

United States Court of Appeals  
For the Eighth Circuit

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No. 16-3428

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Judith A. Redd

*Plaintiff - Appellant*

v.

DePuy Orthopaedics, Inc.

*Defendant - Appellee*

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Appeal from United States District Court  
for the Eastern District of Missouri - St. Louis

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Submitted: June 6, 2017

Filed: July 5, 2017

[Unpublished]

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Before LOKEN, MURPHY, and MELLOY, Circuit Judges.

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PER CURIAM.

After the stem fractured in Judith Redd's hip implant, she filed this diversity action against the hip manufacturer, DePuy Orthopaedics, Inc, alleging product defect and failure to warn under Missouri law. She hired metallurgist Shankar Sastry as an

expert witness to testify about the allegedly defective product. The district court<sup>1</sup> excluded Dr. Sastry's testimony on defect and causation and granted DePuy summary judgment on all of Redd's claims. Redd appeals, arguing that the district court abused its discretion by excluding parts of Dr. Sastry's testimony. We affirm.

## I.

In 2008 Judith Redd received a total hip replacement. At that time she was a little over five feet tall, weighed 302 pounds, and took immunosuppressant drugs. These factors placed her at a higher risk for failure of the hip replacement, and in 2012 the implanted hip stem fractured. When the hip stem was removed, doctors learned that it had not properly grown into the bone at the top of Redd's hip (a possibility they had been aware of given her risk factors). She received a second hip stem implant which similarly fractured less than two years after it was inserted.

Redd filed this diversity action against DePuy Orthopaedics, the supplier of the initial hip stem implant, asserting negligence and strict liability claims based on product defect and failure to warn. She hired Shankar Sastry, a professor of metallurgy and materials science, to analyze the cause of the fracture. Dr. Sastry had done research in fatigue fracture initiation in metal objects, but not in metal objects implanted in the human body. His analysis considered metallurgical factors, but not any biomechanical factors (such as a hip stem's failure to grow into the hip bone like Redd's). He also did not review any records related to the manufacturing process of Redd's replacement hip before issuing his expert report. Dr. Sastry's report concluded that the metal in Redd's hip stem was predominantly in a hexagonal close packed ("HCP" or "non austenitic") phase, rather than in a face centered cubic ("FCC" or "austenitic") phase which, along with the coarse grain size of the metal alloy, had

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<sup>1</sup>The Honorable Catherine D. Perry, United States District Judge for the Eastern District of Missouri.

caused a premature and sudden fatigue fracture. He acknowledged that environmental factors could have also contributed to the failure of the hip implant, but said that "any small variation in the biomechanical forces" would have been "secondary in nature" to the hip stem's non austenitic state "in terms for the failure."

After the close of discovery, DePuy moved for summary judgment and the exclusion of Dr. Sastry's testimony under Federal Rule of Evidence 702 and Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993). Redd submitted an affidavit from Dr. Sastry testifying that DePuy's own specifications required the material in the hip stem implant to be austenitic and that environmental factors would be "secondary in the cause of the fracture when the material is inherently defective to begin with." DePuy responded with a motion to strike Dr. Sastry's affidavit as impermissibly supplementing or changing his expert opinion after the close of discovery.

The district court granted DePuy's motion to exclude parts of Dr. Sastry's testimony after concluding that he lacked "a scientific or factual basis to conclude that there was a manufacturing defect or to opine on causation," although he was qualified to testify about metallurgy (i.e., that the material was in an HCP or non austenitic phase). The court observed that Dr. Sastry had failed to "consider the necessary issues of the forces that were exerted on [the] implant as it was placed in Ms. Redd's hip." It also granted DePuy's motion to strike Dr. Sastry's affidavit since "many of [his] statements directly contradicted things he said in his deposition" and a party cannot "change testimony just to avoid summary judgment or a Daubert motion." Redd then lacked any expert testimony on defect or causation, and DePuy's motion for summary judgment on her manufacturing defect claim was granted, as well as on her remaining claims. Redd appeals the grant of summary judgment as to her manufacturing defect claim, challenging the exclusion of Dr. Sastry's affidavit and expert testimony.

## II.

Redd argues that the district court erred by excluding Dr. Sastry's affidavit which had been submitted after DePuy moved for summary judgment. We review such an exclusion of evidence for abuse of discretion. Yates v. Rexton, Inc., 267 F.3d 793, 802 (8th Cir. 2001).

A party may not avoid summary judgment by submitting an affidavit that contradicts rather than clarifies previous sworn testimony. Cole v. Homier Distrib. Co., 599 F.3d 856, 867 (8th Cir. 2010). Here, Dr. Sastry's affidavit arguably crossed the line between clarifying prior testimony and changing prior testimony. First, his affidavit discussed DePuy's material specifications for the hip stem implant. At his deposition, however, Dr. Sastry said that he had not been provided with and therefore had not relied on the specific manufacturing, testing, and regulatory records for the hip stem which had been implanted in Redd. Second, the affidavit said that any environmental factor would have been a secondary cause of the fracture if the material were inherently defective to begin with. At his deposition, however, Dr. Sastry said that environmental factors would have been secondary causes of the fracture to the defective material only if there had been "small variations in [the] biomechanical forces" operating on the implanted metal. He further said that he had not considered any biomechanical forces in Redd's case and thus did not discuss whether any variations in those forces had been small or large. Given such differences between the testimony Dr. Sastry provided during discovery and his affidavit, we conclude that the district court did not abuse its discretion by excluding the affidavit from consideration at summary judgment.

## III.

Redd also argues that the district court erred by excluding Dr. Sastry's testimony that (1) her hip stem implant had a manufacturing defect and (2) that defect

caused the hip stem to fracture. We review a district court's "decision to exclude expert evidence for an abuse of discretion." Kuhn v. Wyeth, Inc., 686 F.3d 618, 624 (8th Cir. 2012). This same deferential standard of review applies even when the exclusion of the testimony will result in summary judgment in favor of one party. See Gen. Elec. Co. v. Joiner, 522 U.S. 136, 142–43 (1997).

District court judges "must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." Daubert, 509 U.S. at 589. Under Federal Rule of Evidence 702, the opinion of an expert witness is reliable if "(1) it is based on sufficient facts or data, (2) it is the product of reliable principles and methods, and (3) the expert has reliably applied the principles and methods to the facts of the case." Kuhn, 686 F.3d at 625. An expert opinion is relevant if "[t]he expert's scientific, technical, or specialized knowledge . . . [will] 'assist the trier of fact to understand the evidence or determine a fact in issue.'" Id. (quoting Fed. R. Evid. 702). "The proponent of the expert testimony must prove its admissibility by a preponderance of the evidence." Lauzon v. Senco Prods., Inc., 270 F.3d 681, 686 (8th Cir. 2001).

We first consider Dr. Sastry's testimony that the non austenitic phase of the metal caused Redd's hip stem to fracture. The district court excluded this testimony because Dr. Sastry had not considered "the forces that were applied to the hip stem" or "any biomechanical forces." Redd argues that the district court erred by requiring Dr. Sastry to exclude other potential causes of the fracture. Although Redd is correct that an expert need not rule out all possible causes of an injury, an expert nonetheless should "adequately account[] for obvious alternative explanations." Fed. R. Evid. 702 advisory committees note to 2000 amendment; see Lauzon, 270 F.3d at 693–94 ("After discounting obvious alternatives through scientific testing, . . . [the expert] need only be able to explain why other conceivable causes are excludable."). Here, Dr. Sastry did not consider the obvious alternative explanation for the fracture recognized by Redd's own doctors: the failure of the hip stem to grow into Redd's

upper hip bone and properly distribute her weight. Although Dr. Sastry testified during his deposition that environmental factors would have been secondary causes of the fracture to the defective material if there had been "small variations in biomechanical forces," he nonetheless did not consider whether the biomechanical forces applied to Redd's hip stem had amounted to such small variations (indeed, he did not at all consider the biomechanical forces applied to the hip stem). The district court therefore acted within its discretion by excluding Dr. Sastry's opinion on causation under Rule 702.

Redd argues that the district court's causation analysis should have taken account of Missouri's causation standard, but it is clearly established that Rule 702 rather than state law governs "the propriety of the district court's exclusion of . . . expert[] reports." Johnson v. Mead Johnson & Co., 754 F.3d 557, 561 (8th Cir. 2014). Although Missouri law would govern any merits determination of causation, it does not impact the district court's preliminary analysis under Rule 702 of the reliability of an expert's testimony. See id. The district therefore did not abuse its discretion by excluding Dr. Sastry's expert testimony that the alleged non austenitic phase of the metal caused Redd's hip stem implant to fracture.

We need not determine whether the district court abused its discretion by excluding Dr. Sastry's testimony on manufacturing defect because the exclusion of his causation testimony alone supports its summary judgment order. Under Missouri law, a "plaintiff in a strict products liability . . . claim must show," among other things, "that the alleged defect caused the claimed damages." Pro Serv. Auto., LLC v. Lenan Corp., 469 F.3d 1210, 1214 (8th Cir. 2006). Further, the cause of sophisticated injuries "requiring surgical intervention or other highly scientific technique for diagnosis . . . is not within the realm of lay understanding and must be established through expert testimony." Turner v. Iowa Fire Equip. Co., 229 F.3d 1202, 1210 (8th Cir. 2000). Since the fracture of Redd's hip stem implant was a sophisticated injury, and Redd lacked any admissible expert testimony on the cause

of that fracture, the district court did not err by granting DePuy summary judgment on her manufacturing defect claim.

IV.

Accordingly, we affirm the judgment of the district court.

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