court or this Court with any probability studies regarding those potential causes, and his expert report never referenced those probabilities”). While the Court accepts the proposition that cancer can have multiple concurrent causes, this does not relieve Kradin of the obligation to analyze the role played by each potential cause. See Guinn, 602 F.3d at 1255; see also Cano, 362 F. Supp. 2d at 841 (“The [Reference] Manual notes that some conditions may have multiple contributing factors, and that some agents have been found to interact in a synergistic manner or to contribute in an incremental fashion to a disease, and thus the

common statement that ‘alternative causes of disease must be ruled out’ before causation is attributed can be more accurately refined to say that ‘the role of other causes must be adequately considered.’ ” (quoting Reference Manual at 476)).

*17 For all of the foregoing reasons, after careful consideration of Kradin’s Affidavit, his deposition testimony, and the other evidence of record, the Court is convinced that Kradin’s opinion is due to be excluded. Kradin reaches his opinion as to specific causation without: 1) making any attempt to analyze the Decedent’s specific dose of **asbestos** and the degree to which it increased his risk of developing **mesothelioma**, 2) identifying or discussing the particular form of the Decedent’s **mesothelioma** and its connection to **asbestos** exposure, or 3) adequately considering the contribution of the Decedent’s therapeutic radiation and explaining why it was likely not the sole cause of his **mesothelioma**. In light of the foregoing, the Court concludes that “ ‘there is simply too great an analytical gap’ ” between the data presented and Kradin’s causation opinion. See Allison, 184 F.3d at 1315 (quoting Joiner, 522 U.S. at 146). Kradin’s conclusion that the Decedent’s exposure to chrysotile **asbestos** caused his **pericardial mesothelioma** is supported only by his own ipse dixit and as such, fails to meet the requirements of Evidence Rule 702.¹⁹ As such, the Court will grant Ford and Abex’s Motion to Exclude to the extent that the Court will exclude Kradin’s opinion on specific causation.

B. Summary Judgment

Causation is an essential element to Plaintiffs’ claims, and is, therefore, a material issue for summary judgment purposes. See West, 336 So. 2d at 86-87. In toxic tort cases, where injury is not readily observable, expert testimony is required. See McClain, 401 F.3d at 1237.

In support of specific causation, Plaintiff relies solely on Kradin’s opinion to argue that the Decedent’s exposure to **asbestos** was a substantial contributing factor in the development of his **mesothelioma**.²⁰ However, the Court has determined that Kradin’s opinion is not sufficiently reliable under Daubert and must be excluded. As such, Plaintiff has no admissible evidence that the Decedent’s exposure to Ford or Abex’s **asbestos**-containing products was more likely than not a substantial factor contributing to the development of the **mesothelioma**. Without any

proof of causation, Plaintiff cannot make a prima facie case. See [Guinn](#), 602 F.3d at 1256; [Williams](#), 889 F.3d at 1242. Defendants have, therefore, met their burden of showing that there is no genuine issue of material fact for trial, and they are entitled to judgment as a matter of law. See [Celotex Corp.](#), 477 U.S. at 323 (“The moving party is ‘entitled to judgment as a matter of law’ because the nonmoving party has failed to make a sufficient showing on an essential element of her case with respect to which she has the burden of proof.”); [McDowell](#), 392 F.3d at 1288-89 (“If the evidence could not lead a rational factfinder to find for the nonmoving party, and where the nonmoving party fails to make a sufficient showing to demonstrate an element essential to that party’s case, on which that party bears the burden of proof at trial, then no genuine [issue of] material fact exists, and summary judgment should be granted.”).

V. Conclusion

*18 For the foregoing reasons, the Motions to Exclude are due to be granted to the extent the Court excludes Kradin’s specific causation opinion. As Plaintiff has offered no additional proof that exposure to the **asbestos**-containing products of Ford or Abex more likely than not caused the Decedent’s **cancer**, the Court will also grant Ford and Abex’s Summary Judgment Motions. In light of the foregoing, it is not necessary for the Court to consider the other arguments or pending motions.

Accordingly, it is

ORDERED:

1. Pneumo Abex LLC’s [Daubert](#) Motion to Exclude the Testimony of Plaintiffs’ [sic] Causation Experts, Dr. Kradin and Dr. Brody and Memorandum of Law (Doc. 118) and Ford Motor Company’s Amended [Daubert](#) Motion to Exclude the Testimony of Plaintiff’s Causation Experts Drs. Arnold Brody and Richard Kradin (Doc. 181) are **GRANTED, in part**, to the extent the Court excludes the specific causation testimony of Dr. Richard Kradin.

2. Pneumo Abex LLC’s Motion for Summary Judgment (Dispositive Motion) (Doc. 122) and Ford Motor Company’s Motion for Summary Judgment on All Claims and, Alternatively, for Partial Summary Judgment on Plaintiff’s Loss of Consortium Claims and Supporting Memorandum of Law (Doc. 127) are **GRANTED**.

3. The Clerk of the Court is directed to enter **JUDGMENT** in favor of Defendants and against Plaintiff.

4. With one noted exception, the Clerk of the Court is further directed to terminate any pending motions and deadlines²¹ as moot and administratively close the file.

DONE AND ORDERED in Jacksonville, Florida this 25th day of September, 2018. lc11

Copies to:

Counsel of Record

All Citations

Slip Copy, 2018 WL 4599712

Footnotes

- 1 Aside from Ford and Abex, Plaintiff has stipulated to the dismissal of, or entered into a settlement with, the other Defendants named in the Amended Complaint. See Orders (Doc. 34, 52, 184); see also Notice of Settlement of Claims Against Defendant Honeywell International, Inc. (Doc. 179).
- 2 [Daubert v. Merrell Dow Pharm., Inc.](#), 509 U.S. 579, 589 (1993).
- 3 Plaintiff relies on this brake work as the source of the Decedent’s exposure to **asbestos**. See Resp. to Ford MSJ at 7-13. Ford admits that it “manufactured and sold some vehicles that incorporated friction components, such as brake linings, brake pads, and clutch facings, which were composed, in part, of **asbestos**.” See Resp. to Ford MSJ, Ex. B at 11. These “**asbestos**-containing friction products were incorporated into [Ford] vehicles since it began selling mass production vehicles in the early 1900s.” *Id.* at 12. “[T]he type of **asbestos** fibers in these components was chrysotile.” *Id.*
- 4 Abex concedes that “Rayloc brakes may have been manufactured with Abex friction materials during the years that Rayloc brakes were used at the repair shop,” thereby potentially exposing the Decedent to **asbestos**. See Abex MSJ at 5; see also *id.*, Ex. A: Affidavit of Albert Indelicato ¶ 4 (“Abex manufactured and sold various friction materials that contained **asbestos** during various periods from approximately 1927 to 1987. Abex ceased manufacturing and selling

- friction material in 1987 that contained **asbestos** in response to a shift in the demand for friction materials and to corporate decision. As of December 31, 1987, Abex did not manufacture or sell any friction material that contained **asbestos**.”)
- 5 Plaintiff does not appear to rely on this clutch work as evidence of **asbestos** exposure attributable to Ford, see generally Resp. to Ford MSJ, although Plaintiff’s causation expert, Kradin, cites the Decedent’s participation in clutch work as evidence of exposure in his Affidavit. See Resp. to Ford MSJ, Ex. L: Affidavit of Richard L. Kradin, M.D., D.T.M.&H. (Doc. 152-12; Kradin Aff.) at 17. Notably, Ford began phasing out the use of **asbestos**-containing clutch components from its vehicles in 1978. See Resp. to Ford MSJ, Ex. B at 12. “Ford had eliminated all **asbestos**-containing wet clutch applications for use in automatic transmissions by the 1982 model year, followed by the elimination of **asbestos**-containing dry clutch applications for use in manual transmissions by the 1984 model year.” Id.
- 6 There is no evidence that a 2000 or 2001 Ford Escape would have contained any **asbestos** products. Indeed, Ford began phasing-out **asbestos** containing brake products from its vehicles in 1983. See Resp. to Ford MSJ, Ex. B at 12. “By 1993, the only vehicles in which **asbestos**-containing brake products were still used were low-volume limousine applications and the Mustang.” Id. Those uses were discontinued in the 1997 and 1995 model years, respectively. Id.
- 7 **Asbestos** fibers are characterized in two families: (1) amphibole which include crocidolite, amosite, anthophyllite and tremolite fibers, and (2) serpentine which includes only chrysotile fibers. Brody Report ¶ 7. Chrysotile fibers are curly, while amphibole fibers tend to be straighter. Id. Although Brody maintains that all fiber types can cause **mesothelioma**, he acknowledges that “on a fiber-to-fiber basis of comparison the amphiboles have greater potency in causing **mesothelioma**.” Id. ¶ 30.
- 8 As discussed below, the only evidence of record is that the Decedent suffered from **pericardial mesothelioma**. See infra at pp. 30-31. When asked about **pericardial mesothelioma** during his deposition, Brody explained that although he has not specifically focused on **pericardial mesothelioma**, “the mesothelial cells that line the pericardial sack are no different in their biology than any of the other surfaces and there have been cases of **pericardial mesothelioma** associated with **asbestos** exposure.” See Ford Motion to Exclude, Ex. A: Deposition of Dr. Arnold Brody (Doc. 181-1; Brody Dep.) at 7. Brody is unaware of any study identifying **asbestos** fibers in pericardial tissue but maintains that “the heart is bathed in lymphatic fluid and that’s obviously a transport pathway for **asbestos**...” Id. at 23.
- 9 Notably, Kradin then states that this opinion is supported by various occupational epidemiology, registry and case studies which link “all types of **asbestos**, including chrysotile **asbestos**, to **pleural and peritoneal mesothelioma**.” Id. (emphasis added).
- 10 The language of Evidence **Rule 702** was amended in December 2011. The Advisory Committee Notes accompanying this latest revision state that the changes are only stylistic and do not make any substantive change. **Fed. R. Evid. 702** advisory committee’s note (2011 amends.). Thus, case law interpreting and applying Evidence **Rule 702** prior to the 2011 changes is still applicable.
- 11 **Rule 56** was revised in 2010 “to improve the procedures for presenting and deciding summary- judgment motions.” **Rule 56** advisory committee’s note 2010 Amends. The standard for granting summary judgment remains unchanged. The language of subdivision (a) continues to require that there be no genuine dispute as to any material fact and that the movant be entitled to judgment as a matter of law. The amendments will not affect continuing development of the decisional law construing and applying these phrases. Id. “[A]lthough the interpretations in the advisory committee[s] notes are not binding, they are highly persuasive.” **Campbell v. Shinseki**, 546 F. App’x 874, 879 n.3 (11th Cir. 2013). Thus, case law construing the former **Rule 56** standard of review remains viable and applies here.
- 12 Several courts have found that the Welch Article is not admissible as evidence or a proper foundation for expert testimony because it was prepared for the purpose of litigation. See **Yates v. Ford Motor Co.**, No. 5:12-CV-752-FL, 2015 WL 3463559, at *10-11 (E.D.N.C. May 30, 2015) (collecting cases); **Vedros v. Northrop Grumman Shipbuilding, Inc.**, 119 F. Supp. 3d 556, 564 (E.D. La. 2015). While the Court does not necessarily disagree with these decisions, it bears noting that the Article was ultimately published in a peer- reviewed journal with the supporting signatures of fifty-one other scientists and public health officials. Regardless, the Court need not determine the evidentiary value of this Article because consideration of the Article does not change the outcome of this case.
- 13 Ford and Abex also challenge the sufficiency of the evidence on exposure to their **asbestos**-containing products. See Ford MSJ at 5; Abex MSJ at 21-24. Because the specific causation issue is case dispositive, the Court will assume without deciding that Plaintiff has demonstrated an issue of material fact regarding exposure. To the extent Plaintiff contends that there is evidence of **asbestos** exposure other than at Teen Challenge, see Plaintiff Resp. to Ford MSJ at 2-4, Plaintiff fails to cite the Court to any specific evidence of such exposures. Regardless, it is apparent that Kradin based his causation opinion solely on the Decedent’s exposure to **asbestos** at Teen Challenge. See Kradin Aff. at 17.

- 14 Although Kradin denies that he holds the opinion that “any exposure” to **asbestos** is a substantial contributing factor in causing **mesothelioma**, he distinguishes his opinion from this concept only to the extent that he requires an exposure to be **above background** in order to qualify as a substantial contributing factor. See Kradin Aff. at 11 (explaining that if a person sustains **asbestos** exposures above background level and goes on to develop **mesothelioma**, then it is his opinion that the exposures, “taken in context of the individual’s total (cumulative) **asbestos** exposures,” are “significant and non-trivial” and “medical and scientific causes in the development of the individual’s **mesothelioma**”). As several courts have recognized, this distinction makes no difference. See *Vedros*, 119 F. Supp. 3d at 563-64 (finding no meaningful distinction between the “every exposure” theory and the “every exposure above background” theory) (collecting cases). To the extent Kradin limits his opinion to require a “significant” exposure, it does not appear that he reliably applied that limitation here. Kradin lists four factors in his Affidavit that he asserts are relevant to a determination of whether an **asbestos** exposure is significant or substantial. See *supra* at p. 15. However, his Affidavit contains no analysis of whether the Decedent’s exposures satisfy those criteria. *Id.* at 17.
- 15 Many of the references to **mesothelioma** in the **asbestos** literature refer to only the pleural and peritoneal forms of the **cancer**. See, e.g., Resp. to Abex Mot. to Exclude, Ex. J (“There is overwhelming documentation ...of **asbestos** as an occupational cause of...pleural and **peritoneal mesothelioma**...”); *id.*, Ex. K (“Clinical and epidemiological studies have established incontrovertibly that chrysotile causes **cancer of the lung**, malignant **mesothelioma** of the pleura and peritoneum, **cancer** of the larynx and certain **gastrointestinal cancers**.”); see also National Toxicology Program, **Asbestos**, in 14th Report on Carcinogens (U.S. Dept. of Health & Human Servs. Nov. 3, 2016) available at <https://ntp.niehs.nih.gov/ntp/roc/content/profiles/asbestos.pdf> (“Studies in humans have shown that exposure to **asbestos** causes respiratory-tract **cancer**, **mesothelioma** of the lung and abdominal cavity (pleural and **peritoneal mesothelioma**), and **cancer** at other tissue sites”); International Agency for Research on Cancer (IARC), **Asbestos** in 100C Monograph on the Evaluation of Carcinogenic Risks to Humans 219- 309 (2012), available at <https://monographs.iarc.fr/wp-content/uploads/2018/06/mono100C-11.pdf>; Agency for Toxic Substance & Disease Registry (ATSDR), **Toxicological Profile for Asbestos** (U.S. Dept. of Health & Human Servs. Sept. 2001) at ¶ 3.2.1, available at <https://www.atsdr.cdc.gov/ToxProfiles/tp61-c3.pdf> (“Studies in humans and animals indicate that inhalation of **asbestos** fibers may lead to...**cancer of the lung**, the pleura, and the peritoneum. It may also increase the risk of **cancer** at other sites, but the evidence is not strong.”). Indeed, the Florida **Asbestos** and Silica Compensation Fairness Act defines **mesothelioma** as “a malignant tumor with a primary site in the pleura or peritoneum...” See Fla. Stat. § 774.203(18).
- 16 In response to Ford’s argument that the Decedent suffered from **pericardial mesothelioma**, Plaintiff does not assert that there is a dispute of fact regarding what form of **mesothelioma** the Decedent had, rather Plaintiff contends that it is not necessary to separate the different forms of **mesothelioma** in assessing causation. See Resp. to Ford Motion to Exclude at 16-17. The Court rejects Plaintiff’s argument in this regard as counsel’s unsupported and unscientific analogies to grocery bags and **skin cancer** are not persuasive.
- 17 The Court notes that Kradin did not testify that such information was unavailable or that the records he reviewed were ambiguous, only that he “did not have enough clinical information to be certain of where exactly the tumor was located.” See Kradin Dep. at 21. Kradin testified that he had “not seen the detailed records” necessary to determine whether the Decedent suffered from a primary **pericardial mesothelioma**. *Id.* at 21-22, 85. According to Kradin, “if there was reference to disease anywhere outside of the pericardium,” he would consider this “prima facie evidence that this was not a primary **pericardial mesothelioma**.” *Id.* at 85. While it may be that this information is unavailable in the absence of an autopsy, see Kradin Dep. at 44, 85, it is concerning that Kradin did not at least review the Decedent’s detailed medical records to see if such a determination could be made before assuming that his **mesothelioma** was not what it otherwise appeared to be. As noted above, Plaintiff does not appear to dispute that the Decedent suffered from **pericardial mesothelioma**. See *supra* note 16.
- 18 The Court discusses the methodology of the Welch Article because Kradin endorses that methodology in his Affidavit. This discussion is not an indication of whether the Court approves of the Welch Article as appropriate scientific evidence. As stated above, it is not necessary for the Court to reach that issue in this case. See *supra* note 12.
- 19 In reaching this determination, the Court is not suggesting that the cumulative exposure theory can never be reliably applied to determine causation. See *Bobo v. Tenn. Valley Auth.*, 855 F.3d 1294, 1301 (11th Cir. 2017); *Waite v. All Acquisition Corp.*, 194 F. Supp. 3d 1298, 1312-17 (S.D. Fla. 2016); *Northrop Grumman Sys. Corp. v. Britt*, 241 So. 3d 208, 211-15 (2017); see also *Rost v. Ford Motor Co.*, 151 A.3d 1032, 1048 (Pa. 2016). However, the experts in those cases provided opinions based on a thorough analysis of the relevant facts and specifically tailored to the individual circumstances of the case. Comparison of the expert testimony offered in those cases to that presented here highlight the deficiencies in Kradin’s use of the “any exposure” theory. See *Bobo*, 855 F.3d at 1301 (finding opinion that wife’s

twenty-two years of laundering husband's work clothes caused her [mesothelioma](#) where expert "testified about scientific studies that recognize laundering [asbestos](#)-contaminated clothing as one mode of [asbestos](#) exposure," and "he based his opinion about proximate cause on a thorough review of the scientific literature and the facts in the record"); [Waite, 194 F. Supp. 3d at 1314-17](#) ("Dr. Frank has presented evidence and analysis quantifying Mr. Waite's exposure to [asbestos](#) products manufactured by Ford."); [Britt, 241 So. 3d at 211-15](#) (finding expert testimony admissible where expert relied on pathology showing fibers in patient's lungs, testified about other potential causes and ruled them out, and declined to opine on "any" exposure, finding instead that patient's cumulative exposure to [asbestos](#)-containing insulation was significant). Kradin did not specifically identify any scientific literature addressing low exposure levels akin to the facts of this case, much less literature which connected such exposures to [pericardial mesothelioma](#); indeed he did not attempt to analyze the Decedent's exposure at all, and he failed to meaningfully consider the other potential cause of the Decedent's [mesothelioma](#).

- 20 In Response to the Summary Judgment Motions, Plaintiff argues that the expert testimony supports the opinion that the Decedent's exposure to [asbestos](#) "substantially increased his risk of contracting [mesothelioma](#) and substantially contributed to causing his [mesothelioma](#) and death." *See* Resp. to Ford MSJ at 14; Resp. to Abex MSJ at 17. This highlights precisely what is missing from the expert testimony— any scientifically supported opinion that the Decedent's limited exposure to chrysotile [asbestos](#) in brake dust "substantially increased" his risk of [mesothelioma](#). Indeed, there is no analysis of risk at all. As such, even if the expert testimony was admissible, the Court questions whether it would be sufficient to create an issue of fact on causation. *See* [Guinn, 602 F.3d at 1256-57](#); [Haller, 598 F. Supp. 2d at 1303-07](#); [Cano, 362 F. Supp. 2d at 841](#) (" 'If other possible cause of an injury cannot be ruled out, or at least the probability of their contribution to causation minimized, then the more likely than not threshold for proving causation may not be met.' " (quoting Reference Manual at 470 n.112)).
- 21 The deadline set in the August 30, 2018 Endorsed Order (Doc. 189) pertaining to the settlement between Plaintiff and Defendant Honeywell remains in place.