Opinion issued July 13, 2021

In The

Court of Appeals

For The

First District of Texas

NO. 01-20-00013-CV

THELMA MULLINS, INDIVIDUALLY AND AS REPRESENTATIVE OF THE ESTATE OF DONALD WAYNE MULLINS, DECEASED, AND ON BEHALF OF ALL WRONGFUL DEATH BENEFICIARIES, Appellant

V.

ATLANTIC RICHFIELD COMPANY, Appellee

On Appeal from the 152nd District Court
Harris County, Texas
Trial Court Case No. 2010-54230

MEMORANDUM OPINION

In this wrongful death and survivor suit, Thelma Mullins sued Atlantic Richfield Company (ARCO), alleging that her deceased husband, Donald Mullins,

was exposed to asbestos while working at ARCO's petrochemical plant.[1] Thelma claims that the asbestos exposure caused Donald to develop mesothelioma, which led to his death. The trial court granted a no-evidence summary judgment in favor of ARCO, which Thelma now appeals. Because Thelma did not produce more than a scintilla of evidence to show that Donald's exposure to asbestos at ARCO's plant was a substantial factor in causing his mesothelioma, we affirm.

Background

Donald died in 2008 from mesothelioma, an incurable cancer of the lining of the lungs caused by the inhalation of asbestos fibers. Two years after his death, Thelma sued ARCO and two other defendants—Foster Wheeler Energy Corporation and Riley Power, Inc. In her petition, Thelma alleged that Donald had worked at ARCO's plant "from approximately 1967 to 1983" and had been exposed to "asbestos-containing products" while working there. Thelma generally alleged that (1) ARCO and the other defendants knew that Donald was being exposed to airborne asbestos fibers at ARCO's plant; (2) the defendants knew that asbestos caused respiratory illnesses, including asbestosis and mesothelioma; (3) the defendants failed to warn Donald about the risks of asbestos exposure or to protect him from it, and (4) Donald's exposure to asbestos at ARCO's plant caused him to develop

[1] Thelma also sued Foster Wheeler Energy Corporation and Riley Power, Inc. but later nonsuited her claims against them with prejudice. Thelma raises no issues on appeal relating to those two defendants.

mesothelioma, leading to his death. Thelma asserted numerous causes of action against ARCO and the other defendants, including the negligence theories of premises liability and gross negligence.

After answering the suit, ARCO filed a no-evidence motion for summary judgment. Among its summary-judgment grounds, ARCO asserted that Thelma could produce no evidence regarding the element of causation, an element common to all of Thelma's causes of action. ARCO correctly pointed out that "[p]roof of causation is an essential element in a negligence/premises liability case." *See W. Invs., Inc. v. Urena*, 162 S.W.3d 547, 550–51 (Tex. 2005) (recognizing that proximate causation is element of ordinary negligence and premises-liability claims); *Nowzaradan v. Ryans*, 347 S.W.3d 734, 741 (Tex. App.—Houston [14th Dist.] 2011, no pet.) (explaining that causation element is same for negligence and gross-negligence claims).

Citing *Borg–Warner Corp. v. Flores*, ARCO asserted more particularly that, in asbestos-exposure cases, "a plaintiff must provide quantitative evidence of the approximate dose of asbestos to which he was exposed from a particular defendant." *See* 232 S.W.3d 765, 772 (Tex. 2007). ARCO further claimed that "[a] plaintiff must establish that this dose was a substantial factor in causing his asbestos-related injury." *See id.* at 772–73. ARCO claimed that Thelma "[did] not have the evidence necessary to permit any expert to opine that [Donald] was exposed to asbestos on

any of ARCO's premises in sufficient quantities to have increased his risk of developing mesothelioma; thus, [Thelma had] no evidence to prove specific causation."

Thelma filed a response to ARCO's motion for summary judgment. In it, Thelma stated that she "[did] not bring any claims against ARCO based on strict liability." She also withdrew all claims against ARCO except those based on negligence theories, which she continued to pursue.

Thelma's evidence, offered in response to the motion for summary judgment, included three "work history sheets," verified by Donald under oath in 2002. The work history sheets contained information regarding Donald's work history from 1965 to 1983. The information included the location of Donald's worksites, the name of his employers, the job duties he had performed, and the type of asbestos materials used at the worksites.

The first sheet showed that Donald had been employed as a "pipefitter insulator" at the Houston Shipyards for two years from 1965 to 1966. The second sheet showed that he had been employed by AJ Mundy Contractors from 1967 to 1983, working at ARCO's petrochemical plant as a boilermaker, carpenter, machinist, and welder. The third work history sheet showed that Donald had worked intermittently during 1978 as a welder for Richmond Tank Company at a railyard. Regarding the asbestos materials used at the three worksites, each work history sheet

referenced the same attachment, which listed asbestos materials and products, but the attachment did not identify which materials and products were used at which worksites.

Thelma's summary-judgment evidence also included an addendum to Donald's work history sheets. The addendum was signed by Thelma in 2014, six years after Donald's death and four years after this suit was filed. In the addendum, Thelma stated that she had "firsthand knowledge of Donald's employment history," including "where he worked and what he did." She said that the addendum was made to Donald's work history sheets "to correct the number of years" that he had worked at the ARCO plant to reflect that Donald had worked at the plant from 1967 until 2007 and that he "was actually employed by various contractors" while working there. The addendum did not describe the job duties that Donald engaged in from 1983 until 2007.

In addition, Thelma offered the opinions of two experts, including a 2009 letter written by Dr. Jerry Abraham, a pathologist. Dr. Abraham wrote that, according to the information provided to him, which included Donald's work history sheets, Donald "had asbestos exposure from 1965 to 1983 working as a pipefitter insulator, boilermaker, carpenter, machinist, and welder at various jobs." Dr. Abraham stated that he had reviewed Donald's medical records. He noted that Donald was diagnosed with asbestosis and asbestos related pleural disease in 2001.

He stated that the death certificate indicated that Donald had died in September 2008 from mesothelioma. Dr Abraham concluded the letter by stating, "[B]ased on all the available information[,] I can conclude to a reasonable degree of medical certainty that [Donald's] asbestos exposure was the cause of his clinically and radiologically diagnosed asbestosis and of his malignant mesothelioma and death."

Thelma also offered the affidavit of Dr. David Goldsmith, an occupational epidemiologist. In the opening paragraph of his affidavit, Dr. Goldsmith testified, "This is to report on my anticipated testimony in litigation concerning the asbestos exposures of Mr. Donald Mullins. Specifically, I intend to testify to the fact that [Donald's] workplace asbestos exposure was much greater than ambient asbestos exposure generally found among the civilian population of the U.S." To render his opinion, Dr. Goldsmith indicated that he had reviewed Dr. Abraham's 2009 letter, Donald's medical records, and the affidavits of Thelma and five of Donald's co-workers from the ARCO plant.[2] He noted that he had been informed that Donald had worked at the ARCO plant for AJ Mundy Contractors from 1967 to 1983 and had worked at the plant for a total of 40 years from 1967 to 2007. Dr. Goldsmith did not mention the other two worksite sources of asbestos exposure reflected in Donald's work history sheets.

[2] Thelma did not include the affidavits in her summary-judgment evidence.

Dr. Goldsmith explained that "[t]he standard measure of asbestos exposure (i.e., that used to define disease risk) is fibers per unit volume of air, usually stated as cubic centimeter (or cc)." He further explained that "[t]his well-established method provides an 'index of exposure' and can roughly quantify cumulative exposures across the range 0.1-100 fibers/cc, the range generally resulting from the use/disturbance of asbestos products in the workplace." He also stated that "[l]onger-term cumulative exposures (usually expressed as fiber/cc years) are sometimes estimated for epidemiological investigations and represent the product of daylong cumulative exposure and the number of years (or fractions thereof) incurred." Dr. Goldsmith noted, "Ambient asbestos air pollution can also exist at concentrations on the order of 0.000,001–0.000,5 fibers/cc depending mainly on human activity (such as building demolition) affecting the geographic region in question."

In a footnote, Dr. Goldsmith explained that, "[a]s an industrial epidemiologist, I can provide realistic estimates of exposure levels (usually at the order of magnitude level[3]) associated with particular workplace activities." But, "[t]o provide estimates of cumulative exposure," Dr. Goldsmith stated that he "must also have estimates of total time spent in the endeavors of interest, a factual matter that is usually in dispute." He stated, "Normally, at a hearing, deposition or trial, [he would be]

[3] "Order of magnitude" means "a range of magnitude extending from some value to ten times that value." MERRIAM-WEBSTER ONLINE DICTIONARY, www.merriam-webster.com/dictionary/order%20of%20magnitude (last visited June 30, 2021).

provided exposure times in hypothetical questions and [he would] then translate [that] data into cumulative exposure estimates."

Dr. Goldsmith averred that, "[w]hen repairs were needed in a petroleum plant such as [ARCO], the employees charged with these tasks were exposed to asbestos dusts whenever insulated lining was broken or abraded." He explained that this "meant that workers, like [Donald], had high asbestos exposures that ranged from the same order of magnitude (e.g., in smaller, enclosed airspaces, longer duration work) to one or more orders of magnitude lower (e.g., in open air, significant distance, well-ventilated)."

Dr. Goldsmith continued:

> Another recurring feature of [Donald's] work was the removal and replacement of gaskets and stem/shaft packing associated with pipe connections, pumps, valves and other equipment. Into the 1990s, these always contained asbestos. Described work practices were not calculated to minimize/contain dust release and would have caused [Donald's] exposures across the orders 0.1-10 fibers/cc with the higher exposures associated with more aggressive practices such as power wire-wheel removal of adhered gasket residue. There was also mention of occasional, collateral exposure to dust generated by drywall installers sharing [Donald's] airspace. Into the late 1970s, drywall joint compounds virtually always comprised asbestos and their use caused exposures of the order 1-10 fibers/cc.

(footnotes omitted.) Dr. Goldsmith noted that "[n]o respiratory protection was said to have been used nor were asbestos control engineering methods described by any of [Donald's] co-workers."

Dr. Goldsmith concluded,

> In summary, based on the information currently in hand, I anticipate testifying that, as a result of the activities and events described above at the [ARCO] facility, [Donald] had frequent, regular exposure to asbestos dust products in close proximity to his breathing zone. Therefore, [Donald] incurred asbestos exposures that ranged from hundreds to millions of times greater than (and in addition to) ambient pollution levels in even the most polluted areas of the U.S. These exposures at [ARCO] were of such a dose that they substantially increased his risk of contracting mesothelioma, a deadly type of cancer, and were a substantial factor in the cause of his mesothelioma and death. . . .

The trial court granted ARCO's no-evidence motion for summary judgment without specifying the basis for the ruling. Thelma non-suited her claims against the other two defendants. The trial court signed an order acknowledging that the nonsuit made the order granting ARCO's motion for summary judgment "a final order subject to appeal."

Summary Judgment

On appeal, Thelma presents one issue with four subpoints challenging the no-evidence summary judgment in ARCO's favor. Among the sub-points raised by Thelma is her contention that she presented more than a scintilla of evidence regarding the element of causation.

A. Standard of Review

We review a trial court's summary judgment de novo. *Valence Operating Co. v. Dorsett*, 164 S.W.3d 656, 661 (Tex. 2005). In conducting our review, we take as true all evidence favorable to the non-movant, and we indulge every reasonable

inference and resolve any doubts in the non-movant's favor. *Id.* If a trial court grants summary judgment without specifying the grounds for its ruling, we must uphold the trial court's judgment if any of the asserted grounds are meritorious. *W. Invs., Inc.*, 162 S.W.3d at 550.

To prevail on a no-evidence summary-judgment motion, a movant must identify "one or more essential elements of a claim or defense . . . as to which there is no evidence." TEX. R. CIV. P. 166a(i); *see B.C. v. Steak N Shake Operations, Inc.*, 598 S.W.3d 256, 259 (Tex. 2020). The burden then shifts to the nonmovant to produce "summary judgment evidence raising a genuine issue of material fact." TEX. R. CIV. P. 166a(i); *see B.C.*, 598 S.W.3d at 259.

A no-evidence summary judgment may not be granted if the non-movant brings forth more than a scintilla of evidence to raise a genuine issue of material fact on the challenged elements. *See Ford Motor Co. v. Ridgway*, 135 S.W.3d 598, 600 (Tex. 2004). More than a scintilla of evidence exists when reasonable and fair-minded individuals could differ in their conclusions. *King Ranch, Inc. v. Chapman*, 118 S.W.3d 742, 751 (Tex. 2003).

B. Applicable Legal Principles: Causation

Causation in toxic tort cases is discussed in terms of general and specific causation. *Merrell Dow Pharm., Inc. v. Havner*, 953 S.W.2d 706, 714 (Tex. 1997). "General causation is whether a substance is capable of causing a particular injury

or condition in the general population, while specific causation is whether a substance caused a particular individual's injury." *Id.* Here, ARCO did not dispute general causation; that is, ARCO did not dispute that exposure to asbestos fibers causes mesothelioma. Instead, ARCO asserted that Thelma could not offer evidence to establish specific causation—whether Donald's exposure to asbestos at ARCO's plant proximately caused his mesothelioma.

The framework for specific causation in asbestos-exposure litigation was addressed in *Borg–Warner Corporation. v. Flores*, 232 S.W.3d 765 (Tex. 2007). There, the plaintiff, Flores, was a mechanic who claimed that his occupational exposure to several brands of asbestos-containing brake pads, including those manufactured by Borg–Warner, caused him to develop asbestosis. *Id.* at 766. The court held that, to establish causation-in-fact against a particular defendant, a plaintiff must prove that the defendant's product was a substantial factor in causing the plaintiff's asbestosis. *Id.* at 770. The court described substantial-factor causation as "separate[ing] the speculative from the probable." *Id.* at 773.

The *Flores* court described the inadequacy of the plaintiff's proof of causation in that case:

> [W]hile some respirable fibers may be released upon grinding some brake pads, the sparse record here contains no evidence of the approximate quantum of Borg–Warner fibers to which Flores was exposed, and whether this sufficiently contributed to the aggregate dose of asbestos Flores inhaled, such that it could be considered a substantial factor in causing his asbestosis.

Id. at 772. In short, the supreme court rejected the plaintiff's theory that a showing of "any exposure" to a defendant's asbestos was sufficient to prove that the exposure caused asbestosis. *See id.* at 771–72.

The court noted that the most frequently cited standard for proving causation in asbestos cases was the Fourth Circuit Court of Appeals's "frequency, regularity, and proximity" test found in *Lohrmann v. Pittsburgh Corning Corp.*, 782 F.2d 1156 (4th Cir. 1986). *Id.* at 769. The *Flores* court explained that, although evidence of the frequency, regularity, and proximity of exposure is required to establish causation, it is not alone sufficient to establish causation. *Id.* at 772. It stated that "proof of mere frequency, regularity, and proximity is necessary but not sufficient, as it provides none of the quantitative information necessary to support causation under Texas law." *Id.* Following the central principle of toxicology that "the dose makes the poison," the court determined that to establish causation under Texas law, the plaintiff must offer quantitative evidence about the dose or level of asbestos exposure. *Id.* ("Implicit in [*Lohrmann*'s frequency-regularity-proximity] test, however, must be a requirement that asbestos fibers were released in an amount sufficient to cause Flores's asbestosis, or the *de minimis* standard *Lohrmann* purported to establish would be eliminated, and the [substantial-factor] causation standard would not be met.").

While a plaintiff need not establish causation with "mathematical precision," a plaintiff must produce "[d]efendant-specific evidence relating to the approximate dose to which the plaintiff was exposed, coupled with evidence that the dose was a substantial factor in causing the asbestos-related disease." *Id.* at 773. In rejecting a standard that "some" exposure would suffice, the *Flores* court recognized: "As one commentator notes, '[i]t is not adequate to simply establish that 'some' exposure occurred. Because most chemically induced adverse health effects clearly demonstrate 'thresholds,' there must be reasonable evidence that the exposure was of sufficient magnitude to exceed the threshold before a likelihood of 'causation' can be inferred." *Id.* (citing David L. Eaton, *Scientific Judgment and Toxic Torts—A Primer in Toxicology for Judges and Lawyers*, 12 J.L. & POL'Y 5, 39 (2003)).

In *Bostic v. Georgia-Pacific Corporation*, the supreme court amplified *Flores*'s substantial-factor-causation test and extended it to all asbestos-related diseases, including mesothelioma. 439 S.W.3d 332, 353 (Tex. 2014). The court noted that both asbestosis and mesothelioma are dose-related diseases, meaning that the risk of contracting each disease rises along with the level of exposure. *Id.* at 338–39. The court reiterated that "proof of 'any exposure' to a defendant's product will not suffice and instead the plaintiff must establish the dose of asbestos fibers to which he was exposed by his exposure to the defendant's product[.]" *Id.*

The *Bostic* court also incorporated a "doubling of the risk" requirement into the causation analysis:

> [I]n the absence of direct proof of causation, establishing causation in fact against a defendant in an asbestos-related disease case requires scientifically reliable proof that the plaintiff's exposure to the defendant's product more than doubled his risk of contracting the disease. A more than doubling of the risk must be shown through reliable expert testimony that is based on epidemiological studies or similarly reliable scientific testimony.

Id. at 350.

The court underscored that in cases involving exposure from multiple sources, proof of a doubling of the risk from a particular exposure source may not alone be sufficient to establish substantial-factor causation. *Id.* A plaintiff in those cases may also need to present evidence regarding his aggregate exposure to asbestos. *See id.* at 351, 353. The court explained that "the defendant's product is not a substantial factor in causing the plaintiff's disease if, in light of the evidence of the plaintiff's total exposure to asbestos or other toxins, reasonable persons would not regard the defendant's product as a cause of the disease[.]" *Id.* at 353. For example, the court suggested that a particular exposure may not be considered a substantial factor in causing a plaintiff's disease even when the plaintiff's risk was more than doubled by that exposure if other exposure sources increased the risk by a factor of 10,000. *Id.* at 351.

Here, Thelma contends that the causation principles enunciated in *Flores*—and we presume those in *Bostic*—do not apply because *Flores* was a products-liability case (as was *Bostic*) and her claims against ARCO are based on premises liability. Texas law has made no distinction between the need to show substantial-factor causation in premises-liability and in products-liability cases. The supreme court has made clear that substantial-factor causation is part of the cause-in-fact analysis included in determining proximate causation in premises-liability cases generally. *See W. Invs., Inc.*, 162 S.W.3d at 551 (recognizing that both negligence and premises-liability causes of action require proximate causation, which has causation in fact as element). And, in *Bostic*, the supreme court stated that "the element of causation in fact is the same" under negligence and products-liability theories. *Bostic*, 439 S.W.3d at 343 n.42. The court explained, "To recover under a negligence theory, the plaintiff must establish proximate causation, while recovery under a products liability theory requires proof of producing causation. Proximate cause and producing cause share the common element of causation in fact . . . ." *Id.* Thus, the causation standards set out in *Flores* and *Bostic* apply here.

In *Flores* and *Bostic*, the supreme court emphasized that both asbestosis and mesothelioma are dose-related diseases, requiring the plaintiff to quantify the dose of his asbestos exposure, albeit without mathematical precision. *Id.* at 338–39. In deciding to extend the *Flores* causation principles to mesothelioma cases, the *Bostic*

court explained that if it were "to adopt a less demanding standard for mesothelioma cases and accept that any exposure to asbestos is sufficient to establish liability, the result essentially would be not just strict liability but absolute liability against any company whose asbestos-containing product crossed paths with the plaintiff throughout his entire lifetime." *Id.* at 339. The court said, "Instead, we have rejected such thinking and held firm to the principle that liability in tort must be based on proof of causation by a preponderance of the evidence." *Id.* The same reasoning applies to a plaintiff seeking to recover in an asbestos-disease case sounding in premises liability and dictates that a showing of any exposure of asbestos occurring on a defendant's premises would not be sufficient to establish liability; rather, a premises-liability plaintiff must offer proof in accordance with the causation principles enunciated in *Flores* and *Bostic*, including showing approximate dose, in order to insure that proof of causation is shown by a preponderance of the evidence. *See id.* at 339–41; *see also Union Carbide Corp. v. Torres*, No. 13-10-00325-CV, 2019 WL 6905229, at *9 (Tex. App.—Corpus Christi Dec. 19, 2019, pet. dism'd) (mem. op.) (applying *Flores* and *Bostic* causation principles in asbestos case, which included premises-liability claim).

C. Analysis

As mentioned, in *Flores*, the supreme court determined that to establish causation under Texas law, the plaintiff must offer quantitative evidence about his

approximate dose of asbestos fibers associated with the defendant from which he seeks to recover. 232 S.W.3d at 772.

Relying on Dr. Goldsmith's affidavit, Thelma contends that she provided sufficient evidence regarding Donald's approximate dose of asbestos fibers. In his affidavit, Dr. Goldsmith stated that "[a]mbient asbestos air pollution can also exist at concentrations on the order of 0.000,001–0.000,5 fibers/cc depending mainly on human activity (such as building demolition) affecting the geographic region in question." As sufficiently establishing Donald's dose of asbestos fibers at ARCO's plant, Thelma points to Dr. Goldsmith's conclusion that Donald "incurred asbestos exposures that ranged from hundreds to millions of times greater than (and in addition to) ambient pollution levels in even the most polluted areas of the U.S."

While mathematical precision is not required in determining dose, a plaintiff must offer an approximate quantum of dose associated with the defendant from whom he seeks to recover. *Id.* at 773. "Approximate" means "nearly correct or exact: close in value or amount but not precise." MERRIAM-WEBSTER ONLINE DICTIONARY, www.merriam-webster.com/dictionary/approximate (last visited June 30, 2021). Expert opinions that are conclusory or speculative lack probative value and constitute no evidence. *Coastal Transp. Co., Inc. v. Crown Cent. Petro. Corp.*, 136 S.W.3d 227, 232–33 (Tex. 2004). "Guesses, even if educated, are insufficient to

prove the level of exposure in a toxic tort case." *Austin v. Kerr-McGee Refin. Corp.*, 25 S.W.3d 280, 293 (Tex. App.—Texarkana 2000, no pet.).

Dr. Goldsmith's determination regarding Donald's quantum dose of exposure to asbestos fibers at ARCO's plant was more a guess than an approximation of exposure. By stating that Donald's dose "ranged from hundreds to millions of times greater than (and in addition to) ambient pollution levels," Dr. Goldsmith used a multiplier covering four orders of magnitude ("hundreds to millions of times greater") and a multiplicand covering two orders of magnitude (ambient asbestos pollution levels, ranging from 0.000,001–0.000,5 fibers/cc), thus producing such a wide range of exposure that it is too speculative to be considered Donald's approximate dose of asbestos fibers from ARCO's plant. *See Bostic*, 439 S.W.3d at 360 (recognizing that *Flores*'s "essential teaching" is that "dose matters"); *see also E.I. du Pont de Nemours & Co. v. Hood*, No. 05-16-00609-CV, 2018 WL 2126935, at *10 (Tex. App.—Dallas May 8, 2018, no pet.) (mem. op.) (holding that expert's calculation of lifetime exposure dose of benzene derived by picking median of range was "unreliable and therefore no evidence supporting causation").

Dr. Goldsmith's opinion testimony regarding the dose of asbestos fibers that Donald incurred at ARCO's facility also constitutes no evidence because it is conclusory. *See Coastal Transp. Co., Inc.*, 136 S.W.3d at 232–33. Expert testimony is conclusory "if no basis for the opinion is offered," or if "the basis offered provides

no support" for the opinion. *City of San Antonio v. Pollock*, 284 S.W.3d 809, 818 (Tex. 2009); *accord Burrow v. Arce*, 997 S.W.2d 229, 236 (Tex. 1999) (holding affidavit conclusory and explaining that qualified expert "cannot simply say, 'Take my word for it, I know'" because credentials do not supply basis for opinion).

The sentence before Dr. Goldsmith's conclusion regarding Donald's overall exposure range stated that "as a result of the activities and events described above at the [ARCO] facility, [Donald] had frequent, regular exposure to asbestos dust products in close proximity to his breathing zone." Other than that statement, Dr. Goldsmith provided no explanation for the basis of the multiplier range (hundreds to millions of times greater) that he used to determine Donald's exposure range (i.e., his dose). Without more, that statement is too general to provide any insight into the range selected by Dr. Goldsmith to form his opinion. *See Pollock*, 284 S.W.3d at 818.

To the extent that Dr. Goldsmith's conclusion regarding Donald's overall exposure range was based on exposure ranges for individual job duties discussed in his affidavit, those ranges themselves are speculative. Dr. Goldsmith averred that Donald had "exposures across the orders 0.1-10 fibers/cc" for "the removal and replacement of gaskets and stem/shaft packing," which Dr. Goldsmith described as a "recurring feature" of Donald's work at ARCO. Dr. Goldsmith stated that "[t]here was also mention of occasional, collateral exposure to dust generated by drywall

installers sharing [Donald's] airspace." He explained that "[i]nto the late 1970s, drywall joint compounds virtually always comprised asbestos and their use caused exposures of the order 1-10 fibers/cc." But these estimates, like Dr. Goldsmith's conclusion regarding Donald's overall exposure range at ARCO, are stated in broad terms or in orders of magnitude, rather than in terms of approximate dose. The use of indefinite terms such as "recurring" and "occasional" leave the regularity, frequency, and duration of the exposure at any specific level and in total, subject to variance and open to speculation, thus constituting no evidence of the dose of asbestos fibers attributable to ARCO. *See Frias v. Atl. Richfield Co.*, 104 S.W.3d 925, 930 (Tex. App.—Houston [14th Dist.] 2003, pet. denied); *cf. Torres*, 2019 WL 6905229, at *11 (indicating that plaintiff's experts offered approximate dose of plaintiff's incurred asbestos exposure while performing his job at defendant's plant in support of premises-liability claim).

Thelma also contends that *Flores*'s requirement that a plaintiff quantify dose does not apply here because Donald worked most of his career at ARCO's plant. However, the supreme court stated in *Bostic* that even "a single-exposure case" requires "proof of dose." 439 S.W.3d at 352. Supporting this statement, the court pointed to its observation in *Flores* that "[o]ne of toxicology's central tenets is that the dose makes the poison.'" *Id.* (citing *Flores*, 232 S.W.3d at 770). Accordingly, Thelma was required to offer competent evidence of dose but failed to do so.

Thelma further asserts that she was not required to present expert testimony to show substantial-factor causation because "even a lay member of a jury can use their common sense to determine that the majority of [Donald's] work career occurred at ARCO and, thus, was a substantial factor in the cause of his mesothelioma diagnosis and early death." But, as we have recognized, "Expert testimony is particularly necessary in toxic-tort and chemical-exposure cases, in which medically complex diseases and causal ambiguities compound the need for expert testimony." *Starr v. A.J. Struss & Co.*, No. 01-14-00702-CV, 2015 WL 4139028, at *6 (Tex. App.—Houston [1st Dist.] July 9, 2015, no pet.) (mem. op.); *see BNSF Ry. Co. v. Baca*, No. 02-17-00168-CV, 2018 WL 1528573, at *2 (Tex. App.—Fort Worth Mar. 29, 2018, no pet.) (mem. op.) (recognizing in asbestos case that "whether a causal connection exists between a person's exposure to a chemical and a disease from which he suffers is outside the common knowledge and experience of lay persons"). With respect to asbestos cases, the *Bostic* court made clear that "to establish substantial factor causation in the absence of direct evidence of causation, the plaintiff must prove with scientifically reliable expert testimony that the plaintiff's exposure . . . more than doubled the plaintiff's risk of contracting the disease." *Bostic*, 439 S.W.3d at 353.

Here, Thelma has offered no direct evidence of causation. Thelma appears to take the position that, because Donald worked most of his career at ARCO's plant,

that is sufficient direct evidence that his asbestos exposure at the plant caused his mesothelioma without the need of reliable expert testimony. However, this is contrary to the standard established by the supreme court.

In *Bostic*, the court discussed the scenario in which a plaintiff contends that the defendant is the only source of his asbestos exposure. *See id.* at 352. The court explained that under those circumstances, "[i]f the plaintiff can establish with *reliable expert testimony* that (1) his exposure to a particular toxin is the only possible cause of his disease, and (2) the only possible source of that toxin is the defendant's product," then "this proof might amount to direct proof of causation and the alternative approach," requiring the plaintiff to prove with scientifically reliable expert testimony that the plaintiff's exposure to the defendant's product more than doubled the plaintiff's risk of contracting the disease might be unnecessary. *Id.* (emphasis added). In other words, the plaintiff must still offer "reliable expert testimony" even when she claims that the only possible source of the toxin is the defendant's product or, in this case, the defendant's premises. *See id.*

Thelma offered no expert testimony (or other evidence) to show that ARCO was the only source of Donald's asbestos exposure. To the contrary, Thelma's summary-judgment evidence established that Donald was exposed to asbestos at two other worksites, the Houston Shipyards and a railyard. Thelma discounts the significance of those two worksites in causing Donald's mesothelioma because he

worked much longer at ARCO's plant. However, there is no evidence in the record to show the dose of asbestos fibers that Donald received at either of the other two worksites nor is there evidence of Donald's aggregate lifetime asbestos exposure. The record does not allow a determination that Donald's asbestos exposure at the two other worksites was of no consequence. *Cf. id.* at 353 (stating that defendant's product is "not a substantial factor in causing the plaintiff's disease if, in light of the evidence of the plaintiff's total exposure to asbestos or other toxins, reasonable persons would not regard the defendant's product as a cause of the disease").

Because she offered no direct evidence of causation, Thelma was required to offer scientifically reliable expert testimony that Donald's asbestos exposure at ARCO's plant more than doubled his risk of contracting mesothelioma. *See id.* at 350, 353. Thelma did not offer any doubling-of-the-risk evidence. For this reason, and because she did not offer competent evidence of dose, we conclude that Thelma failed to offer more than a scintilla of evidence of causation, an element required for her negligence theories of recovery. Accordingly, we hold that the trial court properly granted ARCO's no-evidence motion for summary judgment. Although harsh, this result is compelled by the asbestos-liability framework established by the Supreme Court of Texas, which has been recognized as "the most stringent" of any state. *Rost v. Ford Motor Co.*, 637 Pa. 625, 654, 151 A.3d 1032, 1049 (2016); *see In*

re Asbestos Litig., 228 A.3d 676, 678 (Del. 2020) (describing Texas's "stringent expert report requirements" in asbestos-exposure cases).

We overrule Thelma's subpoint relating to causation.[4]

Conclusion

We affirm the judgment of the trial court.

Richard Hightower
Justice

Panel consists of Justices Kelly, Landau, and Hightower.

[4] Because our ruling on this subpoint is dispositive, we need not address Thelma's other subpoints challenging the summary judgment. *See* TEX. R. APP. P. 47.1.