IN THE UNITED STATES DISTRICT COURT
DISTRICT OF COLORADO
SENIOR JUDGE MARCIA S. KRIEGER

Civil Action No. 18-cv-01891-MSK-STV

SHIRON MILLS, and
MARVELET RANDOLPH,

Plaintiffs,

v.

FCA US, LLC,
TRW VEHICLE SAFETY SYSTEMS, INC., and
John Does 1-10,

Defendants.

OPINION AND ORDER GRANTING, IN PART, AND DENYING, IN PART, MOTIONS FOR SUMMARY JUDGMENT AND MOTIONS TO EXCLUDE PURSUANT TO FED. R. EVID. 702

THIS MATTER comes before the Court pursuant to Defendant TRW Vehicle Safety Systems, Inc.'s ("TRW") Motion for Summary Judgment **(# 124)**, the Plaintiffs' response **(# 140**, as amended **#142)**, and TRW's reply **(# 159)**; Defendant FCA US, LLC's ("FCA") Motion for Summary Judgment **(# 130)**, the Plaintiffs' response **(# 144)**, and FCA's reply **(# 163)**. Also pending are numerous motions **(# 125-129, 131-133)** by the parties seeking to exclude certain opinion testimony pursuant to Fed. R. Evid. 702, and TRW's motion to restrict access **(# 154)** to certain filings.

FACTS

The Court summarizes the pertinent facts here and elaborates as necessary in its analysis. On June 18, 2016, police officers observed a Dodge Charger, driven by Gabriel Dorado, speeding on Interstate 225 in Aurora, Colorado. The police attempted to pull Mr. Dorado over,

but Mr. Dorado attempted to elude law enforcement, pulling onto the East Mississippi Avenue exit ramp at a high rate of speed. He failed to negotiate the ramp, struck a curb, the Dodge Charger became airborne, traveled approximately 60 feet in the air, then struck the front driver's side fender of a Jeep Liberty driven by Plaintiff Shiron Mills. It seems to be largely undisputed that the impact by the Dodge Charger caused the roof structure of Ms. Mills' vehicle – most notably, the "A-pillar" (the area that supports the vehicle's roof and separates the windshield from the driver's door) or the roof rail that runs from front to back along the roofline of the car – to deform significantly. As a result, it intruded into the passenger compartment, hit Ms. Mills' head and caused her catastrophic physical injuries.

Ms. Mills[1] brings this action against a number of defendants, but these motions concern only claims against and defenses asserted by FCA, the designer and manufacturer of the Jeep Liberty, and TRW, the alleged designer of certain portions of the driver's safety system in the Jeep Liberty. Ms. Mills' claims against these Defendants arise under Colorado tort law: (i) product liability (design defect); (ii) product liability (manufacturing defect); (iii) product liability (failure to warn); (iv) common-law negligence; (v) breach of implied warranty; and (vi) breach of express warranty.[2]

FCA and TRW both move for summary judgment. FCA's motion **(# 130)** argues that: (i) Ms. Mills' design defect claim fails because the nature of the accident and the magnitude of the

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[1] The co-Plaintiff, Marvelet Randolph, is Ms. Mills' mother and appears solely in a representative capacity on Ms. Mills' behalf. Accordingly, the Court will generally treat Ms. Mills as the sole Plaintiff in the discussion that follows.

[2] No party has addressed the manufacturing defect or breach of warranty claims. In a November 29, 2018 Order **(# 59)**, the Court found that the breach of warranty claim was not cognizable against a different Defendant, but as best the Court can determine, it has yet to consider that claim as against FCA or TRW. In the absence of a formal filing reflecting the termination of those claims, the Court will assume that the parties intend that the manufacturing defect and breach of warranty claims against FCA and TRW will proceed to trial.

forces exerted on the Jeep Liberty were so extreme and atypical as to be unforeseeable by FCA; (ii) Ms. Mills' failure to warn claim fails because Ms. Mills cannot identify any alleged warning that FCA could have given that would have allowed her to reduce or avoid the injuries she suffered; and (iii) that any common-law negligence claim should be deemed to be subsumed within the products liability claims so as to avoid the possibility of inconsistent verdicts.

TRW's motion **(# 124)** initially argued that Ms. Mills cannot show that the vehicle was equipped with a side-curtain airbag manufactured by TRW, an optional feature that never was installed on Ms. Mill's Jeep Liberty. Ms. Mills concedes this in her response, but argues that TRW is nevertheless liable because it co-designed the driver's safety system with FCA, knew that side-curtain airbags were effective at reducing injuries, and was therefore negligent in allowing FCA to market the vehicle with side-curtain airbags as an optional, rather than standard, feature. In its reply brief, TRW argues that Ms. Mills cannot show that TRW was involved in FCA's decision to market some Jeep Liberty models without a side curtain airbag.

Separately, both parties have filed numerous motions under Fed. R. Evid. 702, challenging the admissibility of certain opinion testimony endorsed by the other side. The Court will address these motions to the extent they are pertinent to the issues remaining in this case.

ANALYSIS

A. Summary judgment standard

Rule 56 of the Federal Rules of Civil Procedure facilitates the entry of a judgment only if no trial is necessary. *See White v. York Intern. Corp.*, 45 F.3d 357, 360 (10th Cir. 1995). Summary adjudication is authorized when there is no genuine dispute as to any material fact and a party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(a). Substantive law governs what facts are material and what issues must be determined. It also specifies the elements that

must be proved for a given claim or defense, sets the standard of proof and identifies the party with the burden of proof. *See Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986); *Kaiser-Francis Oil Co. v. Producer's Gas Co.*, 870 F.2d 563, 565 (10th Cir. 1989). A factual dispute is "genuine" and summary judgment is precluded if the evidence presented in support of and opposition to the motion is so contradictory that, if presented at trial, a judgment could enter for either party. *See Anderson*, 477 U.S. at 248. When considering a summary judgment motion, a court views all evidence in the light most favorable to the non-moving party, thereby favoring the right to a trial. *See Garrett v. Hewlett Packard Co.*, 305 F.3d 1210, 1213 (10th Cir. 2002).

If the movant has the burden of proof on a claim or defense, the movant must establish every element of its claim or defense by sufficient, competent evidence. *See* Fed. R. Civ. P. 56(c)(1)(A). Once the moving party has met its burden, to avoid summary judgment the responding party must present sufficient, competent, contradictory evidence to establish a genuine factual dispute. *See Bacchus Indus., Inc. v. Arvin Indus., Inc.*, 939 F.2d 887, 891 (10th Cir. 1991); *Perry v. Woodward*, 199 F.3d 1126, 1131 (10th Cir. 1999). If there is a genuine dispute as to a material fact, a trial is required. If there is no genuine dispute as to any material fact, no trial is required. The court then applies the law to the undisputed facts and enters judgment.

If the moving party does not have the burden of proof at trial, it must point to an absence of sufficient evidence to establish the claim or defense that the non-movant is obligated to prove. If the respondent comes forward with sufficient competent evidence to establish a *prima facie* claim or defense, a trial is required. If the respondent fails to produce sufficient competent

evidence to establish its claim or defense, then the movant is entitled to judgment as a matter of law. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 322-23 (1986).

B. TRW's motion

The Court begins with TRW's motion for summary judgment. TRW is a manufacturer of automobile airbag systems. TRW manufactured the front airbag that in Ms. Mills' Jeep Liberty, and there is no dispute between the parties regarding the design or operation of that airbag. TRW also manufactures side-curtain airbags, and there is no dispute that Ms. Mills' Jeep Liberty never contained such component. For the Jeep Liberty model at issue, side-curtain airbags were an optional feature and Ms. Mills' vehicle was not sold as having one. Ms. Mills contends that TRW should nevertheless be held liable under a product liability theory because it had a "level of input, influence, and control . . . over the design of the subject Jeep Liberty's restraint system, including the decision to make side curtain airbags optional, rather than standard."

Both Ms. Mills and TRW cite to Colorado tort law in their briefing, suggesting that they agree that Colorado substantive law governs Ms. Mills' design defect claims. Because the parties' focus their arguments on Ms. Mills' defective design, failure to warn, and negligence claims, and the Court will confine its analysis to those claims.

1. Design defect claim

Turning first to the design defect claim, Ms. Mills must come forward with evidence that would show: (i) that TRW's parts were "in a defective condition unreasonably dangerous to the user"; (ii) that the products created by TRW were expected to and did reach the user without substantial change in their design"; (iii) that TRW is engaged in the business of selling the product at issue; and (iv) that TRW's design defect was the cause of Ms. Mills' injury. *Union Supply Co. v. Pust*, 583 P.2d 276, 282-83 (Colo. 1978). Ms. Mills appears to offer two discrete

theories for TRW's liability. First, she argues that TRW was a "co-designer" with FCA of the Jeep Liberty such that TRW is jointly liable for its defective design. Second, Ms. Mills appears to argue that the safety system designed by TRW was defective because TRW did not conduct a "risk/benefit analysis" as required by *Walker v. Ford Motor Co.*, 406 P.3d 845, 850 (Colo. 2017), before proposing a safety system that failed to include a side airbag to FCA.

Ms. Mills' argument that TRW is jointly-liable with FCA for defects in the Jeep Liberty is derived from *Union Supply*, in which the Colorado Supreme Court stated that "when two or more parties collaborate and where each contributes to the final design, each is a designer of the final product." 583 P.2d at 281. In *Union Supply*, the Holly Sugar Corporation sought to obtain a conveyor system for its warehouse. It "sent bid drawings, together with documents listing the various parts needed, to three conveyor suppliers, including Union Supply Company." After Holly accepted Union's bid, Union "submitted its own drawings to Holly[,] substituting another manufacturer's components and allegedly adding mechanical engineering specifications necessary for manufacture." After subcontracting to manufacture the conveyor, Union "redesigned and modified each of the sections of the conveyor," with some modifications "contained in a final manufacturing or assembly drawing sent by Union [ ] to Holly." Holly then installed the conveyor, and an employee was injured when using it. The employee sued Union, alleging both defective design and failure to warn claims, but the trial court dismissed the employee's claims on Union's motion, apparently based on a finding that Holly, not Union, was responsible for the design of the conveyor and the absence of safety guards.

On appeal, the Colorado Supreme Court reversed, finding "ample evidence that Union [ ] was a designer of this conveyor system." The Court noted that Union "added the mechanical and structural design, together with the necessary engineering specifications, without which the

conveyor could not be built." It pointed to evidence that Holly had done "performance design," dictating "how much sugar beet pulp the conveyor would carry and how much power was needed," but that Union "did the 'mechanical design' necessary for the conveyor to be operational." And the Court noted that Union "redesigned and modified each of the sections of the conveyor," apparently after manufacturing. Based on these facts, the Colorado Supreme Court found there to be a triable question as to whether Union could be deemed a "designer" of the conveyor. 583 P.3d at 279-282.

Ms. Mills' contention that TRW influenced or controlled FCA's "decision to make side curtain airbags optional". This argument is supported by only two items of evidence. The first is a single question and answer in the deposition of Lawrence Brookes, a representative of FCA:

> Q: So if TRW was the airbag supplier, you've talked about the design process where there would have to be a cooperative and integrated process between TRW and Chrysler to have an airbag design that fit the overall specification and design of the vehicle?
>
> A: Correct. It would always be a collaboration between a supplier and the OEM.

The second, is found in the deposition testimony of Dr. Lisa Fodale, an FCA official who oversaw the design of safety systems on the Jeep Liberty during the applicable period. Dr. Fodale testified that she "participated in a lot of meetings [with TRW]" concerning safety systems, that she "was in attendance at the TRW facility in Washington [and] Michigan" for various meetings, although Dr. Fodale does not describe the purpose, content, or conclusions of these meetings. Dr. Fodale testified that TRW "did the design and development" of safety products,[3] and that FCA's role was to be "the system integrator," such that "together we ensured

[3] At this stage in the deposition, the questions were specifically discussing a device called the Occupant Restraint Controller. It is not clear whether Dr. Fodale's testimony is specifically

that the system met the functional objectives [of FCA] through our performance standards . . . We worked as a team with each member having a role in the process." Ms. Mills also points to a snippet of testimony in which Dr. Fodale stated that "when performance standards are created [by FCA], suppliers are asked to provide input. I cannot say whether [TRW] was one of them specifically in this instance or not, but I can tell you that as a standard course of business, suppliers are involved in the performance standard creation and review." Finally, Dr. Fodale testified that FCA would issue a "quote package" to suppliers, asking for information about "an optional side airbag inflatable curtain," and that suppliers like TRW "would come back with information" about items such as "the size and shape of the side airbag inflatable curtain, a proposed inflator, and some information about that relative to incorporating it into the [ ] Jeep Liberty at that time."

There is some evidence that TRW and FCA worked collaboratively on the general design of a safety system for the Jeep Liberty. The record indicates that FCA issued a "quote package" indicating the particular goals of the intended product (*e.g.* that the driver's airbag module include a 26" diameter cushion, a preference for inflator assemblies with "two distinct output levels" that were yet to be determined, a cover whereby tear seams would not be visible, and a target module weight of 2.8 lbs.), much like Holly did in *Union Supply* when it issued "performance design" specifications for the conveyor it sought to buy. Similar to Union, TRW submitted a bid providing in-depth details of the various components of the system it intended to deliver. But the factual similarity between *Union Supply* and this case ends here.

directed at this device or whether the collaborative process she is describing applied more broadly to other components of a vehicle safety system as well.

In this case, the alleged liability is not premised on a design defect in something that TRW proposed as part of its own design, but instead upon a decision to make side-curtain airbags an optional, rather than standard, component in the Jeep Liberty. Generously assuming that decision to be a design as compared to a marketing decision, there simply is no evidence in the record that suggests that TRW had or was given any input as to whether a side-curtain airbag would be standard or optional equipment on the Jeep Liberty. Instead, it appears that, at all times, it was FCA, and only FCA, that decided whether a side curtain airbag would or would not be included in any safety system. Dr. Fodale testified that "the quote package would go out for an optional side airbag." *See e.g.* Docket # 142-5 at p. 90 (emphasis added). But the FCA quote package that Ms. Mills attaches – the document that advises potential suppliers what products FCA wishes to purchase from them -- makes no mention of a side-curtain airbag at all. Rather, it advises suppliers that "[t]he 2002 [Jeep Liberty] will be equipped with Driver's and Passenger Side[4] Air Bags [ ] and front and rear seat belt systems." *See Docket* # 142-1 at 3. TRW's response was directly responsive to the quote package including details for only front-mounted airbags.[5] *Docket* # 142-2 at 33-59 (driver's side airbag proposal) *and* 60-74 (passenger's side airbag proposal). Although Ms. Mills cites to deposition testimony that FCA and TRW worked

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[4] The Court is mindful that the phrase "driver's side airbag" generally refers to a dashboard-mounted airbag on the driver's side – that is, the driver's half -- of the passenger compartment, protecting the driver against front-end impacts, and is distinctly different from "side-curtain" airbags which mounted along the side of the car to protect against side impacts.

[5] TRW's response to the quote package includes a single page identifying the various components of "occupant restraint systems" that TRW was capable of supplying. This system included "side impact system[s]" that include "thorax, pelvic, and head airbag solutions," along with unrelated items like steering wheels. *Docket* # 142-2 at 7. But this appears to be a promotional page advertising the breadth of TRW's capabilities rather than a specific proposal to include a side curtain airbag notwithstanding FCA's requests for a front-airbag-only system. As such, it suggests that both FCA and TRW knew that the decision as to what components would be included in the Jeep Liberty was to be made by FCA.

closely on the development and testing of various components of a safety system, none of the identified testimony demonstrates that FCA ever solicited, nor that TRW ever supplied, opinions as to whether a side-curtain airbag should be a standard as compared to an optional component of the Jeep Liberty, nor that TRW ever addressed that question.

Construing the evidence most favorably to Ms. Mills[6], TRW responded to a proposal for a safety system for the Jeep Liberty that included a number of features, arguably even including a side-curtain airbag. FCA unilaterally decided to incorporate a side curtain airbag in some vehicles and allowed customers to add it to others. Because no evidence in the record demonstrates that TRW participated in any way in FCA's decision to make side-curtain airbags an optional component, Ms. Mills' design defect claim against TRW as a co-designer with FCA must fail.

Ms. Mills' second argument is premised on *Walker*, in which the Colorado Supreme Court clarified that, in cases involving products whose design is "defined primarily by technical, scientific information," the test for determining whether a product is unreasonably dangerous – and therefore defectively designed -- is the "risk-benefit test,"[7] one that inquires "whether the benefits of a particular design outweigh the risks of harm it presents to consumers." 406 P.3d at 850. In implementing the risk-benefit test, the Colorado Supreme Court has articulated several non-exclusive and flexible factors that may inform that inquiry: (i) the usefulness and desirability of the product; (ii) the likelihood that the product will cause injury and the probable seriousness of the injury; (iii) the availability of a more safe substitute product that would meet the same

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[6] The record is silent on TRW's involvement with design or implementation of any side-curtain airbag system.

[7] As opposed to the "consumer expectations test," which asks whether a product "performed as safely as an ordinary consumer would expect." 406 P.3d at 849.

need; (iv) the manufacturer's ability to eliminate the unsafe character of the product without undue impairment of usefulness or expense; (v) the user's ability to avoid the danger of the product; (vi) the user's anticipated awareness of the dangers of the product; and (vii) the feasibility of the manufacturer spreading the risk of loss through pricing or insurance.[8] *Id.*, *citing Armentrout v. FMC Corp.*, 842 P.2d 175, 184 (Colo. 1992). Ms. Mills offers argument as to each of these factors, but identifies only two actual facts supporting that argument: (i) that an expert has opined that side curtain airbags "would have greatly reduced injury to Ms. Mills"; and (ii) that the cost to the purchaser of opting for the optional side curtain airbag when ordering a vehicle was between $441 and $490.

Ms. Mills' argument that the airbag system "designed" by TRW was defective suffers from both analytical flaws and absence of evidence in the record. First, Ms. Mills' briefing never describes this "system" at all; it is unclear precisely how the optional side-curtain airbag system and the airbag-less system differed and to what degree TRW meaningfully participated in the design of either. As noted earlier, the record contains only a quote package from FCA soliciting the design of a safety system which did not call for a side curtain airbag at all. There is some testimony that appears to suggest that a side-curtain airbag could be added to that system as an additional option, but nothing in the record makes clear whether there were two discrete safety systems versus a single system with additional optional functionality. Nor is there anything more than the testimonial evidence recited above that suggests that TRW may have had some degree of generalized input with FCA about unspecified components or features of the Jeep Liberty safety system, but nothing that suggests that TRW had any specific input into the design

[8] In *Ortho Pharmaceutical Corp. v. Heath*, 722 P.2d 410, 414 (Colo. 1986), the Colorado Supreme Court seemed to offer an endorsement of an additional factor, "the role government may have played in regulating the product's design."

or installation of side-curtain airbags in the Jeep Liberty. Without such information, it is difficult to make any assessment of the design of the safety system, much less the searching, fact-intensive inquiry called for by cases like *Walker*.

Moreover, beyond simply suggesting that Ms. Mills' injuries could have been reduced with the installation of a $500 optional side-curtain airbag, Ms. Mills' briefing does not address the broader *Walker* factors that require analysis as to the nature and extent of injuries that generally could be expected to result from the use of the product. For example, Ms. Mills' briefing mentions, in passing, that even the version of the Jeep Liberty without a side-curtain airbag received "5-star" (the highest) safety ratings for side impact crashes from the National Highway Transportation Safety Administration ("NHTSA"), the federal government's vehicle testing agency. Ms. Mills counters that fact by pointing out that safety standard testing at that time did not evaluate the risks of head injuries – a fact which appears to be undisputed – but the fact that Ms. Mills suffered a head injury from a side impact collision in this case does not necessarily indicate that head injuries from such accidents were understood at the time to be common risks that needed to be addressed. (Indeed, one would suspect that their omission from safety standards testing at the time indicates that they were not.) All of which is to say that Ms. Mills' reliance on her single accident, rather than broader and more universal data, is insufficient to discharge Ms. Mills' obligation to demonstrate the relevant *Walker* factors. *See Armentrout*, 842 P.2d at 182 (plaintiff bears the burden to show that a product was defectively designed).

But ultimately, Ms. Mills' design defect claim against TRW based on the design of the airbag-less safety system fails for the same reason that her claim based on TRW's co-designing of the Jeep Liberty with FCA fails - because the record is undisputed that it was FCA, not TRW, that decided to make the side-curtain airbag an optional safety feature. As noted, Ms. Mills has

not pointed to any evidence that reflects that TRW offered any opinion to FCA as to whether side-curtain airbags should be optional or standard, nor that FCA solicited any such opinion. And it is undisputed that FCA's quote package to TRW specifically requested that TRW design a safety system containing only front airbags, not side-curtain ones. TRW's decision to offer a system that met the specific demands set by FCA cannot constitute a basis for concluding that TRW is responsible for the very design choices foisted on it by FCA.

Accordingly, the Court grants TRW's motion for summary judgment on Ms. Mills' design defect claim.

2. Failure to warn claim

For essentially the same reasons, the Court also grants summary judgment to FCA on Ms. Mills' failure to warn claim as well. A seller has a duty to give adequate warning of an unreasonable danger not obvious to the user which the seller knows or should know is involved in the use of a product. *A.H. ex rel Hadjih v. Evenflo Co.*, 579 Fed.Appx. 649 (10th Cir. 2014): To establish a failure to warn claim, Ms. Mills must show "(1) the existence of a duty on the part of the defendant to warn buyers of any dangers that were known or should have been known, (2) breach of that duty by the defendant, and (3) injury to the plaintiff resulting from that breach." *Id.* Nothing in the record indicates that TRW had any control over FCA's decision to include a side-curtain airbag in a given Jeep Liberty or not, nor that it had the ability to communicate a warning to that buyer that the vehicle did not have a side-curtain airbag. At most, the record simply indicates that TRW supplied certain parts to FCA, and that FCA included or omitted certain parts from finished Jeep Liberties according to the buyer's selected options. Because nothing in the record supports a finding of either a duty or a breach by TRW, it is entitled to summary judgment on Ms. Mills' failure to warn claim.

3. Negligence claim

Finally, the Court finds that TRW is entitled to summary judgment on Ms. Mills ordinary negligence claims for the same reasons set forth previously. Nothing in the record indicates that TRW owed a duty to Ms. Mills with regard to the Jeep Liberty nor that TRW breached any such duty. Thus, TRW's motion for summary judgment is granted in its entirety.

C. FCA's motion

FCA seeks summary judgment on Ms. Mills' claims for defective design, failure to warn, and negligence. As to the defective design claim, FCA argues that: (i) the nature of the accident involving Mr. Dorado's vehicle was so extreme and unforeseeable that no reasonable vehicle manufacturer could have anticipated it and designed a vehicle to withstand it; and (ii) Ms. Mills cannot show that a defective design in the Jeep Liberty was a proximate cause of her injuries because Mr. Dorado's conduct was the only cause. As to the failure to warn claim, FCA argues that Ms. Mills cannot identify any warning that FCA could have given that would have reduced or prevented Ms. Mills' injuries. As to the negligence claim, FCA argues that such common-law claims are superseded as a matter of law by product liability claims.

1. Design defect claim

Turning first to the defective design claim, a manufacturer is "not required to be the virtual insurer of its products." *Fibreboard Corp. v. Fenton*, 845 P.2d 1168, 1175 (Colo. 1993). Rather, a manufacturer is only liable when a plaintiff can show that a product that caused the injury was "defective" and "unreasonably dangerous" at the time of its sale. *Id.*, *citing* Restatement (Second) of Torts, § 402A. To be "unreasonably dangerous," a product "must be dangerous to an extent beyond that which would be contemplated by the ordinary consumer who purchases it, with the ordinary knowledge common to the community as to its characteristics."

Restatement, § 402A, comment *i*. As discussed above, the Colorado Supreme Court in *Walker* and *Armentrout* set forth several non-exclusive factors to consider in deciding whether a product is defective and unreasonably dangerous. FCA's argument focuses on two of these factors: the likelihood that the product will cause injury and the probable seriousness of the injury; and the availability of a safer substitute product.[9]

FCA argues that this accident occurred due to "an unforeseeably out-of-control, airborne, 4000+ pound vehicle flying at over 40 mph and imparting over 200,000 ft./lbs. of force." There is some degree of dispute between the parties with regard to certain aspects of the collision, but for purposes of this analysis, the Court adopts the findings of Ms. Mills' accident reconstruction experts, Richard Ziernicki and Brad Stolz. Both witnesses generally estimate that when Mr. Dorado's vehicle struck Ms. Mills' vehicle, Mr. Dorado's vehicle was airborne at a height of 18-24 inches off the ground, was traveling between 41 and 44 miles per hour, and its point of impact was at the front left fender near the front left wheel on Ms. Mill's vehicle. FCA argues that the forces occasioned by the crash "were so high and imparted in such a bizarre way that to hold FCA accountable would be tantamount to requiring it to be a virtual insurer of its products against all injuries in all crashes."

With the exception of Mr. Dorado's vehicle being airborne at the time of impact, the forces at issue – namely, the size and speed of Mr. Dorado's vehicle and the point of impact – do not appear to be particularly unusual. Nothing in the record suggests that Mr. Dorado's vehicle, a Dodge Charger, was substantially larger, heavier, or otherwise more dangerous than other

[9] Because FCA has not addressed the remaining factors, the Court will not assume that those factors tip in favor of FCA. At the same time, the Court makes no particular findings of the degree to which those factors might tip in favor of Ms. Mills. Rather, the Court simply treats the unaddressed factors as having neutral application to both sides.

vehicles in common use on roadways. The location of the impact as being the front left fender of Ms. Mills' vehicle is obviously not unusual for a side-impact collision. The speed that Mr. Dorado's vehicle was traveling at – somewhere between 41-44 miles per hour at the moment of impact -- is certainly a fairly high speed, but it does not appear to be outside the realm of objective foreseeability given the prevailing speed of traffic on ordinary city streets (particularly streets adjacent to highway ramps).[10] Indeed, Mr. Ziernicki testified about what appears to be a common NHTSA crash test known as a "214 test" that simulates a 90-degree side-impact collision with the striking vehicle traveling at 34 miles per hour, only slightly slower than the impact speed in this case.[11]

That leaves only the question of whether the fact that Mr. Dorado's vehicle was airborne at the time of impact so radically changes the nature or magnitude of the forces at issue that it makes the severity of the accident unforeseeable to a reasonable car manufacturer. On this point, FCA has not come forward with any statistics, engineering tests, simulations, or other evidence that explains how the forces that resulted from Mr. Dorado's vehicle being airborne at a height of 18-24 inches differ from the forces that would have resulted from an otherwise identical collision with both vehicles on the ground at the time of impact. It may be that the forces involved are the

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[10] FCA's reliance on *Timmons v. Ford Motor Company*, 982 F.Supp. 1475, 1477 (S.D.Ga. 1997), is thus misplaced. There, the court found that a head-on collision between an individual driving 70 mph and the plaintiffs' vehicle traveling 30 mph produced forces so extreme that a reasonable manufacturer could not "manufacture a Ford Explorer that would ensure the safety of its occupants in collision forces exceeding 100 miles per hour," warranting summary judgment on the plaintiffs' defective design claim. Here, unlike in *Timmons*, Mr. Dorado's vehicle was traveling at a speed that would not be unusual on city streets.

[11] There is some implication in deposition colloquy that another common side impact test involves the striking vehicle traveling at 38 miles per hour. If that were the case, the impact speeds that vehicle manufacturers could reasonably foresee even more closely approximate the actual speed that Mr. Dorado's vehicle was traveling.

similar to those generated in a generally-foreseeable surface-level collision at similar speeds, or it may be that the forces are radically different and largely unforeseeable. Without evidence from FCA that demonstrates that the forces from a collision by an airborne vehicle are substantially more severe than an ordinary accident at that speed and configuration, the Court cannot adopt FCA's position that, as a matter of law, the forces at play in this accident were so extreme as to be unforeseeable by FCA. Rather, the factfinder may make that assessment.

FCA also makes a very abbreviated argument that given the state of the art in vehicle design at the time of the sale of the Jeep, no configuration would have protected Ms. Mills from severe injury. FCA's evidence on this point consists of two exchanges from depositions of Ms. Mills' experts. In the deposition of Neil Hannemann, FCA counsel asked whether Mr. Hannemann had "identified . . . an alternative [vehicle then in production] that would have protected Ms. Mills under the forces of the subject crash," to which Mr. Hannemann responded that "I haven't done that." In the deposition of Stephen Syson, FCA counsel asked whether Mr. Syson could "name for us today a vehicle which would have resulted in no injuries to Ms. Mills in this specific crash," to which Mr. Syson responded "I don't think anybody can say that. . . There is bound to be some injury in a crash of that severity." These answers suggest that no vehicle could have completely protected Ms. Mills.

The doctrine of product liability does not require that a manufacturer eliminate all risk of injury, only that the manufacturer eliminate "unreasonable" dangers. As explained in Section 402A of the Restatement, as adopted by Colorado law, "[m]any products cannot be made entirely safe . . . The article must be dangerous to an extent beyond that which would be contemplated by the ordinary consumer." Restatement, §402A, comment *i*. An ordinary user of a motor vehicle might expect that they could suffer some degree of injury in a high-speed collision – cuts and

bruises, sprains, and even broken bones might be within the realm of consumer expectations in such situations. But it may be that a user would expect vehicles to be designed to protect against more severe forms of injury, like the catastrophic brain injuries suffered by Ms. Mills here. Thus, to invoke the doctrine of product liability, Ms. Mills is not required to show that FCA could have designed the Jeep Liberty to eliminate all risk of injury in a crash of this type. She need only show that FCA could have designed the vehicle in a way that would meaningfully reduce the risk of severe injury in these circumstances. *See e.g. Armentrout*, 842 P.2d at 184 (one of the factors in the "unreasonably dangerous" analysis is the manufacturer's ability to meet the same customer needs via an alternative product that would "not be as unsafe" as the subject product) (emphasis added); *see also Camacho v. Honda Motor Co., Ltd.*, 741 P.2d 1240, 1242-43 (Colo. 1987) ("automobiles are intended for use on the roadways and [ ] injury-producing collisions are a frequent, foreseeable and statistically expectable result of such normal use. Incumbent upon the automobile manufacturer [is] a duty to use reasonable care to minimize the injurious effects of a foreseeable collision by employing commonsense safety features . . . The crashworthiness doctrine does not require a manufacturer to provide absolute safety, but merely to provide some measure of reasonable, cost-effective safety"). In this respect, FCA's questions to Mr. Hannemann and Mr. Syson about whether other vehicles could have "resulted in no injuries" in a crash of this type are irrelevant.

Ms. Mills need only show that FCA could have designed the Jeep Liberty in a way that would have reduced, if not necessarily eliminated, the risk of injuries in a crash of this type. Ms. Mills has come forward with evidence of certain design decisions that, at least arguably, could have been made differently. Had the Jeep Liberty included side-curtain airbags and a metal cross-car structure rather than a plastic instrument panel, her injuries might have been reduced.

It will be up to a jury to determine whether these design choices rendered the Jeep Liberty unreasonably dangerous in the event of crash forces that could have been reasonably foreseen by FCA.

Finally, FCA argues that Ms. Mills cannot show that FCA's design decisions were the proximate cause of her injuries. FCA argues that Mr. Dorado's reckless behavior was the cause of her injuries. At bottom, this argument is simply a restatement of FCA's contention that the nature and severity of the forces imparted in the accident in this case were unforeseeable to FCA at the time it designed the Jeep Liberty. *See e.g.* Docket #130 at 12 ("A vehicle's defective design is not a proximate cause of an individual's injuries where the manufacturer could not foresee the injuries that would result from someone's reckless behavior") (emphasis added). Certainly, FCA could foresee that Jeep Liberties would be involved in accidents, including side-impact collisions involving fairly high speeds. The recklessness, or lack thereof, of the driver causing those accidents is not particularly relevant to the question of whether FCA designed the Jeep Liberty to provide a reasonable level of protection in such circumstances.

Indeed, *Ekberg v. Greene*, 588 P.2d 375, 376 (Colo. 1978), a case that FCA cites for the proposition that "the intentionally tortious or criminal act immunizes the original tortfeasor from liability as a matter of law," actually favors a finding that FCA can be held liable here. In *Ekberg,* Greene was the owner of a service station that contained a defectively-maintained gas heater in its restroom. Ekberg apparently used the restroom without permission after the service station had closed. She lit a match in order to light a cigarette, and the spark caused a gas explosion that injured her. Greene argued that Ekberg's trespass was a tortious act that rendered the injury unforeseeable, thereby absolving Greene of any responsibility. But the Colorado Supreme Court held that a third party's tortious acts do not insulate a defendant from suit based

on product liability if the plaintiff's tortious acts were "reasonably foreseeable." It noted that, based on a past history of vandalism to the restroom and Greene's failure to secure the restroom against further unauthorized use, there was "sufficient evidence upon which the jury could have concluded that the vandalism of the restroom and plaintiff's injuries were reasonably foreseeable." *Id.* Using this reasoning, it can be argued that FCA could have foreseen that reckless drivers might collide with the Jeep Liberties it designed and manufactured. It should come as no surprise to auto manufacturers that some drivers drive recklessly and at high rates of speed. The question is whether this type of collision, regardless of Mr. Dorado's conduct, was reasonably foreseeable. Thus, this Court cannot determine as a matter of law that simply because Mr. Dorado acted tortiously in causing the accident, FCA is insulated from liability. As in *Ekberg*, it will be up to a jury to determine whether the collision that caused Ms. Mills' injury was reasonably foreseeable to a vehicle designer and manufacturer.

FCA's reliance on *Jonas v. Isuzu Motors Ltd.*, 210 F.Supp.2d 1373 (M.D. Ga. 2002), is similarly misplaced. There, the driver of the vehicle "fell asleep at the wheel, drifted into oncoming traffic and lost control of the vehicle," resulting in the vehicle rolling over and causing injuries to its occupants. Granting summary judgment to the vehicle's manufacturer on the plaintiffs' product liability claims, the court concluded that "Isuzu has no duty to guard against grossly careless misuse of a vehicle by a reckless driver and has no duty to design an automobile incapable of causing injury. Society cannot reasonably expect affordable passenger vehicles to be safe under extremely dangerous conditions such as falling asleep at the wheel. In this case, the law does not allow a finding that falling asleep at the wheel of the Isuzu Rodeo and the resulting consequences were foreseeable to the Defendants." *Id.* at 1380. *Jonas* is inapposite here for several reasons. First, it does not address Colorado law which is applied in this matter. But

more importantly it stands for the proposition that a manufacturer does not have to anticipate grossly negligent use of its product by its intended users. But *Jonas'* reasoning does not speak to a situation where the user of a product – here, Ms. Mills – was operating a vehicle in a safe manner, precisely as intended by the manufacturer, only to be harmed by a third-party's careless operation of another vehicle. Thus, the question becomes whether FCA could reasonably foresee that third-parties might crash into Jeep Liberties in a manner similar to this collision. As discussed above, there is enough evidence in the record to create a question of fact as to whether FCA could have reasonably anticipated that its vehicles would be involved in collisions caused by third parties, producing the forces that occurred here. As such, the question of whether FCA reasonably designed the Jeep Liberty to protect its occupants during such collisions is a question that will have to be resolved at trial. Accordingly, the Court denies FCA's motion for summary judgment on Ms. Mills' design defect claim.

2. Failure to warn claim

Turning to Ms. Mills' failure to warn claim, FCA argues that Ms. Mills has not "alleged the existence of any instructions or warnings that would, if followed, have reduced or prevented Ms. Mills' injury." In response, Ms. Mills argues that FCA should have provided two warnings: (i) that the Jeep Liberty "replace[d] the traditional metal cross-car structure with a plastic [instrument panel that] reduced the structural integrity of the occupant compartment of [the] vehicle, increasing occupant compartment crush deformation significantly"; and (ii) a warning relating to the "risk of the missing side-curtain airbags."

In the context of a failure to warn claim, a manufacturer has a duty to warn buyers of dangers from the use of the product that were known or should have been known. The purpose of the warning is to enable consumers to make informed decisions about how and when to use a

product, or perhaps to purchase a different product instead. *Hadjih*, 579 Fed.Appx. 649, 653 (10th Cir. 2014). In *Camacho*, the Colorado Supreme Court considered a failure to warn claim brought by the operator of a motorcycle who was injured in an accident. The plaintiff argued that the absence of "crash bars" on the motorcycle – safety features that were offered as options by other manufacturers (and possibly by the defendant itself) rendered the motorcycle unreasonably dangerous in a design defect context, and the Colorado Supreme Court agreed that the issue was one warranting trial. In *dicta,* the court addressed an alternative claim brought the plaintiff - failure to warn. The court stated that "[a]rguably, a warning that injury-reducing crash bars were available as optional equipment or as add-on equipment would render an otherwise unreasonably dangerous motorcycle reasonably safe." Thus, the court remanded the action to the trial court for "further inquiry" as to "the efficacy of providing a warning" about the missing crash bars. 741 P.2d at 1248. This suggests that when a claim for design defect created by omission of safety equipment is coupled with a claim for failure to warn, the obligation to provide a warning (that the safety equipment is available or that risks are increased without it) exists only if the warning would have been efficacious.

There is at least some evidence to suggest that FCA knew that a Jeep Liberty with optional side-curtain airbags could reduce the injuries faced by a Liberty driver involved in a side-impact collision arguably similar to the one that occurred. According to the reasoning of *Camacho*, a failure to warn claim could lie here because FCA did not warn Ms. Mills about the absence of an optional safety feature that might have made the Jeep Liberty she purchased safer. Armed with such a warning, Ms. Mills might have decided to purchase a different vehicle or to

opt for the installation of a side-curtain airbag as either original or aftermarket equipment.[12] Accordingly, the Court denies FCA's motion for summary judgment as to the failure to warn claim.

3. Negligence claim

Finally, the Court turns to Ms. Mills' ordinary negligence claim. The Court agrees with FCA that Colorado law treats products liability claims as subsuming ordinary negligence claims premised on the same facts. In *Walker*, the Colorado Supreme Court explained that "regardless of whether a design-defect claim is based in strict liability or negligence, in order to properly return a verdict for the plaintiff, a fact-finder must determine that the product at issue is unreasonably dangerous." Thus, it held that "in a design-defect case such as this, the risk-benefit test essentially subsumes the issue of negligence." 406 P.3d at 852. Accordingly, the Court grants summary judgment to FCA on Ms. Mills' negligence claim. Her design defect and failure to warn claims will proceed to trial.

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[12] The Court is mindful that it is undisputed that Ms. Mills purchased the Jeep Liberty as a used vehicle, and thus had no option to select or reject an optional side-curtain airbag at the time of manufacture. And it is not clear what, if any, written materials from FCA accompanied the vehicle at the time Ms. Mills purchased it.

FCA has not argued that, as a factual matter, such a warning would not have adequately reached Ms. Mills or would not have affected her purchase decision. For example, FCA does not point to deposition testimony by Ms. Mills admitting that she did not read FCA's other written safety materials or that she specifically disregarded safety features as part of her purchasing decisions. The Court acknowledges that Ms. Mills' own briefing, which states that "[h]er decision to purchase the vehicle and use it as intended was informed by that lack of warning," is not supported by any citation to the record either. Because it is FCA's obligation under Rule 56(c)(1) to show that absence of a material factual dispute, the failure of both sides to address the factual question of whether any warning FCA could have given could have had an effect operates to defer that question to trial.

B. Rule 702 motions

Both sides have moved to exclude certain opinion testimony proffered by the other side. Fed. R. Evid. 702 permits witnesses qualified as "experts" by virtue of their knowledge, skill, training, or education, to provide opinion or other testimony if four requirements are met: (i) the testimony will help the trier of fact to understand the evidence or determine a fact at issue; (ii) the testimony is based on sufficient facts and data; (iii) the testimony is the product of reliable principles and methods; and (iv) the witness has reliably applied the principles and methods to the case. Rule 702 requires the trial court to "assess the reasoning and methodology of the expert's opinion and determine whether it is both scientifically valid and applicable to a particular set of facts." *Dodge v. Cotter Corp.*, 328 F.3d 1212, 1222 (10th Cir. 2003). The goal of a Rule 702 analysis is "to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999). The proponent of the witness bears the burden of demonstrating that the proffered testimony meets the foundational requirements of Rule 702. *U.S. v. Crabbe*, 556 F.Supp.2d 1217, 1221 (D.Colo. 2008).

Rule 702 is exclusively focused on questions of the foundation necessary to admit opinion testimony, not the ultimate opinion or the weight that it should be given. When a Rule 702 challenge is made to a witness' methodology, the focus is upon whether that methodology is understood to produce valid results.[13] The "quality of data used in applying the methodology[,]

[13] **Error! Main Document Only.**In evaluating the expert's reasoning or methodology, the Court may consider many different factors including those enumerated in *Daubert*. (1) has the theory, process or analytical pattern been or can be tested or falsified - in other words, can the process be challenged or verified in some objective sense? 2) has the witness just stated a subjective, conclusion without any description of how the conclusion was formulated?; (3) has

the conclusions produced" by it, and the reasonableness of the witness' assumptions and conclusions are all matters for the factfinder to evaluate. *In re Urethane Antitrust Litigation*, 768 F.3d 1245, 1263 (10th Cir. 2014). The mere fact that the opponent can point out flaws in the witness' reasoning or quirks in the underlying data does not, of itself, warrant exclusion of the opinions under Rule 702. "Many of those concerns can be addressed through vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof." *U.S. v. Foust*, 989 F.3d 842, 847 (10th Cir. 2021). It is only where the witness "completely changed a reliable methodology" or "misapplied that methodology" or used one that is generally not accepted in the field that exclusion under Rule 702 is warranted. *Id.*, *citing Crew Tile Distrib. Inc. v. Pocrelanosa, L.A., Inc.*, 763 Fed.Appx. 787, 797 (10th Cir. 2019).

The Court also notes that, when challenging the opponent's witness' methodology in particular, it is frequently necessary that the movant support that motion with an affidavit or evidence from other qualified experts in the same field, explaining why the challenged

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the theory/technique/process been subjected to evaluation by peer review and publication; (4) are there known or potential rates of error? and (5) has the theory/process/approach gained "general acceptance" in the scientific community. *See Daubert,* 509 U.S. at 593-94.

In addition, the Court may consider: (1) whether the expert employed the same degree of intellectual rigor in testifying as he would be expected to employ in his professional life; (2) whether the expert proposes to testify about matters growing naturally and directly out of research he or she conducted independent of the litigation or whether the expert developed opinions expressly for purposes of testifying; (3) whether the expert has unjustifiably extrapolated from an accepted premise to an unfounded conclusion (*i.e.,* whether there is too great an analytical gap between the data and the opinion proffered); (4) whether the expert adequately accounted for obvious alternative explanations; (5) whether the expert was as careful as he or she would be in regular professional work outside of paid litigation consulting; (6) whether the field of expertise claimed by the expert is known to reach reliable results for the type of opinion the expert would give; (7) the extensiveness of the expert's credentials; (8) the expert's ability to articulate a process that he or she applied; (9) whether the industry adheres to a particular practice; and (10) whether the opinion consists of summary conclusions or broad generalizations based on perfunctory analysis with no supporting specifics.

methodology is not one that is considered reliable in the field. This is traceable to the burden of proof. As noted above, the proponent of the witness bears the burden of proving that the witness applied a reliable methodology by a preponderance of evidence. *See United States v. Nacchio*, 555 F.3d 1234 (10th Cir. 2009); *Ralston v. Smith & Nephew Richards, Inc.,* 275 F.3d 965, 970 n.4 (10th Cir. 2001); *Daubert,* 509 U.S. at 592 n.10; Fed. R. Evid. 702 advisory committee's note. One would expect that a witness who possesses the qualifications necessary to render an opinion in a given field will also testify that the methodology he or she employed is one that is reasonable and reliably used in that field. Thus, the witness' endorsement of their own methodology will typically provide *prima facie* evidence sufficient to satisfy the proponent's burden of showing a reliable methodology. Competing evidence – not just argument – will typically be necessary for the movant to refute the proffered witness' evidence. Only in the rare situation, like that in *Crew Tile*, where the witness him- or herself admits that they deviated from the very methodology they endorse will the record support exclusion of an opinion without the tender of a fellow expert challenging the proffered witness' methodology. *See* 763 Fed.Appx. at 797 (witness testified that the fourth step of her handwriting analysis methodology required "verification" by a fellow handwriting examiner, but the witness admitted she skipped that step in this case for time reasons).

Before proceeding further, the Court notes that a line-by-line exegesis of the opposing expert's report is not an effective method for bringing a Rule 702 challenge. Expert reports are primarily pre-trial disclosure tools, not the script for the witness' testimony at trial. Not everything in a report may be offered at trial, and most expert witness reports do not address the evidentiary requirements of Rule 702. Accordingly, it is essential for counsel contemplating a Rule 702 challenge to vigorously sift an expert's report to separate the wheat of the expert's

actual opinions from the chaff and to thoroughly engage in the pre-motion conferral required by D.C. Colo. L. Civ. R. 7.1(A) to identify what opinions will actually be offered at trial. It is wasteful of both the parties' resources and the Court's time to address disputes about opinions that no one intends to present at trial.

A major theory underlying Ms. Mills' claims is that had the Jeep Liberty been fitted with a side-curtain airbag, the airbag would have fired during the collision and would have protected her to some degree. Both sides have proffered opinions as to aspects of this theory. Each side has lodged several challenges to the foundation for those opinions. The Court turns to those challenges first.

1. Dr. Ziernicki

Ms. Mills proffers opinions by Dr. Richard Ziernicki with regard to whether a hypothetical side-curtain airbag would have deployed in the circumstances presented in this case. Dr. Ziernicki first consulted data from NHTSA side-impact crash test ("the 214 test") protocols, then used computer software called PC-Crash to model additional aspects of the impact.

FCA challenges Dr. Ziernicki's qualifications with regard to his opinions on the subject of airbags, and specifically, side-curtain airbags. FCA also challenges the admissibility of certain opinions by Dr. Ziernicki, although it does not explicitly identify the particular opinions it challenges. The Court assumes that FCA simply challenges Dr. Ziernicki's overall opinion that, had the Jeep Liberty been equipped with a side-curtain airbag, it "would have deployed during the collision" prior to Ms. Mills making contact with any portion of the vehicle's structure. Finally, FCA argues that Dr. Ziernicki failed to follow a reliable methodology and failed to obtain sufficient facts and data as discussed below.

a. Qualifications

Dr. Ziernicki has advanced degrees in mechanical engineering. His primary occupation since 1994 has been as a consultant and engineer with Knott Laboratory, engaged in the business of investigating vehicular accidents, industrial accidents and machinery failures. According to his C.V., Dr. Ziernicki has conducted accident reconstructions in "several thousand industrial and vehicular accidents."

FCA's particular objection to Dr. Ziernicki's qualifications is his lack of familiarity with modern developments in airbag technology, particularly side-curtain airbags. On this point, the record is fairly brief. FCA points to deposition testimony from Dr. Ziernicki in which he was asked whether he had given any presentations or published any articles on automotive airbags since the late 1990s, and Dr. Ziernicki indicated that he had not. He was not asked, and thus, did not testify, on the extent of his professional understanding and work with automobile airbags after that time. FCA's counsel also elicited from Dr. Ziernicki the fact that he has never testified in a federal court about "the design of function of any side airbag system."[14]

On the limited record presented here, the Court cannot conclude that Dr. Ziernicki lacks the qualifications to testify about the opinions he offers in this case. The sole basis for FCA's challenge to Dr. Ziernicki's qualifications is the fact that he has not published articles or given presentations about automotive airbags since the late 1990s. Writing articles and giving presentations can certainly be evidence of a witness' qualifications to opine on a particular

[14] Whether Dr. Ziernicki has testified in federal court about any issue is irrelevant. The question is whether his qualifications are sufficient to provide expertise to render the opinion proffered. He stated that he did not believe that his testimony in this case would fall within the definition of testifying about "the design and functions" of an airbag system, although he conceded that "the function and performance of" the particular airbag at issue in this case was a subject he would address.

subject, but the witness' failure to publish articles or give presentations does not reflexively suggest that the witness is not qualified. Indeed, it is well-settled that a witness can be qualified to give opinion testimony under Rule 702 simply on the basis of that witness' experience in a particular field, regardless of whether the witness has ever published articles, given presentations, or other engaged in the academic aspects of the field. *See e.g. U.S. v. Smith*, 800 Fed.Appx. 658, 661 (10th Cir. 2020). Here, the record reflects that Dr. Ziernicki has extensive and ongoing experience in automobile accident reconstruction, including the operation of airbag systems generally.[15] Accordingly, the Court finds that Dr. Ziernicki has sufficient *prima facie* qualifications to render the opinions Ms. Mills proffers through him. The question of whether Dr. Ziernicki's qualifications are sufficiently extensive and current as to persuade the factfinder awaits trial.

b. Methdology

Simplified significantly, Dr. Ziernicki's methodology for determining whether a hypothetical side-curtain airbag in Ms. Mills' Jeep Liberty would have timely deployed during this collision is as follows. First, Dr. Ziernicki consulted "NHTSA's side-impact crash test of the Jeep Liberty . . . to determine the performance criteria required to trigger deployment of [side-curtain] airbags." The NHTSA test in question, a "214 test," entails crashing a moving barrier into the subject vehicle at a 90-degree angle and a specified speed, with the locus of impact being spread across an area between the A-pillar (roughly at the hinge edge of the driver's side door)

[15] In an affidavit in response to FCA's motion, Dr. Ziernicki argues that his opinions are not concerned with airbag systems in particular, beyond the well-understood fact that an airbag system deploys when certain established forces occur at the system's sensor locations. Dr. Ziernicki argues that his expertise in this case is more focused on determining what forces occurred during the accident and when those forces would have reached an airbag sensor – subjects that do not necessarily require particular expertise in airbag systems themselves.

and some distance past the B-pillar (roughly at the hinge edge of the rear door on the driver's side). In more basic terms, the 214 test simulates a side-impact collision occurring squarely on the driver's-side door. Because NHTSA's 214 testing of Jeep Liberties did not entail the use of side-curtain airbags until 2008, Dr. Ziernicki focused on the published results of 214 testing of a 2008 Jeep Liberty, even though Ms. Mills' Jeep Liberty was from the 2007 model year. Dr. Ziernicki noted various items of data observed by NHTSA, including the "Delta-V" (that is, change in velocity) experienced by the subject vehicle as a result of the crash, the level of deformation at various locations on the subject vehicle as a result of the collision, and airbag inflation times. Cognizant of the fact that the 2008 Jeep Liberty was structurally different from the 2007 Jeep Liberty involved in Ms. Mills' accident, Dr. Ziernicki then compared the 2008 test data with a NHTSA 214 test conducted on a (airbag-less) 2002 Jeep Liberty, one that is essentially identical to the 2007 model that Ms. Mills drove. Dr. Ziernicki examined data from the 2002 and 2008 tests and found that "lateral Delta-Vs in both model years [were] largely consistent with each other" and that although the 2002 version experienced "slightly more crush deformation than the 2008 model year," the deformation results of the tests on the two vehicles were "substantially similar." Thus, Dr. Ziernicki concluded that "the crash severity between the 2002-2007 model year generation of Jeep Liberty and the 2008 Jeep Liberty are substantially similar in regard to side-impact collisions."

Based on the 2008 test data, Dr. Ziernicki also opined that a 2007 Jeep Liberty containing a side-curtain airbag would have deployed that airbag if the lateral Delta-V measured by the airbag sensor exceeded approximately 10 mph, equivalent to an acceleration of 45g's. Dr. Ziernicki also concluded that the airbag would have deployed approximately 11 milliseconds

after an impact of this force, and that the airbag would have completely deployed within 29 milliseconds of impact.

Because the site of impact in the instant collision was in a different location than that used in 214 testing – Ms. Mills' vehicle was struck at an angle near the front fender, rather than squarely at the driver's side door, Dr. Ziernicki sought to calculate the particular forces that occurred in the instant collision (apparently to determine whether the crash would have activated a side-curtain airbag sensor located in the B-pillar area). To do so, he simulated the crash using software known as PC-Crash. First, he tested the reliability of PC-Crash simulations by simulating the 2008 NHTSA 214 crash test in PC-Crash using published data about the 2008 Jeep Liberty's dimensions, size, weight, and so on, as well as data about the test impact barrier and other test conditions. Dr. Ziernicki then compared the PC-Crash output to data recorded by NHTSA during the actual 2008 crash test, and concluded that the "PC-Crash simulated crash test had very similar crash pulse characteristics as the 2008 NHTSA crash test." Thus, he concluded that a simulation of Ms. Mills' collision in PC-Crash would yield reliable data that could then be compared to the 2008 NHTSA test data.

Dr. Ziernicki then set about simulating Ms. Mills' collision in PC-Crash. He began by reviewing reports from Dr. Durisek and Mr. Stoltz. Noting their disagreement as to the point of impact and the path of the Dodge Charger during the collision, Dr. Ziernicki "conducted an independent assessment of the physical evidence related to impact damage on both vehicles to determine impact configuration." Armed with data from his own reconstruction, Dr. Ziernicki then ran simulations of the impact in the PC-Crash software, concluding that "during the first 11 milliseconds of the crash pulse . . . [the] simulation of the lateral acceleration sustained by the B-pillar [in Ms. Mills'] accident . . . was greater than the acceleration sustained during the

simulation of the NHTSA crash test." Thus, Dr. Ziernicki concluded that "the side airbags would have deployed 11 to 28 milliseconds after impact." He further noted that, at this point in the simulations, the Dodge Charger "was still well outside the occupant compartment" such that "the side airbag would have been inflated prior to any harmful interaction between Ms. Mills and the driver door."

c. Challenges

FCA takes issue with several aspects of Dr. Ziernicki's analysis: (i) that he used data from a 2008 Jeep Liberty instead of a 2007 model like Ms. Mills'; (ii) that he did not know the sensor calibration algorithms for the 2007 airbag system or whether they were similar to the 2008 version; (iii) that he relied on data from 214 testing, when the impact location in such tests is substantially different from the actual collision here; (iv) that the PC-Crash software has not been validated "for use in identifying a discrete crash pulse" (as opposed to "broadly reconstructing crashes at a general speed and force-duration level," which FCA appears to concede would be an appropriate use of the software); (v) that when conducting his simulation, he improperly assumed that the Jeep Liberty was of uniform stiffness across its length; and (vi) that he did not personally perform the PC-Crash modeling, instead having members of his staff do so.

Notably, few of FCA's objections cite to any evidence other than Dr. Ziernicki's own report or deposition. FCA does not, for example, proffer the testimony of another accident reconstructionist for the proposition that the methods Dr. Ziernicki employed are not those that would regularly be used by other experts in the field of accident reconstruction. Similarly, although FCA takes Dr. Ziernicki to task for assuming that a Jeep Liberty is uniformly stiff across its length, FCA does not point to any evidence in the record that establishes that it is not.

FCA's argument appears to be that the defects in Dr. Ziernicki's methodology are so self-evident that the Court should deem them unreliable simply based on the Court's own sense of reasonableness.

Certainly, the ideal method for determining whether a side-curtain airbag would deploy in a 2007 Jeep Liberty during a collision like this one would be to take a 2007 Jeep Liberty with a side-curtain airbag, recreate this particular impact in an actual crash test, and measure the results. But it does not appear that either side employed this approach. In the absence of physical testing, both sides' experts have turned to comparisons to known testing formats and testing data – such as NHTSA 214 testing and other general crash tests – and drawn assumptions therefrom in order to opine as to whether a side-curtain airbag would have deployed in Ms. Mills' accident or not.[16] This suggests that there is no single methodology that is generally applied by accident reconstructionists to resolve the question of whether a hypothetical airbag would have deployed in a given situation. Rather, it appears that accident reconstructionists approach this subject in a somewhat *ad hoc* manner, based on the information and data that is available to them, using assumptions or approximations to fill in any gaps in knowledge. In such circumstances, this Court cannot say that Dr. Ziernicki's methodology, which itself resorts to several layers of assumptions and approximations, is any less reasonable than other methodologies espoused in this case.

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[16] In its reply brief, FCA points to an affidavit given by its own expert, Gregory Miller, in which Mr. Miller criticizes Dr. Ziernicki's approach. Mr. Miller notes that "[Ms. Mills'] own expert, Steve Syson, testified one would have to conduct a crash test to know which alternative vehicle designs would have deployed a side curtain airbag under the subject crash conditions." Despite apparently agreement with Mr. Syson that an actual crash test is the only way to conclusively resolve this question, Mr. Miller's own approach to the question instead relies on data from 214 crash test data and assumptions drawn therefrom, just as Dr. Ziernicki's does.

Accordingly, the Court denies FCA's motion to strike Dr. Ziernicki's opinions.[17]

2. Greg Miller

FCA tendered the opinion of Greg Miller as an expert on occupant restraint systems. Mr. Miller related substantial factual information and opined on a number of subjects that are not at issue here. Ms. Mills challenges only Mr. Miller's opinions relating to side-curtain airbags. On that subject, Mr. Miller opined that: (i) "there is no evidence that had the vehicle been equipped with a side curtain airbag that it could have somehow changed the injury outcome" because such an airbag "does not cover the intruding structure areas opined by [Ms. Mills'] experts"[18]; (ii) that "there is no evidence that a timely deployment could have occurred under the circumstances of the crash" because airbag sensors "in the area of the initial impact from the airborne Charger did not exist"; and (iii) "I am not aware of any studies that would support the conclusion that an airborne Charger interacting with the relatively soft left front fender area . . . imparts the same localized acceleration at the base of the B-pillar [where side-curtain airbag sensors are located] as would [be generated in a NHTSA 214 test]."

Ms. Mills' initial motion seeking to exclude these opinions was largely focused on the semantics of Mr. Miller's statement of them, *e.g.* she contends that a statement that he "is unaware of evidence" of various matters is simply a statement of fact and not a scientific opinion. Subsequent briefing tended to focus on procedural arguments rather than substantive

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[17] FCA's motion makes a brief argument that Ms. Mills failed to timely disclose certain supplemental opinions of Dr. Ziernicki in a timely manner. In response, Ms. Mills states that Dr. Ziernicki rendered those opinions promptly in response to deposition testimony given by FCA's own experts. The Court finds that FCA has not presented this issue with sufficient depth to permit the Court to address it, and thus, the Court denies FCA's motion to strike Dr. Ziernicki's supplemental report.

[18] Put differently, other experts opined that Ms. Mills' injuries resulted from the deforming of the A-pillar. Mr. Miller is opining that a side-curtain airbag would not have been positioned between Ms. Mills and that A-pillar in any event.

ones, leaving much of the challenge to Mr. Miller's opinions without shape. Nevertheless, the analysis of Mr. Miller's opinions is straightforward.

The opinion that a side-curtain airbag would not have lessened Ms. Mills' injury risk is based on nothing more than an observation that the structures that Ms. Mills' other experts alleged caused her injuries would not have been covered by an inflated airbag. Mr. Miller appears to simply be observing that the extent of airbag coverage does not extend to the injury-causing structure. No scientific methodology is involved in making such an observation; the factfinder could duplicate Mr. Miller's method by simply looking at the coverage area of a properly-situated side-curtain airbag. As such, Mr. Miller's opinion would not be a Rule 702 opinion that would be helpful to the factfinder. It is therefore excluded.

As to Mr. Miller's opinion that a side-curtain airbag would not have deployed because there were no sensors at the site of impact on the front fender, the absence of sensors in that location is also a fact. Mr. Miller does not appear to have engaged in any scientific methodology to conclude that an airbag would not inflate if there was no sensor at the site of impact or attempted to determine whether the forces of this collision would trigger an airbag sensor located elsewhere on the vehicle. Thus, that opinion is not a scientific opinion under Rule 702 that is helpful to the factfinder and thus it is excluded.

Finally, the opinion that the impact would not "impart[ ] the same localized acceleration at the base of the B-pillar" as a NHTSA 214 test does is an opinion that requires some degree of specialized knowledge, both as to how 214 tests are conducted and as to how impact forces disperse through a vehicle. But Mr. Miller's supplemental report does not explain the basis for that conclusion. Mr. Miller offers that opinion as a rebuttal to Dr. Ziernicki's opinion that the forces would be comparable, but Mr. Miller does not address Dr. Ziernicki's methodology or

data,[19] does not propose a competing methodology to address the issue, or point to studies or reports that would stand for the opposite conclusion. As presented by Mr. Miller's supplemental report, Mr. Miller's opinion is simply "I disagree with Dr. Ziernicki." Without a scientific explanation for that dispute, the factfinder is unable to compare the two experts' reasoning and conclusions. Thus, Mr. Miller's *ipse dixit* opinion is not helpful to the finder of fact and is therefore excluded.

3. Dr. Durisek

FCA has designated Dr. Durisek to testify about his reconstruction of the accident, specifically, his determination of the orientation of the vehicles at the moment of impact and the manner in which the force of the crash caused each vehicle to move.

Ms. Mills' challenges to Dr. Durisek's opinions are odd. She generally concedes that Dr. Durisek is qualified to render the opinions he has articulated and that "the information [in his opinions] can be obtained by the methodologies he employed to reach his conclusions." But her objection is "about what he did not do" – namely, "analyze the dynamics and interaction between the vehicles and within the crash pulse in the time domain." (Put more simply, Ms. Mills complains that Dr. Durisek did not identify the particular millisecond timing of each of the formative events in his reconstruction.) She appears to acknowledge that Dr. Durisek "did not offer those opinions [about crash timing] at all" in his report; rather, she takes issue with the fact that "during deposition [he] evaded admission of the fact that he cannot offer those opinions."

[19] Mr. Miller's supplemental report does follow this statement of opinion with the sentence "The next generation 2008 Jeep Liberty side-curtain airbag shown in Dr. Ziernicki's report is not representative of the [Jeep Liberty] platform from [model years] 2002 to 2007. Arguably, then, the basis for Mr. Miller's opinion is "Dr. Ziernicki used the wrong comparable vehicle." But even that statement fails to disclose a scientific methodology for determining whether the two vehicles are sufficiently "representative" of each other.

Ms. Mills notes that (unlike her own expert, Dr. Ziernicki), "Dr. Durisek [ ] did not perform a computer simulation that would allow him to assign time stamps to any specific moment of vehicle interaction. He cannot say, in terms of milliseconds, when the Charger struck the A-pillar and roof . . . because he did not utilize the computer software necessary to perform that analysis."[20] She points to the following exchange in Dr. Durisek's deposition:

> Q: In the original work that you did or any of the work that you did in this case, you can't assign time stamps to the progression of the vehicle interaction; is that correct?
>
> A: Oh, that's not correct. [ ] I could do those calculations and tell you what that is.
>
> Q: You didn't though, right?
>
> A: I did some. [ ] I reported in my first report what time the maximum engagement was, and I [ ] showed different vehicle positions throughout the sequence. I didn't assign time to those later positions.

Thus, it appears from Ms. Mills' motion that she seeks to only prevent Dr. Durisek from testifying at trial about previously-undisclosed application of a "time sequence to specific vehicle engagement events in this crash."

In response, FCA argues that "every point of vehicle engagement in Dr. Durisek's reconstruction has a time stamp associated with it, [ ] supported by, among other things, the physical evidence at the scene, damage on the vehicles, the Charger's undisputed [crash data recorder] data, and reliable mathematical calculations." Based on the Court's review, few of

[20] In her argument, Ms. Mills appears to conceive of this evidence as taking the form of Dr. Durisek "say[ing], for example, how much time elapsed between the Charger's first contact with the Jeep's fender until its rotation into the A-pillar" or "how much time elapsed between that contact and the deformation of the roof structure."

these "time stamps" appear in Dr. Durisek's report. Instead, FCA's response mentions that Dr. Durisek's calculations "are clearly set forth in Dr. Durisek's file" and it identifies certain ones.

In reply, Ms. Mills clarifies that the parties generally agree that the Dodge Charger and Jeep Liberty experienced three damage-causing events during the collision: the initial contact at the front fender, the rotational interaction at and around the A- and B-pillars, and the final parallel strike [ ] between the back panels of the two vehicles." Ms. Mills argues that Dr. Durisek should be precluded from testifying as to precisely when each of those impacts occurred. She concedes that the time calculations identified in FCA's response are admissible as components of Dr. Duirsek's acceptable "maximum engagement" calculation, but it is not clear what other "time stamp" data Dr. Durisek disclosed or intends to testify about.

As discussed above, the situation with Dr. Durisek is one in which thorough, good-faith conferral on both sides could have avoided, or at least focused, the need for a Rule 702 challenge. Ms. Mills seeks to exclude an opinion that Dr. Durisek does not appear to have rendered and, perhaps, an opinion that FCA may not ever offer. Neither side has precisely articulated what "time stamp" opinions Dr. Durisek is going to offer, much less addressed the extent to which such opinions were properly disclosed under Fed. R. Civ. P. 26(a)(2). Certainly, the record is not one that permits the Court to make an informed evaluation of any such opinions.

Left without any focused dispute, the Court is in no position to conduct a meaningful Rule 702 analysis of the challenged opinions (if there indeed are any such opinions), and thus, the Court falls back on general principles. Rule 26(a)(2)(B)(i) requires each expert witness to disclose "a complete statement of all opinions the witness will express and the basis and reasons for them." To the extent Dr. Durisek disclosed his opinions regarding specific event timings in his report, he may testify about those timings at trial; if FCA cannot point to the location in Dr.

Durisek's report where such timings are disclosed, that testimony will be excluded, not under Rule 702, but under Rule 26.

Ms. Mills' challenge to Dr. Durisek touches on two other opinions that the Court discusses only briefly. Ms. Mills takes issue with the conclusions Dr. Durisek draws from his examination of the physical evidence, but Ms. Mills does not assert that there is any generally-applied methodology among accident reconstructionists that governs how such physical assessments are conducted, much less that the methodology that Dr. Durisek followed is not an acceptable one. Rather, it appears that Ms. Mills simply believes that Dr. Ziernicki's competing method for drawing conclusions from the physical evidence is more complete and persuasive. This argument presents an issue of the weight to be afforded each opinion, which is a matter exclusively for the finder of fact. Similarly, Ms. Mills criticizes Dr. Durisek for not using software-based crash simulations like Dr. Ziernicki. But Ms. Mills has not produced any evidence that suggests that the use of such simulations is a necessary component of every generally-accepted accident reconstruction methodology. Thus, once again, the question of whether Dr. Durisek's opinions, uninformed by software simulations, are persuasive is one to be resolved by the factfinder.

Accordingly, the Court grants the motion (pursuant to Rule 26, not Rule 702) to the limited extent that FCA asks Dr. Durisek to opine at trial on accident timings that are not otherwise disclosed in Dr. Durisek's report, and those undisclosed opinions are excluded. The Court denies Ms. Mills' motion in all other respects.

4. Dr. Ziejewski

Ms. Mills has endorsed Dr. Marius Ziejewski as a biomechanical expert to testify about the forces that acted on Ms. Mills at the time of the accident. Dr. Ziejewski concluded that Ms.

Mills' head injuries were the result of her making contact with rapidly deforming components of the Jeep Liberty's roof system (*e.g.* the "A pillar," the roof rail running front to back on the driver's side, or the vehicle's roof itself), although he was not able to conclude which particular component Ms. Mills struck. Initially, Dr. Ziejewski concluded that, "with [the] level of deformation" in the roof system that resulted from the impact, the existence of a hypothetical side-curtain airbag "would have been irrelevant." But later, upon reviewing opinions from another expert about the timing of a hypothetical side-curtain airbag, Dr. Ziejewski changed his mind. The pertinent portion of Dr. Ziejewski's supplemental report reads:

> Dr. Ziernicki establishes that the side airbag would have timely fired and deployed prior to deformation. This means that as the structure of the Jeep Liberty deformed and moved inward toward Ms. Mills, the airbag would already be in place. The structure was not maintained, but the airbag would have fired with supporting structure *before* the deformation. This means that the airbag would have provided a cushioning effect as the vehicle structure moved towards Ms. Mills. The cushioning provided by the airbag would have reduced injuries.

At his subsequent deposition, Dr. Ziejewski testified that:

> . . . So the airbag starts above her head. So she's there, and now suddenly the roof start[s] collapsing and moving over, but it will be dragging her, and the airbag will be almost like overlapping or going over her head . . . I am not saying that with the airbag there there would actually be strike [sic] between the roof rail and her head. I'm saying that this would not happen because whatever the . . . relation between the roof rail and the head is, there's the airbag there. The airbag would be over her head.
>
> . . .
>
> There will be an airbag over her head. To what extent [it] would move her to the side, it really doesn't matter to me. The most important thing is that whatever airbag you have initially several inches above her head is moving inward. . . Look at what you have between her head and the roof rail. You have airbag. . . . And considering the stiffness of the airbag and so on, there's the chance the body will be displaced laterally.

FCA moves to exclude two of Dr. Ziejewski's opinions: (i) that the hypothetical presence of a side-curtain airbag would have provided "cushioning" that would have lessened the impact forces of Ms. Mills making contact with the deforming components of the roof system; and (ii) that a hypothetical side-curtain airbag would have produced a "dragging" effect that would have moved Ms. Mills laterally. FCA argues that Dr. Ziejewski did not derive these opinions based on any valid methodology.

Dr. Ziejewski testified that his conclusions regarding the operation of a hypothetical side-curtain airbag were derived from a "surrogate study," which is performed to "gain a general understanding of the vehicle's interior geometric relationship to the occupant's body." The surrogate study entailed obtaining a similar Jeep Liberty, placing a person of similar height and proportions to Ms. Mills in the driver's seat, and making certain recordings of distances and angles between the subject and various components of the vehicle. Dr. Ziejewski later made adjustments to those measurements through a computer program in order to more closely approximate Ms. Mills' actual body measurements. Nothing in either Dr. Ziejewski's initial or supplemental reports describes any process in which he deployed a side-curtain airbag (as part of the surrogate study or otherwise), made any measurements or calculations as to how the deployment of the side-curtain airbag would have affected Ms. Mills' movement during the accident, or correlated the deployment of a side-curtain airbag within the context of the deformation of the roof system. He acknowledged that he did not perform any crash tests entailing a side-curtain airbag for this case.

It appears that Dr. Ziejewski formulated his opinions regarding the effect of a side-curtain airbag simply through the process of intuition (or perhaps speculation). During his deposition, the following exchange occurred:

> Q: So have you done that sort of detailed analysis to demonstrate what would happen between the occupant and an airbag in this crash?
>
> A: No, there's no need to do that. There's no need to do that. . . . There's no need for this kind of analysis because any results, it doesn't matter how accurate they are, they would not contribute to answer the question that we have. So in my opinion, there's no need – there's no need and almost impossible to do that since the nature of the deformation of the vehicle was so unusual.

Later, Dr. Ziejewski explained:

> There's no need [to conduct a surrogate study using a side-curtain airbag] because I see what the surrogate is with respect to opening on the window and I know the geometry of the airbag and what's the purpose of the side airbag. The airbag is directly to the side of her head. And it's attached to the roof rail. Those two factors are important to me; and I don't think that I have to prove anything more, just knowing that. And everybody should agree.

The Court reads Dr. Ziejewski's explanation of his methods regarding the cushioning effect of a hypothetical side-curtain airbag to state that he is not purporting to offer a scientifically-derived opinion at all. Rather, he is offering his belief that because a side-curtain airbag would be mounted in the roof rail, it would have deployed next to Ms. Mills' head during the accident ("those two factors are important to me ... I don't have to [have] anything more"). From those simple facts, Dr. Ziejewski appears to simply assume that the deployed airbag would therefore offer some degree of cushioning during the accident – an assumption that he believes is so consistent with common experience that "everybody should agree." Indeed, when given the opportunity to explain how he validated his hypothesis, he essentially says that he did not need to do so.

To the extent that his opinion is that a side-curtain airbag ordinarily would protect the driver in a side-impact collision, it is not an opinion based upon scientific analysis as required under Rule 702. Dr. Ziejewski did not purport to analyze the coverage area of the side-curtain

airbag relative to the direction that Ms. Mills traveled during the impact or the direction in which the roof system was deforming during the crash, analyses that would be essential to formulate an opinion that the side-curtain airbag would have indeed deployed at a location that would have cushioned the impact to Ms. Mills. Without such analysis, Dr. Ziejewski's opinion about the cushioning effect of a hypothetical side-curtain airbag is simply a non-scientific opinion that would not be of assistance to the factfinder. Thus, the Court excludes that opinion under Rule 702.

Similarly, the Court excludes Dr. Ziejewski's opinion regarding the "dragging" effect that a hypothetical side-curtain airbag would have had in causing Ms. Mills' body to move laterally during the accident. Once again, Dr. Ziejewski did not conduct any actual tests to determine the nature or effect of any such lateral movement. Rather, it appears that he simply assumed that, by the very nature of the inflation of a side-curtain airbag to one side of her, there was a "chance" that Ms. Mills would be laterally displaced to the opposite side by some unknown amount:

> There will be airbag over her head. To what extent it would move her to the side, it really doesn't matter to me. The most important thing is that whatever airbag you have initially several inches above her head is moving inward. . . And considering the stiffness of the airbag and so on, there's the chance the body will be displaced laterally. To what extent, I don't know. It's one of the possibilities that cannot be ignored.

Once again, the Court understands Dr. Ziejewski's opinion on this point to be little more than the simple, non-scientific observation that "inflation of a side-curtain airbag will push whatever is next to it to the side – maybe." Absent a methodology for testing that proposition, Dr. Ziwjewski offers nothing more than his assumption on this point. In such circumstances, Dr. Ziejewski's opinion on the possibility of a "dragging" or lateral movement of Ms. Mills caused by a

hypothetical side-curtain airbag would not be helpful to the factfinder and is thus excluded under Rule 702.

5. Dr. Gwin

FCA has endorsed Dr. Gwin to testify regarding the forces exerted on Ms. Mills during the collision. Most significantly, Dr. Gwin opined that pre-impact braking by Ms. Mills caused her body to travel forward in the vehicle compartment, moving her outside the coverage area of any hypothetical side-curtain airbag. Ms. Mills moves to exclude all of Dr. Gwin's opinions on the grounds that Dr. Gwin lacks the expertise to offer them. Alternatively, Ms. Mills moves to exclude certain opinions from Dr. Gwin, although Ms. Mills' motion is somewhat unclear in identifying such.

a. Qualifications

Dr. Gwin's report explains that her "education includes degrees in both engineering and medicine." She obtained a bachelor's degree in electrical engineering and spent six years at Ford Motor Company as a test engineer, although it appears that her tasks in that regard involved structural vehicle and fuel system testing, not crash safety testing. Dr. Gwin later switched her professional efforts to the medical field, first becoming a registered nurse and later obtaining her medical degree. For roughly a decade, she worked as an emergency room physician. In or about 2012, she joined her current employer, Biodynamic Research Corporation ("BRC"), where she has worked as a consultant on biomechanical issues associated with injuries sustained in auto accidents. Dr. Gwin's specific training in biomechanical consulting consists of a four-week training in accident reconstruction with the Accreditation Commission for Traffic Accident Reconstruction, which included some instruction on biomechanics, and education at conferences that she obtained after joining BRC. Dr. Gwin has lectured on biomechanics at the University of

Texas at San Antonio and has authored several research articles on subjects in the field of biomechanics. The Court finds that these credentials are sufficiently correlated to the opinions Dr. Gwin intends to offer at trial. Ms. Mills may, of course, argue to the jury that it should give less weight to her opinions because of her credentials, and the jury will evaluate Dr. Gwin's testimony accordingly.

Dr. Gwin's ultimate opinion appears to be that a hypothetical side-curtain airbag would not have cushioned Ms. Mills from the forces occurring during the collision. Ms. Mills appears to challenge the admissibility of underlying opinions that led Dr. Gwin to that conclusion, but Ms. Mills does not identify the problematic underlying opinions. As best the Court can determine, Ms. Mills is concerned with certain facts or assumptions made by Dr. Gwin: (i) that "as Ms. Mills braked and steered toward the right just prior to impact, [her body] would continue to . . . move forward and to the left," to a point where she "would be prepositioned against the inner driver's door shell, and leaning forward of her usual driving posture"; (ii) that a surrogate study conducted by Dr. Gwin "provided further support for my opinion that neither a deployed frontal airbag nor a deployed curtain airbag would likely have changed Ms. Mills' [ ] outcome"; (iii) a rebuttal opinion to Dr. Ziejewski's conclusion that Ms. Mills experienced rotational acceleration of 12,000 radians/second^2 and that that figure would have fallen to 3,000 radians if a side-curtain airbag had been present, whereas Dr. Gwin opines that "she certainly experienced greater than 12,000 radians . . ." and could have experienced as much as 66,000 radians; and (iv) an opinion that the speeds involved in the accident were "equivalent to drop heights" – that is, the sort of forces that would result if the vehicle were dropped from a specific height onto the ground – "of 62-83 feet."

b. Opinions regarding positioning

Turning first to the opinion that Ms. Mills' body was positioned "forward of her usual driving position" during the impact, Ms. Mills does not appear to dispute Dr. Gwin's conclusion that the force of braking and steering to the right immediately prior to the impact would have caused Ms. Mills' body to move forward and left in the vehicle, consistent with Newton's First Law of Motion. But Ms. Mills argues that Dr. Gwin's methodology was flawed because it failed to consider the countervailing force that would have resulted simultaneously as Ms. Mills used her own muscles to brace herself against those forces pushing her forward and to the left, such that she would have remained in or close to her normal driving position. Dr. Gwin testified that she did consider the possibility that Ms. Mills might have braced herself against the forward acceleration, but concluded that it was unlikely that she did so. Dr. Gwin testified that she believed that "what's most likely is that she was leaning forward, looking at this car coming at her and braking and turning toward the right to attempt to avoid the collision . . . [T]hat's what she's focused on. . . [A]nd so, no, I don't think she would be trying to move away." The disagreement between Ms. Mills and Dr. Gwin on this point presents nothing more than a dispute over the persuasiveness of the assumptions that underlie Dr. Gwin's opinion, a dispute that goes to the weight, not the admissibility, of that opinion. Both Dr. Gwin and Dr. Ziejewski, when faced with the inability to know a crucial component of their methodologies, have resorted to assumptions about how Ms. Mills most likely behaved in these circumstances. It will be up to the finder of fact to decide which assumption is more reasonable, and thus, which opinion is entitled to more weight.

Ms. Mills also argues that Dr. Gwin's failed to apply a reliable methodology regarding Ms. Mills' positioning at the moment of impact. Ms. Mills argues that Dr. Gwin considered only

"two static moments in this collision," namely, "Ms. Mills' position before the [ ] impact," and "Ms. Mills position after the crash," the latter based on a photograph taken by first responders. Ms. Mills argues that Dr. Gwin offers no methodology for formulating an opinion regarding "Ms. Mills' position *during* the crash." The Court disagrees. Dr. Gwin's stated methodology is presented as an attempt to determine Ms. Mills' location during the crash by attempting to ascertain where Ms. Mills' body was positioned at the moment of the crash (more specifically, at the moment that a hypothetical side-curtain airbag would have deployed). Ms. Mills has not presented evidence that suggests that experts in the field of biomechanics would not have used Dr. Gwin's methodology to make such a determination. Indeed, as noted above, it appears that Dr. Ziejewski similarly attempted to determine where Ms. Mills was in the vehicle during the accident by attempting to ascertain where she was located in the vehicle immediately before impact. Thus, the Court rejects Ms. Mills' challenges to Dr. Gwin's opinion that Ms. Mills "would be prepositioned against the inner driver's door shell, and leaning forward of her usual driving posture" at the moment of impact. It will be up to the factfinder to decide how much weight to give that opinion.

c. Opinions relating to surrogate study

Dr. Gwin performed a surrogate study in two phases, the results of which are depicted in her May 11, 2020 report. First, she selected a human surrogate who is "matched to Ms. Mills for standing stature and weight" and placed that surrogate in a "closely matched exemplar vehicle." She "positioned [the surrogate] in the driver's seat and [had the surrogate] don the lap/shoulder belt" in an "upright driving posture." Then, "with a locked seat belt assembly, [the surrogate] was asked to angle her torso forward and leftward to illustrate [Dr. Gwin's opinion as to] Ms.

Mills' precrash motion." Dr. Gwin photographed both positions, apparently for purposes of visually depicting Dr. Gwin's opinions regarding Ms. Mills' positioning at the time of impact.

Next, Dr. Gwin altered the interior of the exemplar vehicle in certain respects to depict the positioning of certain elements during or after the deformation of the vehicle due to the collision. Specifically, "an exemplar steering wheel was placed in the post-crash position of the subject steering wheel" (depicted in photos as being close to the center console where a manual gearshift lever might typically be found), and "an exemplar A-pillar and left roof rail were positioned in their post-crash locations." For the second phase of the surrogate study, Dr. Gwin asked the surrogate to "position herself inboard of the deformed roof rail" and took additional photos of the surrogate in that position, juxtaposing them with photos taken of Ms. Mills by first responders in the immediate aftermath of the accident. Dr. Gwin's report does not further elaborate on the objectives, methods, or results of the surrogate study except to state that "this work provided further support for my opinion that" a hypothetical side-curtain airbag would not have provided additional protection to Ms. Mills in the collision.[21]

To the extent that the surrogate study is offered (and opinions are derived from it) to establish what actually happened during the accident, Dr. Gwin has described her methodology in conducting that study, and Ms. Mills has not adduced evidence from another witness in the

[21] In conjunction with the instant Rule 702 motion, Dr. Gwin tendered an affidavit that explained the surrogate study in greater detail. She "installed [a side-curtain airbag] to help analyze how Ms. Mills might have interacted with such an airbag." She then photographed the surrogate, displaced roof rail, and inflated side-curtain airbag, believing that this depiction "shows that [a side-curtain airbag] would not have changed the injury-causing interaction between Ms. Mills' head and the Jeep Liberty's roof rail."

It is not clear whether FCA intends Dr. Gwin's affidavit to operate as a supplemental expert report under Fed. R. Civ. P. 26(a)(2)(E), and if so, whether such a supplement would be considered timely. For purposes of this analysis, the Court will restrict itself to the description of the surrogate study found in Dr. Gwin's expert report.

field to establish that a surrogate study of this type is not a reliable methodology. In that sense, then, Dr. Gwin's opinions survive a Rule 702 challenge by Ms. Mills.[22]

d. Opinions regarding rotational acceleration

Dr. Gwin's second opinion appears to be that Ms. Mills' head experienced more than 12,000 radians/sec^2 of rotational acceleration force at the time of the accident. This opinion is offered in rebuttal to Dr. Ziejewski's proffer of that 12,000 radians figure. Dr. Gwin states that "there was no way to know the exact acceleration Ms. Mills experienced," but she opines that the acceleration had to significantly exceed 12,000 radians because: (i) Ms. Mills was diagnosed with diffuse axonal injury ("DAI"), a form of brain injury that results from excessive rotational accelerations, (ii) that those injuries were not mild, and (iii) that research suggests that 12,000 radians is the "lower limit for mild" DAI. Dr. Gwin's report goes on to state that, "for example, had Ms. Mills been subjected to 66,000 radians/sec^2 in the subject crash, reducing that value by dividing by four [to account for the effects of a hypothetical side-curtain airbag] would still result in severe DAI."

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[22] By all appearances, the surrogate study simply entailed placing the surrogate and other items in pre-determined positions and taking photographs. It was not a scientific test or study at all. But in reviewing the record, the Court believes that the study itself is not being proffered as a scientific test, nor that its results are being offered as proof of anything. Rather, it appears to the Court that the surrogate study conducted by Dr. Gwin was simply an attempt to illustrate conclusions or opinions that Dr. Gwin formulated through other tests –*e.g.* her conclusion that Ms. Mills was moving forward, rather than seated normally, at the moment of impact, or that the portion of the roof rail that struck Ms. Mills was forward of where any hypothetical side-curtain airbag would have deployed. The "surrogate study" appears not to have been a "study" at all, only the creation of demonstrative evidence to help explain Dr. Gwin's other opinions.

In that respect, it appears to the Court that neither the surrogate study nor any "opinions" derived from it are evidence that FCA is offering pursuant to Rule 702. Whether those photographs and any testimony by Dr. Gwin about their creation should be admitted at trial as demonstrative evidence is therefore a question that must be evaluated under different evidentiary rules, such as Fed. R. Evid. 403, not Rule 702. The admissibility of such evidence will therefore be determined at the time of trial and within the context of how FCA intends to present it.

It is not clear whether Ms. Mills challenges Dr. Gwin's opinion that "she certainly experienced greater than 12,000 radians" or whether Ms. Mills challenges the opinion that the correct figure could have been as high as 66,000 radians, or indeed, whether FCA intends to present one or both opinions at trial. Based on this Court's reading of Dr. Gwin's reports and deposition, it appears to the Court that Dr. Gwin proffered the 66,000 radians figure simply as an example of how high the rotational forces could theoretically have been, not a scientifically-derived estimate of what they actually were. At her deposition, Dr. Gwin made clear that "I don't have a number" of what the rotational acceleration forces probably were. She went on to say that "it certainly could've been 66,000, but no, I don't have a number. I don't think anybody can say exactly the number." Thus, the Court understands that FCA will not offer an opinion at trial that the rotational forces were as high as 66,000 radians. Rather, the Court understands that FCA will proffer Dr. Gwin to testify simply that those forces exceeded, by some unknown amount, the 12,000 radians figure estimated by Dr. Ziejewski. Dr. Gwin has presented her methodology for that conclusion – that the degree of DAI suffered by Ms. Mills suggests rotational forces significantly in excess of the "mild injury" threshold associated with forces of 12,000 radians – and Ms. Mills' motion does not argue such a methodology is not generally accepted by biomechanics experts. Accordingly, the Court finds that Dr. Gwin may offer the opinion that the forces at issue here exceeded the 12,000 radians estimated by Dr. Ziejewski, although she cannot offer any opinion as to by how much.

e. Opinions relating to a "drop test"

Finally, the Court agrees with Ms. Mills that an opinion by Dr. Gwin about the height that a Jeep Liberty would have to be dropped from in order to replicate the forces imparted by the accident at issue here should be excluded. Putting aside the question of whether Dr. Gwin's

methodology for comparing side-impact collision forces with those imparted by dropping a vehicle onto the ground from a height is reliable or not, the Court finds that such a comparison is not helpful to the jury in understanding the side-impact collision at issue here. Thus, the Court excludes any opinion from Dr. Gwin regarding the equivalency of any the actual crash forces with any type of drop impact.

6. **Mr. Hannemann**

The next set of experts being challenged are those that opine regarding the structural characteristics of the design of the 2007 Jeep Liberty. Specifically, the parties dispute whether FCA's decision to omit a metal cross-car beam at the front of the passenger compartment and replace it with a molded plastic instrument panel operated to compromise the structural integrity of the vehicle during a crash.

Ms. Mills has proffered Neil Hannemann, who performed a "finite element analysis" in order to "demonstrate the importance of an instrument panel cross-car beam." Mr. Hannemann's method involved creating a (software-simulated) test vehicle – essentially a model of a passenger compartment and some (but not all) supporting structures -- that he believed represented a similar design to the 2007 Jeep Liberty. Mr. Hannemann first tested a configuration of the vehicle that lacked a metal stiffening beam across the front of the passenger compartment, "appl[ying] a load that will determine force as the structure is deformed." More simply, Mr. Hannemann simulated the steady application of a crushing force along one side of the compartment, measuring when interior components of the vehicles structure began to deform. Mr. Hannemann then revised the simulated vehicle by including a metal cross-car beam in the design and repeated the test, again measuring the forces that applied as the structure was deformed. Based on this test, Mr. Hannemann concluded that much greater forces would be

necessary to deform a vehicle designed with a cross-car beam compared to a vehicle without one and, alternatively, that a vehicle with cross-car bracing would deform less than a vehicle designed without such bracing.

FCA moves to exclude Mr. Hannemann's testimony about his analysis arguing that: (i) he modeled the test vehicle based on a 2011 Honda Accord, rather than the 2007 Jeep Liberty; (ii) his model removed nearly all other structural components from the vehicle, creating an unrealistic and unreliable test bed; (iii) he never tested the comparable structural function of the plastic instrument panel that FCA substituted for the cross-car beam; and (iv) his methodology did not account for any of the unique forces imparted during the collision in this case.

The Court need not delve into the various arguments that FCA has raised because it finds that Mr. Hannemann's analysis, even if otherwise scientifically sound, would not be helpful to the factfinder and thus must be excluded. Reduced to its simplest expression, Mr. Hannemann's opinion is that a passenger compartment design containing a cross-car beam is stronger and less susceptible to deformation in an accident that a design that does not contain such a beam. That proposition alone is not remarkable, and likely would be apparent to any beginning physics student. Although Mr. Hannemann's methodology quantified the difference in stiffness or deformation potential between two hypothetical versions of the Jeep Liberty (one with and one without a cross-car beam), that information is useless to the factfinder without a corresponding comparison to the actual version of the Jeep Liberty involved in this case. Mr. Hannemann's approach might have had some value if he extended his finite element analysis to measure the stiffness and deformation of a vehicle containing the instrument panel that FCA substituted for a cross-car beam, but he did not do so. Ms. Mills concedes that "a direct analysis of the engineering properties of the Jeep Liberty plastic [instrument panel] could have been done" but

was not because Ms. Mills was unable to secure the "data necessary to conduct that analysis" through discovery.[23] Instead, she argues that "a direct comparison" of a vehicle with a cross-car beam and a vehicle with the Jeep Liberty's instrument panel would be "irrelevant," apparently because of presumed weaknesses in the materials or design of the instrument panel. But notably, she points to no evidence in the record supporting that assertion.[24] Certainly, Ms. Mills has not pointed the Court to any place in which Mr. Hannemann stated that conducting a finite element analysis of the instrument panel's stiffening effect would be irrelevant or meaningless. It simply appears that, for whatever reasons, Mr. Hannemann chose not to conduct such an analysis.

Likewise, Mr. Hannemann's approach might be helpful to the factfinder if his finite element analysis of the hypothetical version of the passenger compartment with a cross-car beam was subjected to the same vectors of forces produced during the crash. In that circumstance, one could compare the real-world deformation of the plastic instrument panel-braced passenger compartment to Mr. Hannemann's simulation of a similar collision involving a passenger compartment with a metal cross-car beam. But once again, Mr. Hannemann's methodology does not allow such comparisons. Mr. Hannemann was specific that his finite element analysis of the simulated passenger compartment was not intended and did not attempt to replicate the actual

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[23] Ms. Mills' response notes that she was simultaneously filing a motion seeking sanctions against FCA for spoliation "based on the non-production of the instrument panel engineering drawings." Ms. Mills filed that motion **(#155)**, and it was subsequently denied by the Magistrate Judge **(#178)**. Ms. Mills did not seek further review of the Magistrate Judge's ruling.

[24] Ms. Mills' brief reproduces a diagram that was included in one of Mr. Hannemann's reports. The diagram, captioned "Figure 10: Jeep Liberty IP main structural parts," is presented in Mr. Hannemann's report without any annotations, in the context of noting that "the main structured parts of the Jeep Liberty are plastic." As reproduced in Ms. Mills' briefing, in conjunction with an argument that "the structural mechanism of the plastic [instrument panel] in the Jeep Liberty was not adequately attached at the hinge pillars," the diagram is annotated with text asserting the fact that "the 'section' does not connect to the [vehicle structural components]." Ms. Mills briefing thus misrepresents Mr. Hannemann's report and offers substantive factual arguments for which no evidentiary support is provided.

forces of the crash. Rather, Mr. Hannemann's analysis applied steady forces laterally across the entire side of the passenger compartment, not the abrupt and specific forces imparted by the collision itself.

Because the simple opinion that a vehicle with a cross-car beam is less susceptible to deformation than one is not helpful to the finder of fact, the Court grants FCA's motion and excludes Mr. Hannemann's opinions regarding his finite element analysis concerning the presence or absence of such a beam in the Jeep Liberty.

7. **Dr. Vogler**

FCA has tendered Dr. Vogler to give various opinions about the crashworthiness of the 2007 Jeep Liberty's design. Two of the grounds for Ms. Mills' objections to Dr. Vogler's opinions have now been resolved, one through an agreement between the parties to exclude evidence of speed calculations by the Aurora Police Department, and the other through the Court's exclusion of Mr. Hannemann's finite element analysis opinions, which renders moot Ms. Mills' challenge to Dr. Vogler's rebuttal opinions regarding Mr. Hannemann. That leaves a single challenge by Ms. Mills for resolution.

Dr. Vogler opines that the 2007 Jeep Liberty was crashworthy in its general design, and that the injuries sustained by Ms. Mills were the result of high levels of "crash energy well above levels associated with [Federal Motor Vehicle Safety Standards] testing of vehicle design, [which were] directly applied to a significantly smaller contact area, and [which were] focused on regions and at orientations unique to the complex vehicle-to-vehicle engagement of the subject crash."

Ms. Mills argues that this opinion is based on inaccurate facts. Dr. Vogler did not perform an accident reconstruction of her own and instead relied on the reconstruction performed

by Dr. Durisek. According to Ms. Mills, Dr. Durisek's initial accident reconstruction posited that there was a single contact between the Dodge Charger and the Jeep Liberty, such that all of the crash force was discharged into the A-pillar area at one time. Ms. Mills contends that, in response to Dr. Ziernicki's opinions, Dr. Durisek later attempted to clarify (or arguably revise) his opinions to agree with Dr. Ziernicki that the initial impact imparted only a portion of the crash energy and that the deformation of the A-pillar occurred later in the crash sequence as the vehicles rotated into further contact with each other. Ms. Mills argues that although Dr. Durisek changed his version of the accident, Dr. Vogler did not change her opinions, continuing to rely on Dr. Durisek's original, abandoned conception of a single-impact accident. Thus, because her opinions are based on "a crash scenario that did not occur," Ms. Mills argues that Dr. Vogler's opinions are not reliable and thus inadmissible.

It is not unusual for a witness like Dr. Vogler to rely upon opinions rendered by other witnesses. In *Crabbe*, this Court explained that "an expert witness may often 'assume' a fact for purposes of applying the methodology," relying on facts supplied from other sources or "someone else's work or opinion." In such circumstances, the assuming witness' opinion "becomes conditional," subject to admission of the assumed information through a different witness, and the factfinder may give weight to the assuming witness' opinion based, in part, on whether the facts that witness has assumed have been proven convincingly as well. 556 F.Supp.2d at 1224. But wholesale rejection of an opinion prior to trial is warranted only when it is apparent that the assumption is clearly unfounded. If there is an arguable basis to believe that the witness' assumption can be harmonized with the facts of the case, the better course of action is to allow the factfinder to test the assumption and afford the appropriate weight to the opinions derived from that assumption.

Here, the Court cannot say that Dr. Durisek's revised opinion differs so starkly from the original articulation that Dr. Vogler accepted and upon which she based her own opinions to conclude that, as a matter of law, Dr. Vogler's opinions must be excluded. As Ms. Mills acknowledges, Dr. Durisek did not completely abandon his original version of the accident. Rather, his supplemental report "claim[ed] he had been misunderstood or misrepresented," and he asserted that his original report was describing an "engagement" of the vehicles that continued beyond an "initial contact." In that sense, Dr. Durisek suggests that his supplemental report is a clarification of his original opinion, not an abandonment of it. If the factfinder concludes that Dr. Durisek's initial and supplemental opinions are not materially different from one another, the factfinder might also conclude that Dr. Vogler properly interpreted and relied on Dr. Durisek's initial report when forming her own opinions. Ultimately, the correctness of the assumptions that Dr. Vogler built her opinions on are a matter of weight, not admissibility. Thus, the Court denies Ms. Mills' motion to exclude Dr. Vogler's opinions relating to crashworthiness.

8. George Pearson

Finally, Ms. Mills seeks to strike certain opinions by Mr. Pearson, designated by FCA to give testimony about aspects of government crash testing. Mr. Pearson's report explains that:

> the correct characterization of this crash [is] unclassified by any [motor vehicle safety standard]. Consideration of this type of crash, where the point of impact is above the belt line of the vehicle, has been referred to as an 'underride' crash. This is similar to the type of crash where a passenger car strikes the side of a semi-trailer whose main structure is above the belt line protections of the vehicle. Typically, if enough speed is present at the time of impact, the roof of the vehicle may be sheared completely off, along with significant injury to the occupants. There are no [motor vehicle safety standards] defining crashworthiness requirements for a crash of this type.

Ms. Mills argues that Mr. Pearson's conclusion that this is an "above-the-beltline" collision is contradicted by all of the experts, for both sides, who have reconstructed the crash, all of whom agree that the initial point of impact was at the Jeep Liberty's front fender. Thus, she argues that Mr. Pearson, who did not purport to perform his own accident reconstruction, has based his methodology on inaccurate facts.

To say that Mr. Pearson did not perform his own accident reconstruction is to misstate the matter somewhat. Mr. Pearson's report explains where Mr. Pearson believes the point of impact was and his process for reaching that conclusion:

> this crash loading was clearly not applied to the side of the vehicle. Post-crash photos of the Jeep Liberty show that the point of impact was above the belt line of the vehicle with the front bumper of the Charger striking numerous components of the Jeep structure above the beltline, including the A pillar . . . The photo that Mr. Hannemann presents as Figure 11 shows a contact patch of the right front wheel of the Charger somewhere in the area of the upper driver's side door hinge. That means that the bumper of the Charger, being somewhat above and forward of the tire, had already penetrated the Liberty's passenger compartment, destroying the A-pillar and windshield in the process. . . [P]hotos show that the rocker panel of the Jeep Liberty is barely bent, and that in an upward direction as if it had been pulled upward by the inward deflection of the upper portion of the hinge pillar. This further supports my opinion that this was not a side impact crash.

Mr. Pearson also quotes Ms. Mills' own expert, Stephen Syson, as describing this collision as "an oblique under-ride frontal collision."

Mr. Pearson, whose experience lies in investigating safety defects in motor vehicles, may not have the same level of qualifications in accident reconstruction as other witnesses purporting to opine on the subject, and his forensic analysis of the collision – based largely on his review of photographs – may be more cursory than the reconstructions performed by the other witnesses. But Ms. Mills has not produced any witness who asserts that Mr. Pearson's methodology – while

perhaps rudimentary – is not at least minimally reliable in identifying an approximate point of impact and describing the recognized safety standards (or lack thereof) that correspond to those points of impact. Indeed, at least one other witness, Mr. Syson, appears to agree with Mr. Pearson that this collision could be understood as an "underride" impact. So at this juncture, the discrepancies between his opinion about the point of impact and that of other witnesses go to weight that the factfinder will evaluate. Accordingly, Ms. Mills' motion to strike Mr. Pearson's opinions is denied.

C. Motion to Restrict Access

Finally, the Court turns to FCA's and TRW's joint motion to restrict public access to Docket # 140-1 and #140-2 as well as #142-1 and #142-2. Docket #140-1 and #142-1 are FCA's quote packages, dated October 20, 1997, requesting the various items FCA sought to purchase from suppliers as part of the safety system of the Jeep Liberty models at issue here. The Court notes that these documents already redact the "target price" column for the various components. Docket #140-1 and #142-1 are TRW's quotation response, dated October 27, 1997, reciting in detail the various products that TRW proposed to supply, along with time frames, engineering data, and other information. Once again, the parties have previously redacted the price information from these documents. FCA and TRW argue that these documents "contain sensitive and confidential business information . . . containing specific product requirements, timing, capabilities, specifications, and plans," among other things. Both Defendants argue that this information is "not generally known in the automotive component-manufacturing business and it cannot be readily ascertained or derived from publicly-available information."

The Court need not review the familiar standards that govern motions to restrict access under D.C. Colo. L. Civ. R. 7.2, except to generally note the strong public interest in having

access to those documents that have been presented to and reviewed by the Court in the process of adjudicating disputes. D.C. Colo. L. Civ. R. 7.2(c)(3) contemplates that the public interest can yield if "a clearly defined and serious injury [ ] would result if access is not restricted." The burden of establishing such an injury is on the party seeking restriction.

The Court finds that FCA and TRW have not carried that burden here. The Court is prepared to accept the proposition that the quote package and response contained sensitive and proprietary business information when they were published in 1997, nearly 25 years ago. At that time, with the Jeep Liberty still in its design phase, the Court would agree with the Defendants that the particular design and components of the vehicle's safety system might not be known to competitors and could not readily be ascertained by them. But there is no showing that the same concerns exist today. To adopt the Defendants' position would require the Court to conclude that: (i) modern vehicle safety systems utilize the same specific components that were in use 25 years ago; (ii) competitors curious about the design of the Defendants' safety systems could not obtain and disassemble a 2007 Jeep Liberty to identify each and every part used in its safety systems, and indeed, to disassemble, test, and reverse engineer each such part if necessary; and (iii) competitors could not consult publicly-reported vehicle sales data to approximate the number of components supplied by TRW and purchased by FCA over the lifespan of that particular iteration of the Jeep Liberty model, among others. The Defendants' contentions that documents a quarter-century old continue to have confidential and proprietary value in a highly-competitive and rapidly-evolving technological industry appear to be simply conclusory and formulaic, not a specific identification of a particular injury as required by Local Rule 7.2(c)(3). Accordingly, the Court denies the motion to restrict access.

CONCLUSION

For the foregoing reasons, TRW's Motion for Summary Judgment **(# 124)** is **GRANTED**, and judgment will enter in favor of TRW on Ms. Mills defective design, failure to warn, and negligence claims in this case at the conclusion of the remaining proceedings.[25] FCA's Motion for Summary Judgment **(# 130)** is **GRANTED IN PART**, insofar as the Court dismisses Ms. Mills common-law negligence claim against FCA, and **DENIED IN PART** insofar as her defective design and failure to warn claims against FCA will proceed to trial. Ms. Mills and FCA are directed to begin preparation of a Proposed Pretrial Order and to jointly contact chambers to schedule a Pretrial Conference.

The motions to exclude opinion testimony from Dr. Ziernicki **(# 132)**, Dr. Vogler **(# 129)**, and Mr. Pearson **(# 126)** are **DENIED**. The Court **GRANTS** those motions that seek to exclude certain testimony from Mr. Miller **(# 127)**, Dr. Ziejewski **(# 125)**, and Mr. Hannemann **(# 131)**. The Court **GRANTS IN PART** and **DENIES IN PART** the motion to exclude testimony from Dr. Durisek **(# 133)** and Dr. Gwin **(# 128)** as set forth above.

[25] Neither TRW nor Ms. Mills has requested the immediate entry of judgment pursuant to Fed. R. Civ. P. 54(b), and this, the Court makes no findings as to whether such entry of judgment is warranted here.

The Court **DENIES** FCA and TRW's Motion to Restrict Access **(# 154)**, and the Clerk of the Court shall lift the provisional restrictions placed on Docket # 140-1, #140-2, #142-1, and #142-2.

Dated this 7th day of September, 2021.

BY THE COURT:

Marcia S. Krieger
Senior United States District Judge