

**FOR PUBLICATION**

**UNITED STATES COURT OF APPEALS  
FOR THE NINTH CIRCUIT**

MARIA FERNANDA ELOSU,  
Individual; ROBERT LOUIS BRACE,  
*Plaintiffs-Appellants,*

v.

MIDDLEFORK RANCH  
INCORPORATED, an Idaho  
Corporation,

*Defendant-Appellee.*

No. 21-35309

D.C. No.  
1:19-cv-00267-  
DCN

OPINION

Appeal from the United States District Court  
for the District of Idaho  
David C. Nye, Chief District Judge, Presiding

Argued and Submitted December 8, 2021  
Pasadena, California

Filed February 23, 2022

Before: Carlos T. Bea and Kenneth K. Lee, Circuit Judges,  
and Richard D. Bennett,\* District Judge.

Opinion by Judge Bennett

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\* The Honorable Richard D. Bennett, United States District Judge for the District of Maryland, sitting by designation.

**SUMMARY\*\***

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**Expert Testimony**

The panel reversed the district court's partial grant of Middlefork Ranch Inc.'s motion to exclude expert testimony and the subsequent entry of summary judgment in a diversity negligence action, and remanded for further proceedings.

Plaintiffs were the owners of a vacation cabin in Idaho that burned. An expert report prepared by fire investigator Michael Koster hypothesized that an open-flame pilot light ignited combustible vapors from an oil stain on a wooden deck and sparked the fire that burned the entire structure to the ground. The district court excluded Koster's testimony, finding that the substance of his opinion was speculative, uncertain and contradicted by multiple eyewitness accounts.

The panel held that the district court improperly assumed a factfinding role in this case. Although a court may screen an expert opinion for reliability, and may reject testimony that is wholly speculative, it may not weigh the expert's conclusions or assume a factfinding role. In the plain text of its opinion, the district court took issue only with the expert's ultimate conclusions. In its findings, the district court disregarded much of the expert's scientific analysis, weighed the evidence on record, and demanded corroboration – factfinding steps that exceeded the court's gatekeeping role.

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\*\* This summary constitutes no part of the opinion of the court. It has been prepared by court staff for the convenience of the reader.

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**COUNSEL**

Patrick C. Bageant (argued), Hollystone Law, Boise, Idaho, for Plaintiffs-Appellants.

Gerald Kobluk (argued), KSB Litigation P.S., Spokane, Washington, for Defendant-Appellee.

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**OPINION**

BENNETT, District Judge:

On July 20, 2017, a fire swept through a cabin in the Idaho wilderness. Nobody was at home, and neither residents, neighbors, nor first responders saw the cabin catch fire. Appellants Maria Elosu and Robert Brace contend that the fire was caused by a negligent employee of Appellee Middlefork Ranch, Inc. (“Middlefork”), the homeowners’ association which governs the cabin. Their case rises and falls on an expert report prepared by fire investigator Michael Koster, who hypothesized that an open-flame pilot light on the northern end of the cabin ignited combustible vapors from an excessive oil stain that had been applied to the wooden deck the previous day—sparking a fast-moving conflagration that swept across the deck and burned the entire structure to the ground.

This appeal arises from an order of the United States District Court for the District of Idaho excluding Koster’s testimony—and precluding Appellants’ case on the critical element of causation, the sole triable issue that remained in this litigation. The district court did not hold that Koster’s methodology was unreliable or that he was not qualified to render an expert opinion in the field of fire investigation.

Indeed, the parties stipulated to his qualifications and methodology.<sup>1</sup> Instead, the court took issue with Koster’s “ultimate conclusions,” finding that the substance of his opinion was speculative, uncertain, and contradicted by multiple eyewitness accounts.

District courts have a longstanding responsibility to screen expert testimony, and to prevent unfounded or unreliable opinions from contaminating a jury trial. *See generally Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 586 (1993). However, this Court has cautioned that the district court is “a gatekeeper, not a fact finder.” *Primiano v. Cook*, 598 F.3d 558, 568 (9th Cir. 2010) (quoting *United States v. Sandoval-Mendoza*, 472 F.3d 645, 654 (9th Cir. 2006)). Although a district court may screen an expert opinion for reliability, and may reject testimony that is wholly speculative, it may not weigh the expert’s conclusions or assume a factfinding role. We are compelled to find that the district court assumed such a role in this case. In the plain text of its opinion, the district court took issue only with Koster’s “ultimate conclusions.” In its findings, the court disregarded much of the expert’s scientific analysis, weighed the evidence on record, and demanded corroboration—factfinding steps that exceed the court’s gatekeeping role. Accordingly, we reverse the judgment of

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<sup>1</sup> Those qualifications are extensive. Koster is a Fire/Arson Investigator employed by Reliant Investigations, Inc., and has been personally involved with 2400 fire investigations in 22 years of service in the field. He has completed six courses and eleven training sessions related to fire investigation and forensics, received multiple relevant certifications, attended several conferences related to fire and arson investigation, taught twenty-three courses, and been certified as an expert witness in several prior cases.

the district court and remand for further proceedings consistent with this opinion.

## BACKGROUND

Maria Elosu and Robert Brace, husband and wife, were the owners and seasonal residents of Cabin 16, a luxury vacation cabin located in the remote Valley County, Idaho, and governed by Middlefork Ranch, Inc. Cabin 16 was a flat, one-story building with a 500-square-foot wooden deck that wrapped around the north, east, and south sides of the structure. The northern end of the deck featured a propane-fueled refrigerator atop an open-flame pilot light, with a propane supply provided and managed by Middlefork. The east side of the deck held various items of wooden furniture—an old sofa, a teak picnic table, and benches.<sup>2</sup>

On the day before the fire, Brace power-washed and stained the deck with Penofin-brand oil. Penofin oil is highly flammable: Penofin oil cans come with detailed disposal instructions and a warning label that specifically alerts the user to the potential for “spontaneous combustion.” Appellants’ chemical expert Douglas Byron concluded in his report that Penofin oil is approximately as incendiary as charcoal starter fluid—with a higher density than air and a tendency to self-heat. When properly applied, Penofin oil becomes dry to the touch after four hours, “serviceable” after twelve, and fully cured after four to seven days. Based on the application instructions, which dictate that one gallon should be used for every 300 square feet of application, a 500-

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<sup>2</sup> Elosu also smokes cigarettes. The night before the fire, Elosu and a guest smoked a cigarette on the deck, and ashes were found on the deck the morning of the fire. Elosu smoked another cigarette “on the ground” outside the following morning.

square-foot deck should be treated with approximately one-and-a-half gallons of Penofin oil. Both parties acknowledge that Brace applied as much as two-and-a-half gallons that day.

On July 20, 2017, Appellant Brace left Cabin 16 prior to 8:00 a.m. He claims that he noticed sticky spots on the wooden deck where the Penofin oil had failed to dry. Brace provided rags for Elosu and their child to clean the deck, instructing them to dispose of them in the fire pit.<sup>3</sup> Elosu allegedly found the deck too sticky to clean. Thereafter, the parties concur that a Middlefork employee visited Cabin 16 to check the propane levels, determined that the propane was out or low, and elected to refill the propane and reignite the pilot light. The parties also acknowledge that this employee confirmed that the deck below the refrigerator was dry before he lit the pilot light. Appellants further claim that the deck remained sticky with oil, that “[Middlefork’s] employee was standing in wet oil next to the refrigerator” when he lit the flame, and that Elosu expressed concern that the oil could ignite.

Around 4:00 p.m., while Elosu and her child were away, Cabin 16 caught fire. The first people to notice the fire were a group of contractors working on a neighboring cabin, including Kenny Pyle, Regee Rauch, and Greg Gamez. These contractors did not see the fire ignite and arrived well after the conflagration had spread. When they arrived, the eastern deck was filled with flames, localized specifically near the southeast corner. Rauch ran onto the north deck to

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<sup>3</sup> The parties dispute whether these rags were used and how they were disposed of. One rag was entered into evidence, while two remain unaccounted for. Appellants allege that they disposed of the rags in the firepit.

bang on the windows and draw the attention of anyone inside. Pyle attempted to extinguish the fire with a garden hose, but retreated when the fire spread and engulfed the entire structure. The cabin burned to the ground and was “a complete and total loss.”

Each party’s insurance company conducted initial examinations of the scene: Appellants’ insurer sent Shane Hargrove four days after the fire, while Middlefork’s insurer sent Glen Johnson two months later. Hargrove and Johnson each investigated the scene individually, before conducting joint interviews of the eyewitnesses, each of whom confirmed that there had not been a fire on the north-facing deck when they arrived.<sup>4</sup> Johnson concluded that the fire had originated on the southeast deck, and that it could have been caused by discarded oil-soaked rags or a mop head. But Johnson had no direct evidence of his theory, Hargrove characterized the fire site as a “black hole,” and neither could offer an opinion about the specific “source of ignition” that rose to the level of “more probable than not.”

Elosu and Brace retained three additional experts to examine the fire site: Michael Koster, a fire investigator, Richard Mumper, a mechanical engineer, and Douglas Byron, a chemist. Mumper evaluated the remains of the cabin and confirmed that there was no evidence of a mechanical breakdown or another point of ignition. Byron conducted a chemical analysis of Penofin oil in light of the weather conditions on the day of the fire, and confirmed that the Xylene vapors released by evaporating Penofin could

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<sup>4</sup> Middlefork exhaustively contends that Elosu and Brace pressured these witnesses to change their testimony and confirm Appellants’ theory that the fire originated on the north deck. These contentions were not addressed by the district court and are not before us on appeal.

cause an explosion upon contact with an open flame. He also determined that there was “no evidence or indication of spontaneous combustion,” as witnesses had not smelled an acrid odor, and video taken of the fire did not display the off-white smoke characteristic of this phenomenon.

Michael Koster, a fire investigator employed by Reliant Investigations, Inc., was the only expert to offer a specific theory as to the cause and origin of the fire.<sup>5</sup> Koster personally examined the remains of Cabin 16 on May 27, 2018, evaluating the cabin’s wiring, structure, insulation, and propane system to rule out external issues.<sup>6</sup> He retrieved several five-gallon buckets of Penofin oil from a shed on the property—one of which was half empty. He compared the scene on the ground to photos of the cabin taken before the fire to calculate “mass loss,” flame length, and rates of exposure—concluding that the north end of the cabin had seen “the most significant amount of mass loss.” He also spoke with Brace to confirm his story of events, and reviewed tapes of witness interviews from the previous investigations.

Koster reported his findings on January 10, 2020. In this report, Koster reviewed literature on volatile liquids and lumber fires, and applied professional standards governing fire and explosion investigations, *see* National Fire Protection Association, *NFPA 921: Guide for Fire and*

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<sup>5</sup> Mumper concurred with Koster’s theory as to the cause and origin of the fire. However, the court granted Middlefork’s motion to exclude this portion of Mumper’s report, reasoning that “Mumper is a mechanical engineer, and appears to have been retained to opine on the mechanical issues in this case, not the origins of the fire.” Elosu and Brace do not challenge this ruling on appeal.

<sup>6</sup> Koster’s examination was delayed by the winter frost.

*Explosion Investigations* (2017 ed.) (“NFPA 921”), to conclude that Cabin 16 had likely been destroyed by a fast-moving vapor fire that was ignited by the refrigerator pilot light. His hypothesis was that the excess Penofin oil Brace applied to the deck had pooled beneath the floorboards, evaporated during the heat of the following day, and ignited upon encountering the open flame. The resulting conflagration had swept through the deck, ignited the oil stains and the furniture, and eventually consumed the entire cabin.

Koster reviewed Johnson’s report, and opined that it had failed to comply with the NFPA 921 standards. Koster challenged Johnson’s conclusion that the fire was caused by discarded rags or a mop head, as “no remnants of cotton fiber materials or rags were found . . . within his suspected area of origination.” In a subsequent deposition, Koster also noted that his opinion was consistent with the testimony of the eyewitnesses, as the fire may have spread to the southeast deck. Nevertheless, Koster also acknowledged that none of the witnesses had substantiated his theory that the fire had originated on the north side of the deck.

Appellants filed suit against Middlefork on July 11, 2019. Consistent with Koster’s testimony, Appellants alleged that Middlefork’s employee was negligent in lighting the pilot light despite the fire hazard posed by the cabin’s oil-stained deck. The case was reassigned to the United States District Court for the Western District of Washington to alleviate the District of Idaho’s heavy caseload. One year later, a District Judge in Washington denied the parties’ cross-motions for summary judgment and transferred the case back to the District of Idaho for trial. On October 23, 2020, Middlefork filed a Motion to Exclude Expert Testimony, challenging all three of Appellants’

experts. The district court granted this motion in part, excluding Koster’s expert report and limiting the admissibility of Mumper’s report. Thereafter, the parties jointly stipulated to summary judgment, concurring that the exclusion of Koster’s report had “eliminated a genuine dispute of material fact as to the causation element of [Appellants’] negligence claim.”

This appeal followed.

### STANDARD OF REVIEW

“We review evidentiary rulings for abuse of discretion and reverse if the exercise of discretion is both erroneous and prejudicial.” *City of Pomona v. SQMN. Am. Corp.*, 750 F.3d 1036, 1043 (9th Cir. 2014) (citing *Nev. Dep’t of Corr. v. Greene*, 648 F.3d 1014, 1018 (9th Cir. 2011)). This standard applies on appeal from a motion to exclude expert testimony. *Kennedy v. Collagen Corp.*, 161 F.3d 1226, 1227 (9th Cir. 1998); *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 152 (1999). The district court’s underlying factual determinations are reviewed for clear error. *United States v. Lukashov*, 694 F.3d 1107, 1114 (9th Cir. 2012).

### ANALYSIS

This case concerns the scope of a district court’s discretion to exclude expert testimony that it deems unsupported by the record. Rule 702 of the Federal Rules of Evidence tasks a district court judge with “ensuring that an expert’s testimony both rests on a reliable foundation and is relevant to the task at hand.” *Daubert*, 509 U.S. at 597; *see also Daubert v. Merrell Dow Pharms., Inc. (Daubert II)*, 43 F.3d 1311, 1313 (9th Cir. 1995). Rule 702 provides that expert testimony is admissible if:

(1) the witness is sufficiently qualified as an expert by knowledge, skill, experience, training, or education; (2) the scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (3) the testimony is based on sufficient facts or data; (4) the testimony is the product of reliable principles and methods; and (5) the expert has reliably applied the relevant principles and methods to the facts of the case.

*City of Pomona*, 750 F.3d at 1043 (citing Fed. R. Evid. 702).

This appeal brings the third element of Rule 702 into tension with the rest. The parties concur that Koster is qualified as an expert in fire investigation, that his testimony is the product of reliable methodology, and that his report is relevant to the critical fact at issue—the cause and origin of the fire. Neither party contested these elements below, and neither party argues them on appeal. Instead, this appeal exclusively turns on whether Koster’s testimony was “based on sufficient facts or data” as required by Rule 702. The district court concluded that Koster’s report is too speculative, that his conclusion conflicted with the contractors’ testimony, and that he relied too heavily on the testimony of the plaintiffs. This was an abuse of discretion, as the district court assumed a factfinding role in its analysis. These concerns speak to corroboration, not foundation, and are properly addressed through impeachment before a jury at trial—not exclusion by a district judge at the admissibility stage.

## I. The District Court's Gatekeeping Role

As construed in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, Rule 702 tasks a district judge with “ensuring that an expert’s testimony both rests on a reliable foundation and is relevant to the task at hand.” 509 U.S. at 597. “Expert opinion testimony is relevant if the knowledge underlying it has a valid connection to the pertinent inquiry. And it is reliable if the knowledge underlying it has a reliable basis in the knowledge and experience of the relevant discipline.” *Alaska Rent-A-Car, Inc. v. Avis Budget Grp., Inc.*, 738 F.3d 960, 969 (9th Cir. 2013) (quoting *Primiano*, 598 F.3d at 565). To evaluate reliability, the district court “must assess the expert’s reasoning or methodology, using as appropriate criteria such as testability, publication in peer-reviewed literature, known or potential error rate, and general acceptance.” *City of Pomona*, 750 F.3d at 1044. These factors are nonexclusive, and “the trial court has discretion to decide how to test an expert’s reliability . . . based on the particular circumstances of the particular case.” *Id.* (quoting *Primiano*, 598 F.3d at 564).

Ultimately, “the test under *Daubert* is not the correctness of the expert’s conclusions but the soundness of his methodology.” *Daubert II*, 43 F.3d at 1318. The court is “a gatekeeper, not a fact finder.” *Primiano v. Cook*, 598 F.3d 558, 568 (9th Cir. 2010) (quoting *Sandoval-Mendoza*, 472 F.3d at 654). Accordingly, “[t]he district court is not tasked with deciding whether the expert is right or wrong, just whether his testimony has substance such that it would be helpful to a jury.” *Alaska Rent-A-Car, Inc.*, 738 F.3d at 969–70. If the proposed testimony meets the thresholds of relevance and reliability, its proponent is “entitled to have the jury decide upon [its] credibility, rather than the judge.”

*Sandoval-Mendoza*, 472 F.3d at 656. “Challenges that go to the weight of the evidence are within the province of a fact finder, not a trial court judge. A district court should not make credibility determinations that are reserved for the jury.” *City of Pomona*, 750 F.3d at 1044; *accord Alaska Rent-A-Car, Inc.*, 738 F.3d at 969 (“[T]he judge is supposed to screen the jury from unreliable nonsense opinions, but not exclude opinions merely because they are impeachable.”). This Court has previously noted that “[s]haky but admissible evidence is to be attacked by cross examination, contrary evidence, and attention to the burden of proof, not exclusion.” *Primiano*, 598 F.3d at 564.

An expert’s specialized knowledge and experience can serve as the requisite “facts or data” on which they render an opinion. In *Primiano v. Cook*, a patient who had received an elbow replacement sued the manufacturer of her prosthesis, alleging that defects in the device’s polyethylene components had caused joint problems that required several additional surgeries to correct. 598 F.3d at 562. The patient adduced testimony by Arnold-Peter Weiss, M.D., who opined that polyethylene prostheses normally last between five and fifteen years, and that it was unlikely plaintiff’s joint issues were caused by “overuse, medical malpractice . . . or other factors external to the device.” *Id.* at 562–63. The district court granted the defendants’ motion to exclude this testimony under *Daubert*, observing that Dr. Weiss had failed to base his assumptions on an “objective source,” as he had neither examined the plaintiff personally nor cited any peer-reviewed publications that corroborated his opinion. *Id.* at 563, 567.

This Court reversed, holding that the district court’s concerns spoke to weight, not reliability. *Id.* at 568. We placed particular emphasis on Dr. Weiss’s experience and

qualifications, the nature of medical testimony, and the unusual issue at hand. *Id.* at 566. As “medical knowledge is often uncertain” due to the complexity of the human body and the novelty of emerging medical issues, we reasoned that “physicians must use their knowledge and experience as a basis for weighing known factors along with the inevitable uncertainties” to make “a sound judgment” in each case. *Id.* at 565–66 (quoting *Sandoval-Mendoza*, 472 F.3d at 655). Dr. Weiss’s “extensive, relevant experience” with the implantation or revision of prosthetic elbows qualified him to make such a judgment and provided a sufficient foundation for his testimony. *Id.* “Given that the judge is ‘a gatekeeper, not a fact finder,’ the gate could not be closed to this relevant opinion offered with sufficient foundation by one qualified to give it.” *Id.* at 568 (citation omitted).

Relatedly, the requirement of “sufficient facts or data” does not preclude an expert from making projections based on reliable methodology. In *Alaska Rent-A-Car, Inc. v. Avis Budget Grp., Inc.*, featuring a breach of an exclusivity agreement by a nationwide rent-a-car chain, the plaintiff rental car company offered expert testimony to prove damages. 738 F.3d at 967. This testimony required the expert to “address a hypothetical world that never existed,” extrapolating market projections based on similarly situated rental companies to estimate the plaintiff’s lost profits. *Id.* at 968. The defendant moved to exclude the expert’s opinion as speculative, highlighting various market differences that undercut his conclusions. *Id.* at 968–69. Rejecting this assertion, the district court admitted this testimony, and we affirmed, observing that Avis had not challenged the expert’s credentials, qualifications, or methodology—only the accuracy and credibility of his final projections. *Id.* at 970. Each of the defendant’s countervailing considerations were appropriate matters for impeachment, not

admissibility. *Id.* at 969–70 (“[T]he judge is supposed to screen the jury from unreliable nonsense opinions, but not exclude opinions merely because they are impeachable.”).

Finally, while a court may reject wholly speculative or unfounded testimony, it abuses its discretion if it overlooks relevant data submitted as the foundation of an expert’s remarks. In *Kennedy v. Collagen Corp.*, the plaintiff sued the manufacturer of Zyderm, a facial smoothing product that required subcutaneous injections, alleging that its application had caused her to develop systemic lupus erythematosus (“SLE”), “a debilitating and incurable autoimmune disease.” 161 F.3d at 1227. The plaintiff offered testimony by Dr. Joseph Spindler, who opined that there was a link between Zyderm and SLE, relying on “peer-reviewed publications and clinical studies” that suggested Zyderm produced autoimmune antibodies. *Id.* at 1228. The district court excluded this testimony, noting that no epidemiological studies had confirmed a link between Zyderm and SLE, and that there was too great an “analytical gap” between the data presented in the case and the expert’s conclusion. *Id.* at 1229–30. And we reversed, observing that “[t]he court did not consider all of the data relied upon by Dr. Spindler, namely, studies by the defendant and others finding that Zyderm can induce autoimmune reactions.” *Id.* at 1230. Accordingly, “the gap was of the district court’s making.” *Id.*

The common thread running through these cases is that Rule 702’s “sufficient facts or data” element requires foundation, not corroboration. Consistent with the court’s gatekeeping function, Rule 702 instructs a district court judge to determine whether an expert “had sufficient factual grounds on which to draw conclusions.” *Damon v. Sun Co., Inc.*, 87 F.3d 1467, 1475 (1st Cir. 1996); *Kennedy*, 161 F.3d

at 1228 (“[T]he focus of the inquiry envisioned by Rule 702 must be on the principles and methodology underlying an expert’s testimony, not on the conclusions.”); *see also City of Pomona*, 750 F.3d at 1049 (“A factual dispute is best settled by a battle of the experts before the fact finder, not by judicial fiat.”). Although “[a] court may conclude that there is simply too great an analytical gap between the data and the opinion proffered,” *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997), Rule 702 does not license a court to engage in freeform factfinding, to select between competing versions of the evidence, or to determine the veracity of the expert’s conclusions at the admissibility stage.

This is consistent with the basic function of expert testimony: to help the trier of fact understand highly specialized issues that are not within common experience. *See Kumho Tire*, 526 U.S. at 148–49, 156–57. Experts working in specialized, scientific, and uncertain fields regularly “extrapolate from existing data” and generate novel hypotheses about complex issues. *Joiner*, 522 U.S. at 146. For this reason, “an expert is permitted wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation.” *Daubert*, 509 U.S. at 592–93. The court’s role is to determine “the scientific validity” of an expert’s “principles and methodology,” not to determine whether their hypothesis is correct, or to evaluate whether it is corroborated by other evidence on the record. *Id.* at 594–95. That is for the litigants to argue, and for the jury to decide.

## **II. Evaluating Koster’s Proposed Expert Testimony**

Applying the principles articulated above, we must determine whether the district court’s analysis of Koster’s report exceeded the limited gatekeeping function contemplated by Rule 702. In a 145-page fire origin and

cause report applying the NFPA 921, Koster hypothesized that the refrigerator pilot light ignited combustible vapors produced by evaporated Penofin oil, producing a fast-moving conflagration that swept along the deck and ignited the stain on the southeast deck. Koster arrived at this conclusion by conducting an analysis of the fire scene and applying known scientific principles and established fire investigation methodology. He studied the remains of the cabin, examined evidence of fire movement and oxidation patterns, and reviewed recorded interviews, deposition transcripts, and video footage of the fire. He examined the propane refrigerator and interviewed homeowners who were present near the cabin in the days and hours leading up to the fire. And he used before-and-after photographs to calculate flame lengths and mass loss, referencing scientific literature on the burning of milled lumber and volatile liquids.

The district judge did not question Koster's qualifications or the reliability of his methodology. Instead, the district court solely took issue with "his ultimate conclusions," adopting Middlefork's contention that they were "speculative and unsupported by the evidence." In its analysis of Koster's proposed testimony, the court found that only limited portions of his report were substantive, that the underlying facts were susceptible to competing interpretations, that he relied too heavily on the Appellants' story of events, and that his conclusions conflicted with the testimony of the eyewitnesses. This analysis exceeds the district court's limited gatekeeping role in several important respects.

First, the district court overlooked much of the scientific analysis that formed the basis of Koster's testimony. The court concluded that only 20 to 25 pages of Koster's 145-page report were substantive in nature, distinguishing the

remainder as “photographs, charts, and other supporting documents.” But those “supporting documents” formed an importing part of the “facts and data” that the district court found lacking—including photographs and artifacts obtained from the fire site, weather data, a forensics report, and a reconstruction of the cabin. Accordingly, the same error that demanded reversal in *Kennedy* is present here: “Although the district court properly may exclude expert testimony if the court concludes too great an analytical gap exists between the existing data and the expert’s conclusion, [this] gap was of the district court’s making.” 161 F.3d at 1230. A court cannot exclude expert testimony for lacking “sufficient facts or data” while openly disregarding the foundation of the expert’s opinion.

Second, throughout its opinion, the district court weighed the evidence and discredited Koster’s “ultimate conclusions.” The court emphasized that Koster’s theory was “directly contradicted by multiple eye-witness accounts” of the fire, as the contractors had seen a fire raging on the southeast deck, and Rauch had stepped onto the northern deck to attempt to alert the occupants of the cabin. The court took issue with Koster’s reliance on Brace’s “interested” testimony, noting that Brace had hired Koster to perform his analysis, and that Koster had made several important assumptions “without conducting any independent investigation.” And it weighed Koster’s report against Johnson’s, observing that Middlefork’s expert had “based his conclusions on other independently verifiable facts and supporting evidence.” As Appellants note, this analysis “fixat[ed] on evidence not offered in support of [Koster’s] opinion while simultaneously ignoring the evidence advanced on its behalf,” and exceeded the scope of the Rule 702 inquiry. *Cf. Daubert II*, 43 F.3d at 1318 (“[T]he

test under *Daubert* is not the correctness of the expert's conclusions but the soundness of his methodology.”).

As an initial matter, these factual conclusions appear to be clearly erroneous. See *Lukashov*, 694 F.3d at 1114. Contrary to the district court's contention that Koster did not conduct an “independent investigation,” Koster's report details his exhaustive personal examination of the fire scene, studying factors such as mass loss, wind flow, fire spread, and material heat release rates. His theory was also fully consistent with the eyewitness testimony. Although there was no fire on the northern deck when the contractors arrived, the court's singular focus on this fact misses the point of Koster's hypothesis: his theory was that an open-flame pilot light caused flammable vapors to ignite a sustained fire on the southeast deck before the first responders witnessed the fire. Cf. NFPA 921 § 19.3.1.5 (“Gases, vapors, and combustible dusts . . . can cause confusion about the location of the point of origin, because the point of ignition can be some distance away from where sustained fire starts in the structure or furnishings.”). Accordingly, it was clear error for the district court to construe Koster's testimony as incompatible with the statements of witnesses on the scene. Whether the first responders initially saw fire on the north deck is not dispositive, as they arrived after the fire had begun and did not witness the moment of ignition.

Given this logic, it is also notable that the court found Johnson's report admissible. Johnson theorized that the oil on the deck had spontaneously combusted due to discarded oil-soaked rags or an oil-soaked mop head. The district court distinguished these theories from Koster's by noting “that Johnson based his conclusions on other independently verifiable facts and supporting evidence.” But Middlefork

acknowledges that none of the experts investigating the scene could account for the oil-soaked rags, and Johnson conceded there was no “direct evidence” of his theory. Accordingly, Johnson’s testimony is no more “concrete” than Koster’s. It was clear error to conclude otherwise, and it was an abuse of discretion to select between these experts’ competing versions of events. *Cf. City of Pomona*, 750 F.3d at 1049 (“Where two credible experts disagree, it is the job of the fact finder, not the trial court, to determine which source is more credible and reliable.”).

In any event, these concerns are matters for impeachment, not admissibility. In performing its gatekeeping function, a district court “is not tasked with deciding whether [Koster] is right or wrong, just whether his testimony has substance such that it would be helpful to a jury.” *Alaska Rent-A-Car*, 738 F.3d at 969–70. NFPA 921 instructs fire investigators to rely on the observations of witnesses and property owners when determining the origin and cause of a fire. *See* NFPA 921 §§ 18.3.3.14, 19.3.1.6, 19.3.3. Koster acted in accordance with this professional guideline when he relied on Brace’s opinion, which was relevant to the central issue of the case: Brace applied the Penofin oil stain to the deck and was one of the last people to observe the deck before the cabin caught fire. It may well be that Koster relied too heavily on an “interested party,” that his report was not sufficiently corroborated, or that he was biased towards Appellants, financially or otherwise. As in *Alaska Rent-A-Car*, these countervailing concerns “go to the weight of the testimony and its credibility, not its admissibility.” 738 F.3d at 970; *accord Primiano*, 598 F.3d at 564 (“Shaky but admissible evidence is to be attacked by cross examination, contrary evidence, and attention to the burden of proof, not exclusion.”).

Finally, the court erred by demanding “concrete physical or testimonial evidence” in a field characterized by uncertainty. The court acknowledged that “Koster was able to point to various factors that influenced his opinion,” but found that “each of those factors have numerous alternative explanations that could lead to alternative outcomes as well.” By way of example, the court noted that the oxidation Koster observed on the north side of the cabin was consistent with the presence of strong north-to-south winds on the day of the fire, that none of the witnesses he had interviewed suggested that the point of ignition was on the north deck, and that Koster lacked data supporting his theory that Penofin oil had pooled beneath the deck on the following the stain. The court concluded that the presence of “competing interpretation[s]” and the lack of “concrete physical or testimonial evidence” in support of Koster’s theory rendered it too speculative to be admissible.

Quite simply, Koster is a fire investigator. The fact that his testimony relied on circumstantial evidence and inferences is neither unusual nor unexpected, as fires routinely destroy all evidence of their origins. “By the very nature of a fire, its cause must often be proven through a combination of common sense, circumstantial evidence and expert testimony.” *Ricci v. Alt. Energy Inc.*, 211 F.3d 157, 162–63 (1st Cir. 2000) (quoting *Minerals & Chems. Philipp Corp. v. S.S. Nat’l Trader*, 445 F.2d 831, 832 (2d Cir. 1971)); *Hartley v. St. Paul Fire & Marine Ins. Co.*, 118 F. App’x 914, 919 (6th Cir. 2004) (quoting same). Accordingly, fire investigation, no less than medicine, requires sound judgment in the face of uncertainty. *Cf. Primiano*, 598 F.3d at 566. An expert in either field must “use their knowledge and experience as a basis for weighing known factors along with the inevitable uncertainties.” *Id.*; *Joiner*, 522 U.S. at 146 (noting that experts regularly

“extrapolate from existing data”); *Daubert*, 509 U.S. at 592 (emphasizing that an expert need not testify based on “firsthand knowledge or observation”). The court’s responsibility is to ensure that a sufficiently qualified expert applied reliable principles to form their hypothesis—not to gauge whether that hypothesis is ultimately correct. That is for the litigants to prove, and for the factfinder to decide.

It is undisputed that Koster was qualified as an expert in fire investigation, and that he applied broadly accepted scientific principles and professional standards to conduct his analysis. Koster is a Fire and Arson Investigator employed by Reliant Investigations, Inc., with multiple certifications and twenty-two years of experience in the field. He reached his conclusions by applying NFPA 921, which has been consistently accepted as a suitable foundation for fire investigation testimony. *See Schlesinger v. United States*, 898 F. Supp. 2d 489, 504 (E.D.N.Y. 2012) (collecting cases); *McCoy v. Whirlpool Corp.*, 214 F.R.D. 646, 653 (D. Kan. 2003) (calling NFPA 921 “gold standard” for fire investigations). Those guidelines provide direct support for Koster’s vapor fire theory. *See, e.g.*, NFPA 921 § 19.1.3 (noting that vapor fires often ignite far from the location of the first sustained heavy fire and leave “no physical evidence of an ignition source” at the origin of the fire.). They also instruct fire investigators to rely on the precise kinds of circumstantial evidence that formed the basis of Koster’s opinion. *See, e.g.*, NFPA 921 § 18.1.2 (directing investigators to examine witness statements, fire patterns, arc mapping, and fire dynamics). Accordingly, “the gate could not be closed to this relevant opinion offered with sufficient foundation by one qualified to give it.” *Primiano*, 598 F.3d at 568.

## CONCLUSION

We **REVERSE** the district court's partial grant of Middlefork's motion to exclude expert testimony and the subsequent consent entry of summary judgment, and **REMAND** this case to the United States District Court for the District of Idaho for further proceedings consistent with this opinion.