UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF FLORIDA
PENSACOLA DIVISION

IN RE: DEEPWATER HORIZON BELO CASES	Case No. 3:19cv963
This Document Relates to: *VINCENT CULLIVER,* Case No. 3:21cv4942-MCR-HTC	Judge M. Casey Rodgers Magistrate Judge Hope T. Cannon

ORDER

Plaintiff Vincent Culliver filed suit against Defendants BP Exploration & Production Inc. and BP America Production Company (collectively, "BP"), claiming that he contracted prostate cancer as a result of cleanup work he performed in connection with the Deepwater Horizon oil spill.[1] Following discovery, the

[1] The Court assumes the reader's familiarity with the context of the Deepwater Horizon oil spill in 2010 and the resulting multidistrict litigation in the Eastern District of Louisiana (MDL No. 2179), which resulted in part in a Medical Benefits Class Action Settlement Agreement ("Settlement") in favor of workers who participated in the spill and cleanup response activities. Briefly, the Settlement provided a claim-payment scheme for all personal injury class members who suffered an illness diagnosed by the cutoff date of April 16, 2012, and met certain requirements. The Settlement also established a separate litigation track for medical benefits class members who were not diagnosed in time to meet the Settlement cutoff date. Through a Back-End Litigation Option ("BELO") suit, those individuals may litigate whether a Later-Manifested Physical Condition ("LMPC") was caused by exposure to chemicals originating from the spill and/or cleanup response activities. BP's fault for the spill and the litigant's exposure are deemed established by the Settlement, but the parties may litigate the following issues: (i) the fact of diagnosis, (ii) the amount, location, and timing of oil or other substances released in connection with the response activities, (iii) the level and duration of the plaintiff's exposure, (iv) whether the later-manifested physical condition was legally caused by the exposure to substances released or used in connection with the *Deepwater Horizon* spill, (v) alternative causes, and (vi) the amount of compensatory damages. (Section VIII G(3)(a)-(b) of the Settlement Agreement.) Culliver brought his BELO complaint in the Deepwater Horizon MDL in the Eastern District of Louisiana on August 25, 2021, and the case was transferred to this District on December 30, 2021.

parties each filed several *Daubert*[2] motions challenging the admissibility of expert testimony, and BP moved for summary judgment on the issue of causation. Pursuant to 28 U.S.C. § 636(b)(1), the Magistrate Judge entered a Report and Recommendation ("R&R"), ECF No. 182, recommending that the undersigned grant BP's *Daubert* and summary judgment motions and deny Culliver's motions as moot. *See Culliver v. BP Explor. & Prod., Inc.*, No. 3:21cv4942-MCR-HTC, 2024 WL 1478659, R&R (N.D. Fla. Apr. 3, 2024). Culliver filed objections, ECF No. 185, which BP has responded to, ECF No. 186.

When reviewing a magistrate judge's R&R on a dispositive matter, the Court reviews *de novo* all aspects to which a party has specifically objected and "may accept, reject, or modify, in whole or in part, the findings or recommendations made." 28 U.S.C. § 636(b)(1); *see also* Fed. R. Civ. P. 72(b)(3); *Amlong & Amlong, P.A. v. Denny's, Inc.*, 500 F.3d 1230, 1245 (11th Cir. 2007) ("the district court is generally free to employ the magistrate judge's findings to the extent that it sees fit"). The undersigned has fully considered all objections *de novo* and concludes that the objections should be overruled. The R&R is adopted and incorporated herein by reference for reasons that follow.

[2] *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993).

I. Background

There is no objection to the background as stated in the R&R. Factually, it is sufficient for discussion to note that Culliver was a shoreline cleanup worker in the aftermath of the April 20, 2010, Deepwater Horizon oil spill. He worked on the shoreline from May 25, 2010 to August 22, 2010, and at a decontamination site for ten days in September 2010. Culliver maintains, and must ultimately prove, that his exposure during that work to polycyclic aromatic hydrocarbons ("PAHs"), benzo(a)pyrene in particular, was a substantial contributing cause of his prostate cancer, which was diagnosed in 2019.[3] *See* ECF No. 1 at 7.

Culliver designated Benjamin Rybicki, Ph.D. (epidemiologist) as a causation expert and James J.J. Clark, Ph.D. (toxicologist) and Ranajit Sahu, Ph.D. (mechanical engineer) as exposure experts. BP challenged the reliability and helpfulness of these experts and argued that without reliable expert opinion, Culliver cannot establish causation, and therefore summary judgment in BP's favor is appropriate. The Magistrate Judge recommended excluding Culliver's experts and granting summary judgment to BP.

[3] The fact of his exposure to weathered oil, hydrocarbons, and other substances is established by the Settlement, *see supra* Note 1, but the quantification of any particular substance of exposure or the dose remains to be proven.

II. Legal Standards

The governing legal standards are accurately set out in the R&R and included here briefly to provide context for evaluating the objections. The admissibility of expert testimony is evaluated under *Daubert v. Merrell Dow Pharms., Inc*., 509 U.S. 579 (1993) and Federal Rule of Evidence 702. Rule 702 allows opinion testimony from a qualified witness that is based on sufficient facts, consists of specialized knowledge that will help the jury understand a fact in issue, is the product of reliable principles and methods, and reflects methods that are reliably applied. Fed. R. Evid. 702. The Court acts as gatekeeper by evaluating an expert's qualifications, the reliability of methods used, and the helpfulness of the testimony. *See Daubert*, 509 U.S. at 597 (Rule 702 "assigns the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand"). The proponent of the expert must establish the admissibility of expert opinions "by a preponderance of the evidence." *Chapman v. Procter & Gamble Distrib., LLC*, 766 F.3d 1296, 1312–13 (11th Cir. 2014) (citing *Daubert*, 509 U.S. at 592 n.10).

In a toxic tort case expert testimony is required to prove general and specific causation— general causation requires expert testimony that "the drug or chemical can cause the harm plaintiff alleges," whereas specific causation focuses on

individual plaintiff-specific questions of exposure and causation. *See McClain v. Metabolife Int'l, Inc*., 401 F.3d 1233, 1239 (11th Cir. 2005). The Eleventh Circuit identified two broad categories of toxic tort cases in *McClain*. First-category cases involve a chemical or agent that is well-recognized by the medical community as toxic and as causing the type of human harm claimed by the plaintiff, and thus, toxicity or general causation may be accepted without an "extensive" *Daubert* inquiry, and the analysis proceeds directly to specific causation.[4] *Id.* Second-category cases—such as this one[5]—involve a chemical or agent that is not well-recognized in the medical community as causing the particular harm or injury alleged by the plaintiff, and as a result, expert testimony on both general and specific causation is required and must be examined for admissibility under *Daubert*. *Id*.

Evidence found to be inadmissible at trial "cannot be used to avoid summary judgment." *Chapman*, 766 F.3d at 1313. Thus, to survive summary judgment, *see* Fed. R. Civ. P. 56(a), Culliver must establish a question of fact as to both general and specific causation through reliable expert testimony.

[4] The court in *McClain* listed the following chemicals and correlating diseases as first-category examples: asbestos, known to cause asbestosis and mesothelioma; cigarette smoking, known to cause lung cancer and heart disease; and excess alcohol, known to cause cirrhosis of the liver. 401 F.3d at 1239 & n.5. Notably absent are PAHs or benzo(a)pyrene.

[5] This is a second-category case, and the R&R states that the parties agree on this.

III. General Causation Expert

It is well-settled in this Circuit that in a toxic tort case, an expert's reliable application of at least one primary methodology—dose-response, epidemiology,[6] or background risk of disease—is "indispensable" to proving general causation.[7] *Chapman*, 766 F.3d at 1308; *In re Abilify (Aripiprazole) Prod. Liab. Litig.*, 299 F. Supp. 3d 1291, 1306 (N.D. Fla. 2018). Epidemiology is generally considered to be "the best evidence of causation in toxic tort actions." *Rider v. Sandoz Pharm. Corp*., 295 F.3d 1194, 1198 (11th Cir. 2002). To show general causation, epidemiologists search the data for an association between the agent and the disease and then, once the association is found, they evaluate whether that association represents a true cause-effect relationship or instead an association due to chance or confounding factors. *See In re Zantac (Ranitidine) Prods. Liab. Litig.,* 644 F. Supp. 3d 1075, 1186 (S.D. Fla. 2022); *In re Abilify,* 299 F. Supp. 3d at 1306. Dose-response, another primary methodology, is "the hallmark of basic toxicology" through which an expert

[6] "Epidemiology, a field that concerns itself with finding the causal nexus between external factors and disease." *Rider v. Sandoz Pharm. Corp.*, 295 F.3d 1194, 1198 (11th Cir. 2002).

[7] Secondary methodologies (plausible explanations, generalized case reports, hypotheses, and animal studies) are insufficient to prove general causation in the absence of at least one primary methodology. *Chapman,* 766 F.3d at 1308; *see also In re Abilify,* 299 F. Supp. 3d at 1306 (due to "inherent flaws," the "secondary methodologies alone, even in the aggregate, cannot establish general causation").

evaluates whether the chemical or drug is "associated with a change—either an increase or decrease—in risk of disease." *McClain*, 401 F.3d at 1242 (internal quotation omitted). For the general causation inquiry, "the toxic substance in question must have been demonstrated to cause the type of illness or disease in question," *id.* at 1242, and "minimal facts" essential to sustaining the plaintiff's burden include: "[s]cientific knowledge of the harmful level of exposure to a chemical plus knowledge that plaintiff was exposed to such quantities, *id.* at 1241 (quoting *Allen v. Pennsylvania Eng'g Corp.*, 102 F.3d 194, 199 (5th Cir.1996)).

Culliver's general causation expert, Dr. Rybicki, applied epidemiology by considering studies of occupational exposures to PAHs. He also considered experimental animal and *in vitro cell* studies, which identified a high-risk gene and elevated PAH-DNA adduct levels based on PAH exposure. He evaluated all of the evidence in light of the Bradford Hill factors to decide whether there was a causal inference to be drawn between PAH exposure during oil spill cleanup work and prostate cancer.[8] Dr. Rybicki concluded that "given the strength of the experimental

[8] The Bradford Hill analysis informs the inquiry of whether an association identified in the literature "reflects a true cause–effect relationship." *Guerrero v. BP Explor. & Prod. Inc.*, No. 8:20-cv-0263-KKM-JSS, 2024 WL 1244796, at *4 (M.D. Fla. Mar. 20, 2024) (quoting *In re Deepwater Horizon Belo Cases*, No. 19-cv-963, 2020 WL 6689212, at *10 (N.D. Fla. Nov 4, 2020), *aff'd*, No. 20-14544, 2022 WL 104243 (11th Cir. Jan. 11, 2022)). The Bradford Hill factors include: "(1) temporal relationship; (2) strength of the association; (3) dose-response relationship;

evidence[9] PAHs must be considered a potential prostate cancer risk that can be cancer-causing in the occupational setting." ECF No. 159–1 at 19.

The Magistrate Judge conducted an extensive review of Dr. Rybicki's report and identified several flaws in his methodology. The undersigned agrees that these flaws undermine the reliability of Dr. Rybicki's general causation opinion.[10] First, and foremost, he admittedly relied primarily on experimental evidence, because even he acknowledged there was an absence of a strong association between PAH exposure and prostate cancer in the epidemiological literature. Absent reliable epidemiological evidence of a strong association in the literature, however, the secondary methodologies, consisting of experimental animal and *in vitro cell* or DNA evidence that he relied on, are "insufficient proof of general causation." *Chapman*, 766 F.3d 1308. And beyond that, his reliance on the occupational exposure literature even for a "moderate" association is questionable because the

(4) replication of the findings; (5) biological plausibility; (6) consideration of alternative explanations; (7) cessation of exposure; (8) specificity of the association; and (9) consistency with other knowledge." *In re Abilify*, 299 F. Supp. 3d at 1307 (citing Michael D. Green et al., *Reference Guide on Epidemiology*, in Reference Manual on Scientific Evidence 599–600). "No one factor is dispositive." *Id.*

[9] Dr. Rybicki stated in his deposition that "experimental" refers to the animal studies and *in vitro* cell studies. ECF No. 167–3 at 36 (Rybicki Depo. at 34).

[10] The entire discussion as set out in the R&R will not be recounted here in full but is adopted by reference.

studies have dissimilar exposure scenarios, varying PAH chemical mixtures, and *long*-term high dose exposures, and he fails to meaningfully *explain* how he could reliably infer that there is "moderate to strong" support for a causal relationship using those studies, which even he acknowledged failed several of the Bradford Hill factors. Thus, his primary methodology is not reliable. Second, as the Magistrate Judge also emphasized, Dr. Rybicki failed to identify a harmful level at which the PAH benzo[a]pyrene, or even PAHs generally, can cause prostate cancer in humans. Dr. Rybicki's epidemiological studies were insufficient to establish such a level, and he did not purport to show causation through another primary methodology.

In response to the Magistrate Judge's criticisms, Culliver argues that more relevant epidemiological studies do *not* exist and that more similar oil spill studies are ongoing but not yet completed. Unfortunately for Culliver, the fact that the science to support his claim does not yet exist is no excuse in the *Daubert* context. As the Eleventh Circuit has repeatedly stressed, "[t]he courtroom is not the place for scientific guesswork, even of the inspired sort. Law lags science; it does not lead it." *Hendrix ex rel. G.P. v. Evenflo Co.*, 609 F.3d 1183, 1194 (11th Cir. 2010) (quoting *Rider v. Sandoz Pharms. Corp.*, 295 F.3d 1194, 1202 (11th Cir. 2002)). Indeed, a crucial link is missing here. Dr. Rybicki's failure to provide a reasoned

explanation in the epidemiology that could bridge the "analytical gap" from those statistically insignificant, dissimilar, and, in some cases, even contrary occupational studies to his conclusion that there is a "moderate to strong" causal association between PAH exposure and prostate cancer undoubtedly signals a lack of reliability. *Gen. Elec. Co. v. Joiner,* 522 U.S. 136, 146 (1997) ("A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.").

Culliver also objects to the Magistrate Judge's criticisms of Dr. Rybicki's Bradford Hill analysis, seeming to insist that she erred by not considering *all* of the factors. This is meritless. Again, the Magistrate Judge's focus was properly on the lack of a meaningful explanation for the deficiencies, most of which *Dr. Rybicki* himself identified.

While the undersigned agrees with Culliver that the Bradford Hill factors are indeed flexible in nature, not to be rigidly applied, and necessarily involve a good deal of scientific judgment, *see In re Deepwater Horizon Belo Cases,* No. 19-cv-963, 2020 WL 6689212, at *10 (N.D. Fla. Nov. 4, 2020), *aff'd*, No. 20-14544, 2022 WL 104243 (11th Cir. Jan. 11, 2022); *see also In re Zantac*, 644 F. Supp. 3d at 1235, the expert's exercise of judgment must be explained. *See* Michael D. Green *et al*., *Reference Guide on Epidemiology,* in Reference Manual on Scientific Evidence at

600 (Federal Judicial Center, 3d ed. 2011) (requiring the exercise of judgment and a searching analysis). The Magistrate Judge took note of Dr. Rybicki's own statement that the factors of the strength of association, consistency or replication, and specificity of disease were not satisfied, and she also noted that Dr. Rybicki failed to consider alternative explanations for the associations he observed in the studies of occupational PAH exposure, because the workers in at least some of the occupational exposure studies were exposed to more than just PAHs. Dr. Rybicki's own report emphasized the importance of considering those factors he noted were missing and of considering alternative explanations, which he failed to do. *See* ECF No. 159-1 at 7, 8 (Rybicki Report) (stating that the larger the association, the more likely it is causal; that consistent findings strengthen the likelihood of the effect; that "alternative explanations for an exposure-cancer relationship . . . should always be considered before concluding an exposure causes a cancer;" and that "occasionally it is possible to appeal to experimental evidence"). Dr. Rybicki also conceded that the associations he identified in the literature would not satisfy Bradford Hill and said it is possible an association does not exist. Dr. Rybicki further conceded that consistency and replication were lacking here because measuring PAH is difficult, and the studies are "fraught with measurement error." ECF No. 159–1 at 18.

Additionally, beyond the problems with the epidemiology, he acknowledged that the experimental evidence he relied on is "indirect," dependent on the existence of a high-risk gene, and that the DNA adduct formation identified in cell studies does not itself cause prostate cancer but is a potential intermediary step. ECF No. 159–1 at 19 (Rybicki Report); *see also* ECF No. 167–3 at 131 (Rybicki Depo. at 129). Dr. Rybicki's candid acknowledgement of these weaknesses (in both the epidemiology and the experimental studies) and the missing Bradford Hill factors plus his testimony that PAHs are "almost everywhere" and that "most individuals" have some exposure every day, ECF No. 167–3 at 67–68 (Rybicki Depo.), demonstrates precisely why the expert's *reasoned explanation* of how he nonetheless justifies a causal inference is crucial to a reliability determination. Dr. Rybicki did not provide that explanation.

Culliver argues that the Magistrate Judge unreasonably "fixates" on the lack of epidemiological studies demonstrating a relative risk above 2.0. To the contrary, the Magistrate Judge appropriately considered the statistical significance of the occupational exposure studies in evaluating the reliability of the methodology. By Dr. Rybicki's own recognition, the PAH studies he identified are "fraught with measurement error . . . which most often pushes associations toward the null." ECF

No. 159–1 at 18. His own report recognizes that "[r]elative risks less than 2 are generally not considered strong." ECF No. 159–1 at 7. The Eleventh Circuit has also explained that "[t]he threshold for concluding that an agent more likely than not caused a disease is 2.0." *Allison v. McGhan Med. Corp*., 184 F.3d 1300, 1315 n.16 (11th Cir. 1999) ("A relative risk of 2.0 thus implies a *50% likelihood* that the agent caused the disease. Risks greater than 2.0 permit an inference that the plaintiff's disease was *more likely than not* caused by the agent." (emphasis added)). Even if this is not a standard set in stone, it represents a reasoned and helpful threshold, and one with which Dr. Rybicki apparently agreed.

Culliver also takes issue with the Magistrate Judge's finding that Dr. Rybicki engaged in some cherry-picking of data by omitting certain information.[11] The undersigned summarily rejects this objection. Even assuming the omissions identified were not sufficient in isolation to render the epidemiological report

[11] Specifically, the Magistrate Judge noted that Dr. Rybicki cited some supportive IARC statements but surprisingly failed to acknowledge that the IARC found no association between exposure to crude oil and prostate cancer. ECF No. 182 at 18. She also noted that, while Dr. Rybicki relied on a 2005 study of auto industry workers to show prostate cancer was modestly associated with exposure to oil-based fluids, he neglected to mention that the association was also based on "a latency period of at least 25 years" and did not explain how this supports his conclusion in this case, where Culliver's cancer was diagnosed only 9 years after his oil-spill work. *Id.* at 19.

unreliable, they justifiably raise additional concerns over the reliability of Dr. Rybicki's methodology that have already been identified.

Culliver further emphasizes that Dr. Rybicki should not be required to identify a threshold harmful dose of PAH exposure because he relied on epidemiology.[12] But even epidemiology requires consideration of a dose-response relationship within the Bradford Hill analysis. And furthermore, as already concluded, Dr. Rybicki's epidemiological opinion is not reliable. Because an expert must have reliably applied at least one primary methodology, the absence of a harmful threshold is significant here even if, as Culliver argues, it would only be *required* for an expert applying a dose-response methodology. In toxic tort cases, "knowledge of the harmful level of exposure" to humans generally is a minimal fact that a plaintiff must prove. *McClain*, 401 F. 3d at 1241. "The expert who avoids or neglects this principle of toxic torts without justification casts suspicion on the reliability of his methodology." *Id.* at 1242; *see also Pinares v. Raytheon Techs. Corp.*, No. 19-

[12] Dr. Rybicki also asserted in the declaration that the IARC could not even identify any epidemiological studies that address what *level* of benzo(a)pyrene is cancer-causing in humans. He went on to compare PAH and prostate cancer to the connection between smoking and lung cancer, citing the Surgeon General's report from the 1960s that "neither epidemiologic nor experimental data are adequate to establish a 'safe dosage' of a carcinogen." ECF No. 171–3 at 3. The Magistrate Judge noted that IARC does not offer opinions on causation and stated any comparison to first-category cases under *McClain* is unhelpful in this second-category case. The undersigned agrees.

14831, 2023 WL 2661521, at *2 (11th Cir. Mar. 28, 2023)[13] (affirming the exclusion of expert testimony where the "general causation experts, and the articles upon which they relied, didn't determine 'how much' of the substance needed to 'be used for how long' to cause harm").

Dr. Rybicki's only justification for not providing a hazardous level benchmark is that identifying such a level is impossible and that no such hazardous threshold exists for PAH exposure. Again, if the science is not there, then there is no reliable scientific basis for inferring causation for purposes of establishing liability in a courtroom setting. *See Hendrix*, 609 F.3d at 1194. Culliver's argument that no amount of exposure to a known carcinogen is safe assumes too much. Dr. Rybicki stated that PAHs are ubiquitous in the environment, and assuming that to be the case, it cannot be assumed that any level of PAH exposure can cause prostate cancer.[14] The undersigned agrees with the Magistrate Judge that Dr. Rybicki's "qualitative opinion" that a harmful dose would be a dose on "the medium to high end of the

[13] The Eleventh Circuit's Rules provide: "Unpublished opinions are not considered binding precedent, but they may be cited as persuasive authority." 11th Cir. R. 36–2.

[14] Sunlight, radiation, and air pollution are also generally capable of causing cancer, but this alone does not prove that every level of exposure to them is cancer-causing. The studies Dr. Rybicki cites confirm that prostate cancer outcomes related to PAH exposure are seen, "if at all" only in "high levels" or the "highest quartile" of occupational exposures, involving lengthy durations of exposure and in environments vastly dissimilar to 90 days of beach cleanup. ECF No. 159–1 at 14. This is not helpful absent some quantification.

overall spectrum of PAH exposures within an occupational setting," is inadequate and too vague to be helpful or to establish a reliable harmful dose threshold. ECF No. 182 at 8–9 (quoting Rybicki Depo.).

Similarly, Culliver's argument that the Magistrate Judge erroneously required a mathematical harmful level is baseless. Neither the Magistrate Judge nor the undersigned requires a precise numerical threshold. But there must be at least some general level or range identified in the scientific literature at which the exposure becomes harmful to human health. *See In re Zantac*, 644 F. Supp. 3d at 1109 (agreeing that a threshold range must be identified and would satisfy Eleventh Circuit case law). Culliver also contends that Dr. Rybicki should be allowed to rely on another expert to evaluate the harmful dose/exposure level, namely, Dr. Clark, as Dr. Rybicki did. Frankly, this would be ideal. But reliance on another expert to establish one critical piece of the puzzle necessarily fails if that expert's opinion is not reliable or fails to provide the necessary piece. Here, on *de novo* review the undersigned concludes that neither of the exposure experts—Dr. Clark and Dr. Sahu—established the necessary harmful level of exposure. (Moreover Dr. Clark's testimony indicates that the lifetime cancer risk he calculated based on Culliver's exposure did not even exceed a public health benchmark.) Absent the reliable

application of a primary methodology, Dr. Rybicki's general causation opinion is inadmissible.

Finally, Culliver argues throughout that the Magistrate Judge engaged in an overly restrictive review of Dr. Rybicki's analysis of the literature and effectively determined the weight or relevance of the testimony as opposed to its admissibility. On *de novo* review, the objection is overruled. While "an expert's believability or persuasiveness" is reserved for the jury, the relevance or helpfulness inquiry is an essential part of the court's gatekeeping role under Rule 702 and *Daubert*. *Rink v. Cheminova, Inc.*, 400 F.3d 1286, 1293 n.7 (11th Cir. 2005). The R&R reflects that the Magistrate Judge properly focused her analysis on the lack of both reliability and helpfulness and identified a flawed methodology—not incorrect or unpersuasive conclusions. That said, "although principles and methodology [a]re the focus, the court [i]s not precluded from looking at conclusions." *Allison*, 184 F.3d at 1315.

IV. Specific Causation and Exposure Experts

As the Magistrate Judge recognized, there is no need to consider the issue of specific causation, or even the admissibility of the exposure experts, absent a reliable opinion on general causation, *see Knight v. Kirby Inland Marine Inc.,* 482 F.3d 347,

351 (5th Cir. 2007), but she considered them in the alternative. The undersigned has therefore considered the objections to those portions of the R&R *de novo*.

On specific causation, Dr. Rybicki concluded that absent his work during the oil spill cleanup, Culliver "would most likely not have been diagnosed with an emergent prostate cancer at the age of 53." ECF No. 159–1 at 23. Dr. Rybicki purported to apply a differential analysis to reach this conclusion, considering Culliver's medical, family, and work history, but provided little analysis ruling them out as possible causes.[15] The Magistrate Judge found the analysis unreliable due to Dr. Rybicki's failure to investigate and explain potential alternative causes. *See* ECF No. 182 at 24 (stating, "Dr. Rybicki admitted during his deposition that he did no research regarding Plaintiff's exposures as a welder or to asbestos" in prior work experience) (citing Rybicki Depo. at 121, ECF No. 159-2 at 41). Culliver objects, arguing that Dr. Rybicki's differential etiology is reliable and he properly relied on

[15] Culliver is African American, which presents an increased risk on its own. *See* ECF No. 159-1 at 9 (Rybicki Report) ("The other major demographic risk factor for PCa is African American race."). Dr. Rybicki noted he had a "significant family history" of cancer—his father had prostate cancer and his mother had breast cancer—but did not rule this out as the substantial cause. Culliver also had "significant co-morbidities," which Dr. Rybicki discounted on grounds that they were mostly concurrent with his cancer diagnosis. This rationale is not consistent with his report, however, which lists 20 co-morbidities, 16 of which were diagnosed from 2009 through 2015, and 2 more in 2017 and 2018—thus, 18 co-morbidities were diagnosed prior to Culliver's 2019 prostate cancer diagnosis. Dr. Rybicki did not discuss these factors further.

dose calculations by Dr. Clark. On *de novo* review, the undersigned concludes that regardless of the dose calculations, Dr. Rybicki's conclusory statements that do not sufficiently rule out other causes, and his failure to compare Culliver's exposure scenario with those of the studies he relied on, demonstrates the methodology is not reliability applied. As the Magistrate Judge found, this lack of comparison is "particularly problematic" because the workers in those studies "had multiple years, and sometimes decades, of occupational exposure, while [Culliver] had less than 90 days." ECF No. 182 at 21–22. The objections are overruled.

The Magistrate Judge also recommended excluding the opinions of Dr. Clark based on his cancer risk assessment.[16] Using the methodology of the United States Environmental Protection Agency's ("EPA") Risk Assessment Guidance for Superfund ("RAGS"), Dr. Clark provided a cancer risk assessment based Culliver's level of exposure to various chemicals during his cleanup work. According to Dr. Clark, the data showed that Culliver's work placed him in locations with exposure to "significant quantities" of crude oil containing a "complex mixture of chemicals" including PAHs and benzo(a)pyrene, which Dr. Clark concluded "increased his risk for developing adverse health outcomes, specifically his development of prostate

[16] The Magistrate Judge assumed that his dose calculations were correct.

cancer." ECF No. 155–2 at 8 (calculating Culliver's excess cancer risk at 1 in 6,500,000[17]). He relied on Dr. Rybicki's work to establish a connection to prostate cancer.

The Magistrate Judge did not criticize the RAGS methodology as inherently unreliable, contrary to Culliver's suggestions otherwise, but determined that it is unhelpful, first noting that the risk assessed is not specific to prostate cancer. As the Magistrate Judge explained, the EPA's RAGS methodology is based on a theoretical risk of developing *cancer generally*; therefore, the assessment is not tailored to the facts of this case. The undersigned agrees. Furthermore, Dr. Clark's reliance on Dr. Rybicki's report for this connection, which has been excluded as unreliable, cannot remedy this lack of fit. The Magistrate Judge also noted that the risk assessment did not exceed any public health benchmark.[18] And, as previously noted, neither Dr.

[17] This was a re-calculation. By declaration, Dr. Clark stated that he had initially mistakenly used the BP industrial hygiene data in his dose assessment (which he considers unreliable) instead of the National Institute of Occupational Safety and Health ("NIOSH") industrial hygiene data. The error resulted in a miscalculation (overcalculation) of the quantitative dose and risk estimate by a factor of 10 times. After this was called to his attention during his deposition, Dr. Clark confirmed he had made the error and recalculated to correct his opinion. Using the NIOSH data, some PAHs increased but Culliver's dose of pyrene decreased. ECF No. 175–3 at 8–9.

[18] The Magistrate Judge stated that Dr. Clark estimated a cancer risk of 1 in 6,500,000, which is over 500 times *lower* than the EPA's regulatory benchmark for public health (1 in 10,000), and 5 times lower than the EPA's cancer benchmark (1 in 1,000,000). ECF No. 182 at 33-34.

Clark nor Dr. Rybicki established any other harmful threshold level. The undersigned agrees that Dr. Clark's cancer risk assessment is unreliable and unhelpful. *See* ECF No. 182 at 33–34.

Dr. Sahu provided a list of the chemicals to which Deepwater Horizon oil spill workers were potentially exposed and confirmed that PAHs, and specifically benzo(a)pyrene, are included in the weathered oil samples that Culliver would have been exposed to. The undersigned agrees with the Magistrate Judge that in the absence of a reliable primary methodology by another expert, Dr. Sahu's list of chemicals "does not advance the ball" on general or specific causation. Culliver's objection is summarily rejected.

V. Summary Judgment

Because Culliver has not produced reliable admissible expert testimony, he cannot create a question of fact on causation, and BP is entitled to summary judgment. Culliver argues broadly, however, that both the *Daubert* review and causation standard applied by the Magistrate Judge was too strict. The undersigned disagrees and addresses the arguments *de novo*.

Culliver asserts that that courts outside the Eleventh and Fifth Circuits apply a more lenient *Daubert* review than the Magistrate Judge applied here, citing

Milward v. Acuity Specialty Prod. Grp., Inc., 639 F.3d 11, 17 (1st Cir. 2011) (reversing the trial court's exclusion of an expert opinion that benzene can cause leukemia based on a reliable "weight of the evidence methodology"); and *Maas v. BP Explor. & Prod., Inc.*, 576 F. Supp. 3d 564 (M.D. Tenn. Dec. 21, 2021) (denying summary judgment in a BELO case, based on expert's differential diagnosis and conclusion that Corexit can cause long-term respiratory issues). Regardless of any precedent established in other circuits or used by other district courts, however, this Court is bound to apply the law of the Eleventh Circuit, as set forth in *McClain*. The Magistrate Judge did not depart from this governing standard for toxic torts and, as concluded above, she performed an extensive *Daubert* review, as is warranted in a second-category *McClain* case such as this. Additionally, the Eleventh Circuit has affirmed, albeit in an unpublished case, the use of this standard in the BELO context. *See In re Deepwater Horizon BELO Cases*, No. 20-14544, 2022 WL 104243, at *2 (11th Cir. Jan. 11, 2022). Moreover, *Milward* is distinguishable because the expert used a weight-of-the-evidence methodology, which has its own set of factors that must be reliably applied.[19] *See Milward*, 639 F.3d at 17–19. While the undersigned

[19] The weight-of-the-evidence approach involves six general steps. *See Milward*, 639 F.3d at 18 (listing the steps for this analysis and noting that they are similar to a differential analysis). Each step in the weighing process must be reliable and cannot be supported by mere subjective belief, speculation, or "hollow evidence." *In re Abilify*, 299 F. Supp. 3d at 1311–12; *see also In*

has recognized the existence of a weight-of-the-evidence approach, *see In re Abilify*, 299 F. Supp. 3d at 1311 (citing *Milward*), this was addressed in connection with a reliable primary methodology, not in place of one.[20] And beyond that, Dr. Rybicki did not purport to apply a weight-of-the-evidence analysis. Culliver's belated assertion that he used a methodology that is "parallel" to the weight-of-the-evidence approach is rejected as inconsistent with Dr. Rybicki's report, which purports only to apply epidemiology with a Bradford Hill analysis.[21]

Culliver also criticizes the Magistrate Judge for requiring him to show "undeniable" evidence of a causal link between PAHs and prostate cancer. As BP argues, the Magistrate Judge "did not hold any such thing." ECF No. 186 at 5. The word "undeniable" appears once within the R&R in a string cite parenthetical, *see*

---

re Zantac, 644 F. Supp. 3d at 1236 ("For a Bradford Hill analysis or a weight-of-the-evidence approach to be reliable, there must be a scientific method of weighting that is used and explained.") (internal quotations omitted). A vague and unexplained weight-of-the-evidence approach "triggers a conflict with *Daubert*." *In re Zantac*, 644 F. Supp. 3d at 1236.

[20] Other district courts in this Circuit have also recognized weight of the evidence approach. *See e.g., Henderson v. Lockheed Martin Corp*., 2024 WL 1942636 (M.D. Fla. Mar. 12, 2024) (finding a weight-of-the-evidence method reliable and reliably applied); *Davis v. Lockheed Martin Corp*., 2023 WL 9190261, 705 F. Supp. 3d 1345 (M.D. Fla. 2023) (finding that, although a weight-of-the-evidence approach can be reliable, it was conclusory and not reliably applied in this instance).

[21] Previously, Culliver argued that the flaws BP identified in Dr. Rybicki's opinion go to weight and not admissibility, which is not the same as arguing that Dr. Rybicki in fact applied a weight-of-the-evidence methodology. Moreover, Dr. Rybicki did not discuss how he weighted any of the factors.

ECF No. 182 at 33 (quoting *Vandestreek v. Lockheed Martin Corp.*, 2023 WL 6396087, at *2 (M.D. Fla. Sept. 27, 2023)). While the undersigned agrees that would be an improper standard in this case, context shows that this passing reference was included only to emphasize that the expert testimony must establish a connection to a particular *type of illness,* as opposed to some unspecified cancer.[22] *See id.* The Magistrate Judge did not demand an "undeniable causal link," and the objection is overruled.

Culliver also argues that the burden to prove legal causation is less strenuous than the Magistrate Judge required here because maritime law applies. Noting that maritime law mandates uniform application throughout the country, citing *Great Lakes Ins. v. Raiders Retreat Realty Co.*, 601 U.S. 65, 69 (2024) (stating the Constitution "contemplates a system of maritime law coextensive with, and operating uniformly in, the whole country"), Culliver argues that the appropriate

[22] The quoted sentence from *Vandestreek* is taken from a discussion about first-category *McClain* cases, in which the medical community accepts that a particular agent causes a specific disease (*i.e.*, it is "undeniable"), and so a *Daubert* inquiry is not needed. 2023 WL 6396087, at *2 ("So, even if a substance is harmful to humans as a general matter, the Court must look beyond that to whether the science establishes an undeniable causal link between the substance and *the type of illness* alleged"). The Magistrate Judge quoted that parenthetical sentence but clearly understood that this is not a first-category case under *McClain*; the focus of that quote in the R&R was instead on the need to identify causation linked to a *specific disease*—not that the link must be "undeniable" for purposes of this second category case.

maritime causation standard is described as "featherweight," citing *Davis v. Hill Eng'g, Inc.*, 549 F.2d 314, 331 (5th Cir. 1977).[23] It appears he also wants to extend that more lenient causation standard to the *Daubert* review without authority to do so.

For starters, neither *Great Lakes* nor *Davis* is a toxic tort maritime case. *Great Lakes* applied contract principles, including the long-standing maritime rule that "choice-of-law provisions in maritime contracts are presumptively enforceable."[24] *Great Lakes*, 601 U.S. at 70 (internal quotation omitted). Culliver has not identified a similarly long-standing maritime causation standard for toxic torts. Also, the "featherweight" causation standard applied in *Davis* is a maritime rule that applies when an injured seaman seeks recovery from his employer under the Jones Act, which is not at issue here.[25] In the maritime tort context—outside of the Jones Act–

[23] *See Bonner v. City of Prichard*, 661 F.2d 1206, 1209 (11th Cir. 1981) (*en banc*) (adopting the case law of the former Fifth Circuit before October 1, 1981, as precedent in this Circuit).

[24] In ruling, the Court in *Great Lakes* explained that under maritime jurisdiction, federal courts apply previously established maritime rules, and if none exist, "federal courts may create uniform maritime rules." 601 U.S. at 70. "Subject to direction from Congress, the federal courts fashion maritime rules based on, among other sources, judicial opinions, legislation, treatises, and scholarly writings." *Id.* (internal quotations omitted). The Court explained that "when federal courts decline to create a new rule, federal courts apply state law." *Id.* (observing "the scope of application of state law in maritime cases is one of the most perplexing issues in the law") (quoting 1 T. Schoenbaum, Admiralty and Maritime Law § 4:4, p. 268 (6th ed. 2018)).

[25] The Jones Act accords to seamen "heightened legal protections (unavailable to other maritime workers)," *Chandris, Inc. v. Latsis*, 515 U.S. 347, 354 (1995), and these protections

–as here, a plaintiff bears the burden to prove that the defendant's negligence was a "substantial factor in bringing about the harm." *Harrison v. Flota Mercante Grancolombiana, S.A.*, 577 F.2d 968, 984 (5th Cir. 1978); *Chavez v. Noble Drilling Corp.*, 567 F.2d 287, 289 (5th Cir. 1978); *see also McClow v. Warrior & Gulf Nav. Co.*, 842 F.2d 1250, 1251 (11th Cir. 1988) (declining to apply "the lesser Jones Act standard of causation to general maritime law claims").

Toxic tort cases, such as Culliver's, "are won or lost on the strength of the scientific evidence presented to prove causation," *Rider v. Sandoz Pharms. Corp.*, 295 F.3d 1194, 1197 (11th Cir. 2002), and the admissibility of expert testimony is undeniably governed by *Daubert* and Rule 702. This standard has been consistently applied by this Court, and Culliver cites no maritime case to the contrary.[26] There

include the right "to recover on a Jones Act claim with a lower showing of proximate cause than would be required in a non-admiralty case." *Dempsey v. Mac Towing, Inc.*, 876 F.2d 1538, 1542 (11th Cir. 1989). This lighter "slight negligence," *id.*, or "featherweight" burden as described in *Davis,* 549 F.2d at 331, also has been applied in the general maritime context but only in situations where *res ipsa loquitur*-based negligence allows the jury to make permissible inferences from unexplained maritime events. *See Landry v. Two R. Drilling Co.*, 511 F.2d 138, 142 (5th Cir. 1975) (citing *Johnson v. United States*, 333 U.S. 46, 48 (1948)). However, *res ipsa loquitur*-based negligence has not been pled and is not at issue in this case.

[26] Although the Fifth Circuit stated in a footnote in a BELO case that it did not need to decide whether the toxic tort standard or some other causation standard applied, *see McGill v. BP Explor. & Prod.*, 830 F. App'x 430, 434 n.2 (5th Cir. 2020), it affirmed the grant of summary judgment to BP where expert testimony necessary to prove causation was excluded. *See also Dufour v. BP Explor. & Prod. Inc.*, No. 1:19-cv-591-HSO-BWR, 2023 WL 3807923, at *4 (S.D. Miss. June 2, 2023) ("For a plaintiff to establish legal causation, whether under diversity jurisdiction or general maritime law, '[s]cientific knowledge of the harmful level of exposure to a

is no authority for applying a "featherweight" causation standard in this toxic tort case or for using it to mitigate the necessity either for Culliver to support his claim with reliable expert testimony or for the Court to conduct a careful *Daubert* review. The objection is overruled. Consequently, BP is entitled to summary judgment.

Accordingly,

1. The Objections are **OVERRULED**, and the Magistrate Judge's Report and Recommendation (ECF No. 182) is adopted and incorporated by reference in this Order.

2. BP's motion to exclude Dr. Sahu (ECF No. 154) is **GRANTED**.

3. BP's motion to exclude Dr. Clark (ECF No. 155) is **GRANTED** to the extent his risk assessments are excluded.

4. BP's motion to exclude Plaintiff's causation expert, Dr. Rybicki (ECF No. 159), is **GRANTED**.

5. BP's motion to strike the untimely opinions of Dr. Rybicki (ECF No. 180) is **DENIED**.

---

chemical, plus knowledge that the plaintiff was exposed to such quantities, are minimal facts necessary to sustain a plaintiff's burden.'") (quoting *Allen*, 102 F.3d at 199).

6. Plaintiff's motions to exclude BP's experts (ECF Nos. 156, 157, 158, 161, 162) are **DENIED AS MOOT**.

7. BP's motion for summary judgment (ECF No. 160) is **GRANTED**.

8. The Clerk is directed to enter judgment in favor of Defendants BP Exploration & Production Inc. and BP America Production Company, tax costs against the Plaintiff, and close the file.

DONE AND ORDERED this 30th day of September 2024.

M. Casey Rodgers

M. CASEY RODGERS
UNITED STATES DISTRICT JUDGE