

**August 21, 2009**

PUBLISH

**Elisabeth A. Shumaker**  
Clerk of Court

**UNITED STATES COURT OF APPEALS**

**TENTH CIRCUIT**

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GARY JUNE; SCOTT JUNE,  
individually and on behalf of the  
deceased YVONNE JUNE; GENE  
LYNN, individually and on behalf of  
the deceased, LUCILLE LYNN;  
ALVA FORD, on behalf of the  
deceased, PHYLLIS WEYANT;  
RANDY PORTER; BARBARA  
MEYERS, on behalf of the deceased,  
MINNIE DALE WOODS; ROBERT  
SNOW; PHYLLIS WILMA DAVIS;  
JOSEPH VIGIL; E. LOUISE WATTS;  
JUNELLE WEATHERLY; ISABELLE  
WOODEN; CHERIE ZUSPAN;  
DAISY ARNOLD; BEVERLY  
BATES; VALERIE BOGDAN; JUNE  
ARGUELLO; BETTY JANE  
MCBRIDE; LAURA O'BRIEN; OPAL  
GARCIA; EMMA HANSEN; LA  
VONNE O'BRIEN; STEPHEN  
PLACE; MARY ANN ROMERO;  
FRANK SHARP; LESLIE  
HENDRICKS; CHRIS  
HOLLINGSHEAD; GILDA  
HOLLINGSHEAD; LAURA  
HUGHES; ANNE LEMELLE; ROBIN  
SEELEY; SUSANN STEELE;  
MICHELLE THOMSON; PHYLLIS  
TORIBIO; BETTY WHITE; LONZO  
YARDLEY; CRYSTAL BARELA;  
GLENNA MCCLAIN; LISA BACA;  
DEBRA BLACK; EMMA  
CHAMBERLAIN; PANSY  
CISNEROS; ROSE CLEMENT; LISA  
CORTES; SUSAN DOLLARHYDE;

No. 07-1532

MARTHA LINDSAY; AUDI LOEHR;  
JOAN LONG; CASEY LONG;  
THOMAS LYNN; NANCY MINGAS;  
ROBIN ABRAMSON FOREST;  
LINDA GARDNER; PAM HASKELL;  
MARK SALAZAR; ROBERTA  
SALAZAR; BEN SANCHEZ; LORI  
SELGADO; WILLIAM SHARP;  
GEORGE SHARP; JOHN SHARP;  
KIRK SHARP; BRENDA LU SMITH;  
GWENDA GONZALEZ; CRAIG  
LONG; CYNTHIA STARKEY;  
DEANNA ADDLEMAN; SHERRY  
ALBERTS; IRIS ALLRED; LESLIE  
AMENT; MARLENE BALL; DONNA  
BELDEN; WALLACE BELDEN;  
KENNETH BELDEN; KEITH  
BELDEN; BARBARA BERCUME;  
JUDY BLACK; DOROTHY BLAKE;  
GUYE BLOOD; JERRY BLOOD;  
THOMAS BLOOD; LORNA  
BOWERSOX; MADGE BOWERSOX;  
CAROLEE BURNETT; RICHARD  
BURNETT; GENE CAMPBELL;  
ANNE MARIE CHADD; ALEXIS  
CLARK; MARY ELIZABETH  
CLARK; TERRY COPE; PHILIP  
CRESPIN; THERESA CURTIS;  
IRENE CUTCHINS; CYNTHIA  
DAVID; PAULETTE DAVIS;  
LYNDA DWORNIK; JUNE  
EASTERLY; EVA ELLIOTT;  
CHRISTOPHER FOSTER; COLT  
FREEMAN; GEORGIA FREEMAN;  
BRETT FREEMAN; VICTOR  
FRONK; SARA GILLILIN;  
MICHAEL HALL; MARIE HALL;  
IRIS HARVEY; NINA FAYE  
HASKELL; JUDITH HEARN;  
CONNIE HECHT; MARJORIE  
HECHT; BARBARA HECHT;

SHARON HOISINGTON;  
GERALDINE HOLLINGSHEAD;  
KAREN HOLMAN; KENNETH  
JOHNSON; BEVERLY JOSLIN;  
CHRISTINE KEENER; BETTY  
KIKER; ROXANNA KREBS; JONI  
LEE LEFLER; LINDA LEWIS;  
MARY ELLEN LOVE; CAROL  
LOVOI; MARY LOU LYNN; CAROL  
LYNN; DEBBIE MADDOX; ILA  
MALONE; TED MARTIN; MARY  
MARTIN; JOHN MARTINEZ;  
SHERRIE MCDOWELL; CLARE  
MCNEAL; EDNA MERYHEW;  
ALICE MOCKERMAN; STEPHANIE  
MORROW; KATHERINE NYGREN;  
KENT NYGREN; JAMES  
O'BRYANT; SALLY ELAINE  
OLIVER; MARGARET ORNDOFF;  
SHARON OSBORN; TREASIA  
PFIFER; BECKY PICTOR; KENNY  
PRATTE; MELVIN PRATTE; EVA  
MAY PRATTE; JUDY PROCTOR;  
DOROTHY REED; WANDA REED;  
CAROL RICE; THERESA  
RICHARDS; LEAH ROBERTS;  
BRYAN SALAZAR; CATHERINE  
SALAZAR; PATRICK SCHEETZ;  
SHERYL SEELEY; THORTHANE  
SHARP; JODI SKEES; DEBORAH  
SKILES; FREDDIE SMITH;  
VERNON SMITH; MARGARET  
SNYDER; STEPHANIE TATUM;  
SHARON THOMPSON; KARA  
TOOKER; CHAR LEE BELLE  
UNGER; MARY JANE VIA; JIM  
WAUGH; LUCILLIE WAUGH-  
SMITH; ALVIN WILSON; JOAN  
WILSON; JOHN WILSON, SR.;  
NORMA WRIGHT; NORMA YATES;  
CHARLOTTE ZUFELT,

Plaintiffs - Appellants,

v.

UNION CARBIDE CORPORATION,  
a New York corporation; UMETCO  
MINERALS CORPORATION, a  
Delaware corporation,

Defendants - Appellees.

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**APPEAL FROM THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLORADO  
(D.C. NO. 1:04-CV-00123-MSK-MJW)**

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J. Mark Englehart, Beasley, Allen, Crow, Methvin, Portis & Miles, P.C.,  
Montgomery, Alabama, (Rhon E. Jones, Beasley, Allen, Crow, Methvin, Portis &  
Miles, P.C., and J. Douglas McCalla, The Spence Law Firm, LLC, Jackson,  
Wyoming, with him on the briefs), for Plaintiffs - Appellants.

Christopher Landau, Kirkland & Ellis, LLP, Washington, DC, (Daniel J. Dunn,  
Alan J. Gilbert, Holme Roberts & Owen LLP, Denver, Colorado, and Michael P.  
Foradas, P.C., Joel A. Blanchet, John W. Reale, Kirkland & Ellis LLP, Chicago,  
IL, with him on the brief), for Defendants - Appellees.

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Before **HARTZ, HOLLOWAY**, and **ANDERSON**, Circuit Judges.

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**HARTZ**, Circuit Judge.

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The lawsuit before us arises out of alleged radiation injuries to residents of  
Uravan, Colorado, a former uranium and vanadium milling town owned and  
operated by Defendants Union Carbide Corporation and Umetco Minerals  
Corporation. Plaintiffs brought an action in the United States District Court for

the District of Colorado under the Price-Anderson Act of 1957, Pub. L. No. 86-256, 71 Stat. 576 (codified as amended in scattered sections of 42 U.S.C.). They assert claims for personal injury based on disease or death allegedly caused by radiation and claims for medical monitoring to detect the onset of disease in those Plaintiffs who were asymptomatic. The district court dismissed all the claims on pretrial motions, and Plaintiffs appealed. Exercising jurisdiction under 28 U.S.C. § 1291, we affirm. Plaintiffs' personal-injury claims fail for lack of evidence of factual causation. Their medical-monitoring claims fail for lack of evidence of a "bodily injury" as required by the Price-Anderson Act.

## **I. BACKGROUND**

### **A. Factual Background**

Mining and milling have been conducted in the Uravan area for many years. The Standard Chemical Company was producing radium in the region as early as 1914. In 1928 Defendants purchased Standard Chemical's holdings, and in 1936 began milling vanadium and uranium. To accommodate workers, Defendants founded the community of Uravan, constructing homes and a number of facilities, including a medical clinic, elementary school, community center, tennis courts, and a swimming pool.

Defendants ceased operations in Uravan in 1984, having produced 42 million pounds of uranium oxide. This production did not come without environmental costs. In 1986 the Environmental Protection Agency placed

Uravan on the National Priorities List, *see* 51 Fed. Reg. 21054, 21063 (June 10, 1986), which ranks the nation's most environmentally hazardous sites to prioritize remedial action, *see* 42 U.S.C. § 9605(a)(8)(B). About this time, Uravan's remaining residents were evacuated and remedial activities began. The last structures standing in Uravan were razed after this lawsuit was filed.

Plaintiffs either resided in Uravan during some period between 1936 and 1986, or represent decedents who did. (For ease of exposition, we shall use the term *Plaintiffs* to refer to those allegedly injured by Defendants, whether they be the Plaintiffs personally or the Plaintiffs' decedents.) The thrust of their claims is that Defendants' milling operations exposed Uravan residents to various radioactive materials, and that such exposure has caused, or increased the risk of, radiation-related illnesses.

### **B. Procedural History**

Plaintiffs brought this action under the Price-Anderson Act, which grants federal district courts jurisdiction over lawsuits "arising out of or resulting from a nuclear incident." 42 U.S.C. § 2210(n)(2). Unless inconsistent with § 2210 of the Act, state law supplies the substantive law governing claims under the Act. *See id.* § 2014(hh). Plaintiffs also pleaded seven causes of action under Colorado tort law, but the district court ruled that they were preempted by the Price-Anderson Act because they arose from an alleged "nuclear incident," and it converted the claims to federal claims under the Act.

Twenty-seven Plaintiffs are pursuing personal-injury claims and 152 are pursuing only medical-monitoring claims. Of the 27 personal-injury Plaintiffs, 11 have been diagnosed with nonthyroid cancer and 16 have been diagnosed with thyroid disease (including one case of thyroid cancer).

Defendants challenged Plaintiffs' claims with two motions for summary judgment. One motion argued that the personal-injury claimants had failed to show the but-for causation required by Colorado tort law. The other argued that the medical-monitoring claims could not proceed because (1) Colorado does not recognize such a cause of action and (2) the medical-monitoring Plaintiffs had not alleged a "bodily injury," as required by the Price-Anderson Act.

In opposition to the first motion, Plaintiffs argued that causation in Colorado is determined not by a but-for test but by a "substantial factor" test requiring only that the defendant's tortious conduct be "a substantial contributing cause of the injury." *Aplt. App.*, Vol. XII at 1986. Plaintiffs contended that their experts' opinions created a triable issue of fact "as to whether the Defendants' emission of radiation over the course of decades substantially contributed" to the personal-injury Plaintiffs' illnesses. *Id.* at 2000. As for the medical-monitoring claims, Plaintiffs asserted that they are viable under Colorado law and that the "bodily injury" requirement of the Price-Anderson Act poses no obstacle because each Plaintiff's exposure to radiation resulted in "DNA damage and cell death." *Id.*, Vol. VIII at 1385.

The district court rejected the substantial-contributing-cause argument in support of Plaintiffs' personal-injury claims. It stated that a tort claimant in Colorado must demonstrate both of two distinct components of causation: (1) that "but for" the defendant's conduct the claimant would not have been injured and (2) that the defendant's conduct was a "substantial factor in bringing about the injury." *Id.* at 2205 (internal quotation marks omitted). Because Plaintiffs had submitted no evidence of but-for causation, the court granted summary judgment.

The court also rejected the medical-monitoring claims. The threshold issue, the court explained, was whether such claims constitute claims for "bodily injury" under the Price-Anderson Act. Construing this issue to be jurisdictional, the court treated Defendants' summary-judgment motion on these claims as a motion to dismiss under Federal Rule of Civil Procedure 12(b)(1). It then held that to have a claim for "bodily injury" under the Act, a plaintiff must "manifest[] objective symptoms." *Id.* at 2228. Even if the DNA damage and cell death purportedly suffered by Plaintiffs increased the risk of future illness, reasoned the court, that injury was presently asymptomatic and thus not a "bodily injury." Accordingly, the court concluded that it lacked subject-matter jurisdiction over the medical-monitoring claims and dismissed them without prejudice. The court did not address whether medical-monitoring claims are recognized under Colorado law.

Plaintiffs challenged these rulings in a postjudgment motion under Federal Rule of Civil Procedure 59(e), which the district court denied. Plaintiffs then appealed to this court, presenting the following questions: (1) whether Plaintiffs were required to show “but for” causation under Colorado law and (2) whether unmanifested, subclinical injuries resulting from exposure to radiation can support a “bodily injury” claim under the Price-Anderson Act.

## II. DISCUSSION

We review the grant of summary judgment *de novo*. *See Navair, Inc. v. IFR Americas, Inc.*, 519 F.3d 1131, 1137 (10th Cir. 2008). Summary judgment should be granted when there is no genuine dispute over any material fact and a party is entitled to prevail as a matter of law. *See id.*; Fed. R. Civ. P. 56(c). Likewise, “[w]e review a dismissal for lack of subject-matter jurisdiction *de novo*, accepting the district court’s findings of jurisdictional facts unless they are clearly erroneous.” *Montoya v. Chao*, 296 F.3d 952, 954–55 (10th Cir. 2002).

As previously mentioned, actions brought under the Price-Anderson Act are governed by the “substantive rules for decision” of the state in which the putative nuclear incident occurred. 42 U.S.C. § 2014(hh). Plaintiffs claim that they suffered harmful radiation exposure at Defendants’ facilities in Uravan, Colorado, and the parties agree that Colorado tort law governs Plaintiffs’ claims. We therefore apply Colorado law. *See Grynberg v. Total, S.A.*, 538 F.3d 1336, 1346 (10th Cir. 2008) (adopting parties’ assumption of applicable law).

### A. Personal-Injury Claims

In Colorado, as elsewhere, a party seeking recovery in tort must demonstrate that the defendant's conduct caused the alleged injury. *See Vigil v. Franklin*, 103 P.3d 322, 325 (Colo. 2004). The general rule for causation is that the plaintiff must prove that the alleged "injury would not have occurred but for the defendant's negligent conduct." *Kaiser Found. Health Plan v. Sharp*, 741 P.2d 714, 719 (Colo. 1987). Plaintiffs do not dispute that proposition but argue that when there are "potential multiple or concurring causes" for an injury, Colorado applies a "substantial factor test" for causation, not the more stringent but-for test. Aplt. Br. at 50. Under the substantial-factor test, Plaintiffs contend, an actor's conduct can be deemed causal "where it is of sufficient significance in producing the harm as to lead reasonable persons to regard it as a cause and to attach responsibility.'" *Id.* at 52 (quoting *Sharp v. Kaiser Found. Health Plan*, 710 P.2d 1153, 1155 (Colo. Ct. App. 1985), *aff'd on other grounds*, 741 P.2d 714 (Colo. 1987)).<sup>1</sup> Because the illnesses at issue in this case (cancer and thyroid disease) can have multiple causes, Plaintiffs conclude that this more permissive substantial-factor test applies.

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<sup>1</sup> The quoted language can ultimately be traced to Restatement (Second) of Torts § 431 cmt. a ("The word 'substantial' is used to denote the fact that the defendant's conduct has such an effect *in producing the harm as to lead reasonable men to regard it as a cause*, using the word in the popular sense, in which there always lurks the idea of *responsibility . . .*" (emphasis added)), although, as we shall see, the court-of-appeals decision in *Sharp* ignored essential requirements of the substantial-factor test.

The legal issues regarding causation that arise when a disease has multiple possible causes are subtle. Plaintiffs' statement of the substantial-factor test reflects the difficulty of the issues; it relies on certain language from the Restatement (Second) of Torts but misstates the law by overlooking other language. To better understand the proper test, it is helpful to review the more precise, and clearer, treatment of multiple possible causes in the Proposed Final Draft of the Restatement (Third) of Torts: Liability for Physical Harm.<sup>2</sup> We then compare that treatment to the treatment in the Restatement (Second) and see that the ultimate legal standards in the two Restatements are essentially identical for our purposes. Roughly speaking (we will become more precise as we discuss the underlying concepts), under the Restatements a Plaintiff could recover from Defendants only if either (1) Uravan radiation was a but-for cause of the Plaintiff's ailments or (2) that radiation (either alone or with other factors) would have caused the ailments. Because Colorado law has been consistent with the treatment of causation in the Restatements, we presume that it, too, would impose this requirement for recovery. We therefore reject Plaintiffs' version of the substantial-factor test.

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<sup>2</sup> The proposed final draft has been approved by the American Law Institute, but its publication has been delayed until work on other topics covered in the Restatement is finished. *See* Press Release, American Law Institute, Agenda Set for the American Law Institute's 86th Annual Meeting in Washington, D.C. (April 16, 2009).

To explain how we have arrived at this conclusion, we turn to an extended discussion of general principles. Applying those principles to this case, we then affirm the summary judgment.

### **1. General Principles**

The term *substantial factor* appears in the treatment of causation in the Restatement (Second) of Torts (as well as its predecessor, the original Restatement of Torts). It has been abandoned, however, in the Restatement (Third) of Torts because of the misunderstanding that it has engendered. *See id.* § 26 cmt. j.

Causation under the Restatement (Third) has two components. First, the tortious conduct must be the “factual cause” of the physical harm to the plaintiff. *See id.* §§ 26, 27. Ordinarily, a cause is a “factual cause” only if it is a but-for cause, *see id.* § 26, although there is a potential exception, which we will discuss shortly, when there are multiple causes, *see id.* § 27. Second, the harm must be among the “harms that result from the risks that made the actor’s conduct tortious.” *Id.* § 29. Traditionally, this second component has been referred to as “proximate cause,” a term that has baffled law students (to say nothing of jurors, lawyers, and judges) for generations; but the Restatement (Third) has wisely redescribed the subject matter as “scope of liability.” *See id.* Ch. 6, Special Note on Proximate Cause; *id.* § 29 cmt. b. We need not dwell on this topic—the focus of our attention is on factual cause—but an illustration in the Restatement (Third)

conveys what is necessary to show that an injury factually caused by the defendant is within the scope of liability:

Richard, a hunter, finishes his day in the field and stops at a friend's house while walking home. His friend's nine-year-old daughter, Kim, greets Richard, who hands his loaded shotgun to her as he enters the house. Kim drops the shotgun, which lands on her toe, breaking it. Although Richard was negligent for giving Kim his shotgun, the risk that made Richard negligent was that Kim might shoot someone with the gun, not that she would drop it and hurt herself (the gun was neither especially heavy nor unwieldy). Kim's broken toe is outside the scope of Richard's liability, even though Richard's tortious conduct was a factual cause of Kim's harm.

*Id.* cmt. b, illus. 3.

Returning to the concept of factual cause, § 26 states that “[c]onduct is a factual cause of harm when the harm would not have occurred absent the conduct.” As comment b to the section states, this standard “is familiarly referred to as the ‘but-for’ test.” That test “requires a counterfactual inquiry” in which the court considers “what would have occurred if the actor had not engaged in the tortious conduct.” *Id.* cmt. e. If the harm complained of would have occurred notwithstanding the actor's conduct, then that conduct is not a but-for cause. *See id.*

Section 27, however, recognizes that it is sometimes appropriate to impose liability even when the harm would have occurred without the defendant's act. This exceptional circumstance is narrowly defined to impose liability only “when a tortfeasor's conduct, while not necessary for the outcome, would have been a

factual cause if the other competing cause had not been operating.” *Id.* § 27 cmt. a. The black letter of § 27 states: “If multiple acts exist, each of which alone would have been a factual cause under § 26 of the physical harm at the same time, each act is regarded as a factual cause of the harm.” Again, an illustration clarifies the concept:

Rosaria and Vincenzo were independently camping in a heavily forested campground. Each one had a campfire, and each negligently failed to ensure that the fire was extinguished upon retiring for the night. Due to unusually dry forest conditions and a stiff wind, both campfires escaped their sites and began a forest fire. The two fires, burning out of control, joined together and engulfed Centurion Company’s hunting lodge, destroying it. Either fire alone would have destroyed the lodge. Each of Rosaria’s and Vincenzo’s negligence is a factual cause of the destruction of Centurion’s hunting lodge.

*Id.* cmt. a, illus. 1.

The formulation of the requirements for causation in the Restatement (Third) employs different nomenclature from that in the Restatement (Second), but it does not impose a stricter requirement for factual causation. We explain.

Section 430 of the Restatement (Second) states that a negligent person is liable for another’s harm only if the negligent conduct was a “legal cause” of the harm. Section 431 then introduces the notion of “substantial factor,” stating that “negligent conduct is a legal cause of harm to another if . . . his conduct is a substantial factor in bringing about the harm” and no rule of law exempts him from liability. Section 433 sets forth considerations that are “important in

determining whether the actor's conduct is a substantial factor in bringing about harm to another." Those considerations are:

- (a) the number of other factors which contribute in producing the harm and the extent of the effect which they have in producing it; (b) whether the actor's conduct has created a force or series of forces which are in continuous and active operation up to the time of the harm, or has created a situation harmless unless acted upon by other forces for which the actor is not responsible; (c) lapse of time.

Restatement (Second) of Torts § 433.

Reading the black letter of §§ 430, 431, and 433, one could easily conclude that courts and juries have substantial leeway to depart from but-for causation in imposing liability. It would appear to be enough if the considerations listed in § 433 suggest that liability is appropriate. This is how Plaintiffs appear to understand the doctrine. But this conclusion cannot stand once one reads § 432, which imposes a requirement for liability that is at least as stringent as the factual-cause requirement in the Restatement (Third). Section 432(1) sets forth the general requirement of but-for causation; and § 432(2) recognizes what has become the exception in Restatement (Third) § 27 for "multiple sufficient causes." Section 432 states:

(1) Except as stated in Subsection (2), the actor's negligent conduct is not a substantial factor in bringing about harm to another if the harm would have been sustained even if the actor had not been negligent.

(2) If two forces are actively operating, one because of the actor's negligence, the other not because of any misconduct on his part, and each of itself is sufficient to bring about the harm to another, the

actor's negligence may be found to be a substantial factor in bringing it about.

Thus, as we understand the substantial-factor requirement in the Restatement (Second), it adopts essentially the same standard for factual cause as the Restatement (Third). And that standard is different from what Plaintiffs advocate. What Plaintiffs would apparently use to determine whether conduct is a substantial factor—the conditions set forth in § 433—are actually limitations on what conduct can qualify as a substantial factor. Once conduct satisfies one of the alternative requirements in § 432(1) and (2)—which in the Restatement (Third) §§ 26, 27 are the alternative grounds for being a factual cause—it must still qualify under § 433 if it is to be considered a substantial factor. (The counterpart to § 433 in the Restatement (Third) is § 36, which states that “[w]hen an actor's negligent conduct constitutes only a trivial contribution to a causal set that is a factual cause of physical harm under § 27, the harm is not within the scope of liability.” An actor's trivial contribution thus would still be a factual cause, but the actor would not be liable because the harm was outside the scope of liability. It should be noted that § 36, unlike Restatement (Second) § 433, applies only to one of multiple sufficient causes, not to a but-for factual cause.<sup>3</sup>)

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<sup>3</sup> Restatement (Third) § 36 comment a implies that § 433 did not apply to but-for causes. But the Reporters for the Restatement now believe that the comment was erroneous in that respect. See Joseph Sanders, William C. Powers, Jr. & Michael D. Green, *The Insubstantiality of the “Substantial Factor” Test for Causation*, 73 Mo. L. Rev. 399, 421–22 n.90 (2008).

There are two further nuances regarding factual cause that need to be explained: the notion of causal sets and the meaning of the term *sufficient cause*. The notion of a causal set is a helpful innovation in the Restatement (Third). A number of factors (often innocent) generally must coexist for a tortfeasor's conduct to result in injury to the plaintiff. Even when the defendant drives his car into the plaintiff's car, no injury would have resulted if the plaintiff had not entered her car and driven to the accident site. That there are many factors does not mean that the defendant's conduct was not a cause. As comment c to § 26 of the Restatement (Third) explains:

A useful model for understanding factual causation is to conceive of a set made up of each of the necessary conditions for plaintiff's harm. Absent any one of the elements of the set, the plaintiff's harm would not have occurred. Thus, there will always be multiple (some say, infinite) factual causes of a harm, although most will not be of significance for tort law and many will be unidentified. That there are a large number of causes of an event does not mean that everything is a cause of an event. The vast majority of acts, omissions, and other factors play no role in causing any discrete event.

This causal-set model does not imply any chronological relationship among the causal elements involved, although all causes must precede the plaintiff's harm. An actor's tortious conduct may occur well before the other person suffers harm and require a number of subsequent events to produce the harm. Thus, a gas valve negligently constructed may not fail for many years. Toxic substances may be sold without adequate warnings but not produce harm for decades. Conversely, the tortious conduct may occur after a number of other necessary events have already occurred but close in time to the occurrence of harm. Nor does this model imply any relationship among the causal elements; causal elements may operate independently, as when a property owner neglects a patch of ice on a

sidewalk and a careless pedestrian fails to notice the condition, producing a fall.

When § 27 of the Restatement (Third) speaks of “multiple sufficient causes,” it could more precisely speak of “multiple sufficient causal *sets*.” *See id.* § 27 cmt. f. For example, the evidence at trial may show (1) that conditions A, B, C, D, E, and F were present; (2) that if only A, B, and C had been present, the injury would probably have occurred; and (3) that if only D, E, and F had been present, the injury would probably have occurred. If F is the defendant’s misconduct, then F was not a but-for cause of the injury; even without F, the injury would have occurred (all it took was A, B, and C). But since D, E, and F would also have caused the injury, F is a component of a second causal set. F must, of course, be a *necessary* component of the second causal set to be a factual cause of the injury. *See id.* That is, F would not be a factual cause if D and E alone would have been enough to cause the injury; F must be a “but for” component of at least one causal set for liability to attach.

Moreover, multiple causal sets may share some components. If A, B, and C would probably have caused the injury (with each of A, B, and C being necessary) and so would have A, B, and D, the tortfeasor who committed D would be liable.

The Restatement (Third) provides the following example:

Able, Baker, and Charlie, acting independently but simultaneously, each negligently lean on Paul’s car, which is parked at a scenic overlook at the edge of a mountain. Their combined force results in the car rolling over the edge of a diminutive curbstone and

plummeting down the mountain to its destruction. The force exerted by each of Able, Baker, and Charlie would have been insufficient to propel Paul's car past the curbstone, but the combined force of any two of them is sufficient. Able, Baker, and Charlie are each a factual cause of the destruction of Paul's car.

*Id.* § 26 cmt. f, illus. 3.

A real-world example would be a typical asbestosis lawsuit. A person suffering from asbestosis may have been exposed to asbestos from a number of sources (say, four), and the total exposure may have been more than enough to cause asbestosis. It may well be (1) that asbestosis would probably have arisen even without exposure of the victim to Source A, so Source A is not a but-for cause; and (2) that Source A by itself would not have caused asbestosis. But Source A may be a factual cause if it was a necessary component of a causal set that included, say, two of the other sources and the three together would probably have caused asbestosis. *See, e.g., Spaur v. Owens-Corning Fiberglas Corp.*, 510 N.W.2d 854, 858 (Iowa 1994); *Eagle-Picher v. Balbos*, 604 A.2d 445, 459 (Md. 1992); Restatement (Third) of Torts § 27 Reporters' Note cmt. g.<sup>4</sup>

Finally, we attempt to dispel some confusion that may arise from use of the word *sufficient* in the provisions of the Restatement (Second) and the Restatement

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<sup>4</sup> Restatement (Third) provides no guidance on whether an actor's contribution can be considered as an element of a causal set that contains only a *portion* of another actor's contribution. *See id.* § 27 cmt. f. For example, could the causal set be composed of the asbestos exposure caused by the defendant plus half of the asbestos exposure caused by someone else? We need not take a position on this difficult question to resolve the issues on appeal.

(Third) that provide an alternative to but-for causation in limited circumstances. Restatement (Second) § 432(2) employs the phrase “forces . . . sufficient to bring about harm to another” and Restatement (Third) § 27 is entitled “Multiple Sufficient Causes.” The use of the word *sufficient* in both Restatements does not mean that either of them would impose liability for conduct that is not a but-for cause if only the conduct *could* have caused the injury. Rather, it is necessary for the plaintiff to show that the conduct (or the causal set of which it is a necessary part) *would* in fact have caused the injury. As we all know, in the modern world of many hazardous substances, there may be many possible causes of a particular cancer. Each could be said to be *sufficient* to cause a specific person’s cancer. But one who suffers that cancer does not have a cause of action based on each such substance to which he was exposed, regardless of how unlikely it is that the cancer resulted from that exposure. Only a substance that would have actually (that is, probably) caused the cancer can be a factual cause without being a but-for cause. This is clear in the black letter of Restatement (Third) § 27, which states: “If multiple acts exist, each of which alone *would have been* a factual cause under § 26 of the physical harm at the same time, each act is regarded as a factual cause of the harm.” *Id.* (emphasis added). And the illustrations to the section confirm this reading. We have already quoted the illustrations involving two fires, each of which “alone would have destroyed the lodge,” *id.* cmt. a, illus. 1, and involving three persons leaning on a car, “the combined force of any two

of [whom] is sufficient [to propel the car],” *id.* cmt. f, illus. 3. We leave to a footnote a third illustration, the one most pertinent to the case before us, which requires proof that a drug “would have caused” the birth defect that could also have been caused by an unrelated genetic condition. *Id.* cmt. e, illus. 2. It is not enough that the drug *could have* caused the defect, as might be inferred from use of the term *sufficient cause*.<sup>5</sup>

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<sup>5</sup> Comment e, Illustration 2 states:

Trent is the guardian ad litem and father of Lakeesha, an infant born with a birth defect. Trent sues Pharmco, a pharmaceutical company, alleging both that Pharmco’s drug caused Lakeesha’s birth defect and that Pharmco was negligent for its failure to warn that its drug was teratogenic. Pharmco makes a third-party claim against Wardman, alleging that it negligently released chemicals that contaminated Trent’s ground and drinking water. Trent introduces sufficient evidence for the factfinder to find that Pharmco’s failure to warn was negligent, that the drug was a cause of Lakeesha’s birth defect, and that an adequate warning would have prevented the birth defect. Pharmco introduces sufficient evidence of Wardman’s negligence and that its chemical was a cause of Lakeesha’s birth defect. Trent then receives permission to amend his complaint to make a claim against Wardman. Pharmco contends that its drug did not cause Lakeesha’s birth defect. Rather, Pharmco contends, Lakeesha’s birth defect was caused by a genetic condition wholly unrelated to the drug. Pharmco introduces sufficient evidence in support of its claims. The factfinder must determine if the drug, absent Lakeesha’s genetic condition, *would have caused* the birth defect. The factfinder must also determine if, absent the drug, Lakeesha’s genetic condition *would have caused* the birth defect. If the factfinder determines that either the drug or the genetic condition would have, in the absence of the other, caused Lakeesha’s birth defect at the same time then each is a

(continued...)

The Restatement (Second) is not as clear as the Restatement (Third) in excluding conduct that merely “could have” caused the injury, but the sole illustration to the point in Restatement (Second) § 432 is essentially the same as the concurrent-fires illustration in Restatement (Third) § 27. In any event, the very notion of two (or more) causes (or causal sets), neither of which is a but-for cause, necessarily assumes that each of the causes *would have* caused the injury. Say there are two such causes, A and B. The reason that A is not a but-for cause is that the injury would probably have occurred even if A had not been present. But that is merely another way of saying that even in the absence of A, B probably *would have* caused the injury; it would not be enough (to prevent A from being a but-for cause) that B may have caused the injury on its own but probably would not have.<sup>6</sup>

To sum up, as we understand the Restatement (Second) and the Restatement (Third), a defendant cannot be liable to the plaintiff unless its conduct is either (a) a but-for cause of the plaintiff’s injury or (b) a necessary component of a causal

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<sup>5</sup>(...continued)

factual cause pursuant to this section. If the factfinder determines that either the drug or genetic condition played no role in the birth defect, then the other’s causal status is determined under the but-for standard of § 26.

(Emphases added).

<sup>6</sup> We recognize that the factfinder could find that there was a 50% probability that B would have caused the injury. We can leave to another day how such a circumstance would affect the analysis of factual cause.

set that (probably) would have caused the injury in the absence of other causes. In particular, conduct was not a “substantial factor”, within the meaning of the term in the Restatement (Second), in bringing about a plaintiff’s injury unless it satisfied (a) or (b), and also was a sufficiently significant factor under the considerations set forth in Restatement (Second) § 433. Thus, Plaintiffs’ substantial-factor argument misconceives the meaning of substantial factor in the Restatement (Second).

To be sure, it is Colorado law that governs here, not the Restatements. The Colorado Supreme Court may have decided to disagree with the Restatements and adopt a different standard for causation. But we see no evidence of this. We have reviewed the Colorado opinions relied upon by Plaintiffs for their view of the substantial-factor standard. None expressly addresses multiple sufficient causes. All but one are fully consonant with our above analysis. The sole exception is the opinion by the Colorado Court of Appeals in *Sharp*, 710 P.2d at 1155. That decision held that the trial court had erred in requiring evidence of but-for causation because the plaintiff had been required to show only that the misdiagnosis of her heart condition was a “substantial factor” in causing her heart attack. In language ultimately derived from Restatement (Second) § 431 cmt. a, the court said, “A defendant’s conduct is a substantial factor where it is of sufficient significance in producing the harm as to lead reasonable persons to regard it as a cause and to attach responsibility.” *Sharp*, 710 P.2d at 1155; *see*

Restatement (Second) § 431 cmt. a (“The word ‘substantial’ is used to denote the fact that the defendant’s conduct has such an effect *in producing the harm as to lead reasonable men to regard it as a cause*, using the word in the popular sense, in which there always lurks the idea of *responsibility . . .*” (emphasis added)).

But the court apparently ignored Restatement (Second) § 432, discussed above, which states that conduct is not a substantial factor unless it is a but-for cause or one of multiple sufficient causes. In any event, the state Supreme Court took the case and affirmed on a different theory. *See Sharp*, 741 P.2d at 718, 720 (finding sufficient evidence of but-for causation and affirming court of appeals without reaching its “‘substantial factor’ analysis”).

Our role here is to predict what the Colorado Supreme Court would adopt as the governing law. *See TMJ Implants, Inc. v. Aetna, Inc.*, 498 F.3d 1175, 1180 (10th Cir. 2007) (federal courts applying state law must “predict what the state’s highest court would do” (internal quotation marks omitted)). Predicting another court’s decision is necessarily an uncertain proposition. In our view, however, it would be too adventurous on our part to assume that Colorado would depart from the Restatements. We therefore hold that Defendants would be liable only upon proof of one of the following: (1) that exposure of a Plaintiff to Uranium radiation was a but-for cause of the Plaintiff’s medical condition or (2) that such exposure to Uranium radiation was a necessary component of a causal set that would have caused the medical condition.

We now examine whether Plaintiffs supplied such evidence.

## 2. Causation Evidence

Plaintiffs failed to raise in district court a genuine issue of fact regarding factual causation. That is, they failed to present to the court evidence, or even an argument, that Uravan radiation was either a but-for cause of any medical condition suffered by one of the Plaintiffs or that Uravan radiation was a necessary component of a causal set that would probably have caused one of those conditions.

Plaintiffs presented five expert witnesses. Dr. Colin K. Hill, who was offered only as an expert with respect to the medical-monitoring Plaintiffs, testified regarding how radiation injures cells and begins the process that can lead to cancer and other ailments. Dr. A. James Rутtenber addressed only general causation, that is, whether radiation at Uravan had the capacity to cause the cancers and thyroid diseases that the Plaintiffs developed. *See Neiberger v. Fed Ex Ground Package Sys., Inc.*, 566 F.3d 1184, 1191 (10th Cir. 2009) (discussing general and specific causation); Restatement (Third) of Torts § 28 cmt. c(3), c(4) (same). Dr. F. Owen Hoffman provided the raw data upon which the final two experts relied. He estimated the mean dose of radiation received by each Plaintiff from Uravan operations. And for the Plaintiffs claiming thyroid diseases, he estimated their radiation exposure from the detonation of atomic weapons at a testing site in Nevada (the Nevada Test Site or NTS) conducted between 1959 and

1970. In addition, for the cancer Plaintiffs (including the one who suffered thyroid cancer) he converted the Uravan dosage into a figure representing the “Excess Risk of Diagnosed Cancer” and an “Assigned Share” figure that can be used to compare the number of cancers expected in a population exposed to that level of radiation to the number that would be expected in an unexposed population. Aplt. App., Vol. X at 1869, 1872.

To prove specific causation for each Plaintiff—that is, to prove that the Uravan radiation caused the specific ailment of which the Plaintiff complained—Plaintiffs relied on the remaining two experts: Drs. Inder J. Chopra and Robert Peter Gale. Dr. Chopra addressed the Plaintiffs with thyroid disease (including the one case of thyroid cancer) and Dr. Gale addressed the remaining Plaintiffs, all of whom had suffered cancer.

Dr. Chopra prepared a report that assessed each thyroid Plaintiff and concluded that the Plaintiff’s exposure to radiation from Uravan and NTS fallout was a “substantial factor contributing to” the Plaintiff’s thyroid disease. *See, e.g., id.*, Vol. IX at 1562. A “substantial factor,” he explained, “is intended to mean that the exposures were one of the variables that contributed to the observed health effect (thyroid disease).” *Id.* at 1556. He defined “substantial” as “an amount that is not trivial,” *id.*, concluding that if the “contribution of any one source to [a Plaintiff’s] total exposure to irradiation was 5% of the total,” its contribution was “substantial,” *Id.* at 1557. Because at least 5% of the radiation

exposure for each Plaintiff came from Uravan, the Uravan radiation was a substantial contributing factor. Dr. Chopra's report did not, however, state with respect to any Plaintiff that Uravan radiation was a but-for cause of the Plaintiff's thyroid disease or was a necessary component of a causal set that probably would have caused the Plaintiff to suffer the disease.

For the Plaintiffs with cancer (other than thyroid cancer), Dr. Gale's report opined that "to a reasonable medical probability exposure to ionizing radiations was a substantial factor contributing to each plaintiff developing cancer(s)." *Id.* at 1642 (emphasis omitted). The report did not define *substantial contributing factor*, but it noted that, based on Dr. Hoffman's data, each of the Plaintiffs had an assigned share exceeding 10%, and he later submitted a declaration that this meant that there is greater than a "10% likelihood [that a] Plaintiff's cancer was contributed to by the additional radiation exposure from Defendants' uranium operations." *Id.* Vol. XII at 2075. As was true of Dr. Chopra, however, Dr. Gale did not opine that Uravan radiation was either a but-for cause of any Plaintiff's cancer or was a necessary component of a causal set that would have caused the cancer.

Thus, the evidence relied on by Plaintiffs did not show that Uravan radiation was a factual cause of any of their ailments. In reaching this conclusion we are not being hypertechnical. The problem for Plaintiffs is not that their experts failed to utter some magic words, such as "but for." Nor are we relying

on any expertise of this court in analyzing the data and opinions from Plaintiffs' experts. We claim no such expertise. For all we know, the data would support but-for claims of some, or even all, Plaintiffs. The problem for Plaintiffs is that they did not make a timely argument that they had produced evidence of but-for causation, and they have never (not even in this court) contended that they have produced evidence that Uravan radiation was a necessary component of a causal set that probably would have caused the Plaintiffs' ailments.

Our conclusion in this regard follows from an examination of how the issue was joined below. The Defendants' summary-judgment motion on the personal-injury claims was premised on the absence of but-for evidence. Defendants stressed that agents other than radiation can cause the Plaintiffs' ailments and that neither Dr. Chopra nor Dr. Gale had opined that those ailments "would not have occurred 'but for' [the Plaintiffs'] exposure to the radioactive substances attributable to Defendants' activities." *Id.* Vol. XI at 1928. In response, Plaintiffs argued that they need not establish but-for causation and that their experts—namely Drs. Chopra and Gale—created a triable issue of fact by opining that exposure to radiation at Uravan "substantially contributed" to the development of each Plaintiff's disease. *Id.* Vol. XII at 1992, 1997–98. At a hearing on the matter the district court rejected Plaintiffs' "substantially contributed" standard and stated that Defendants were entitled to summary judgment because the Plaintiffs' "experts ha[d] not offered the requisite opinion

of ‘but for’ causality.” *Id.* Vol. XIII at 2208. A few seconds after stating that conclusion, the court asked whether there was “[a]ny need for clarification or further explanation with regard to the ruling on this motion?” *Id.* Plaintiffs’ counsel responded “No, your Honor.” *Id.*

Ten days later Plaintiffs filed a motion to alter or amend the judgment under Federal Rule of Civil Procedure 59(e). The motion asserted, for the first time, that their evidence could satisfy the but-for requirement (if one were erroneously imposed). But even then the specific arguments that Plaintiffs raised amounted to no more than the assertion that the substantial-factor test “actually subsumes the ‘but for’ test.” *Id.* at 2357. They pointed to no evidence that their ailments would not have occurred in the absence of Uravan radiation. Moreover, a Rule 59(e) motion cannot be used to “advance arguments that could have been raised in prior briefing.” *See Grynberg*, 538 F.3d at 1354 (internal quotation marks omitted).

Plaintiffs make better but-for arguments on appeal.<sup>7</sup> But they come too late. Based on the evidence and arguments properly before the district court, summary judgment on all personal-injury claims was appropriately granted. *See Hutton Contracting Co. v. City of Coffeyville*, 487 F.3d 772, 782 (10th Cir. 2007) (“Absent special circumstances, we will not reverse on a ground not raised below.”).

### **B. Medical-Monitoring Claims**

We now turn to the claims seeking payment for medical monitoring to detect the onset of disease. The district court dismissed these claims without prejudice because they do not assert a “bodily injury,” as required for jurisdiction under the Price-Anderson Act. We affirm the dismissal.<sup>8</sup>

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<sup>7</sup>The partial dissent says that two statements by Dr. Chopra would support a finding of but-for causation with respect to the thyroid-disease Plaintiffs. But the Plaintiffs did not rely on the two statements in the district-court proceedings, so the Defendants lacked an opportunity to address, and perhaps dispose of, them. For example, Defendants might have challenged whether Dr. Chopra could reasonably conclude that the Uravan radiation was a but-for cause of each Plaintiffs’ thyroid disease given that (1) none of the 16 thyroid-disease Plaintiffs was exposed to more than 105 rads total from Uravan and NTS radiation; (2) the only thyroid disease suffered by 11 of the 16 was hypothyroidism; and (3) Dr. Chopra’s report states that “[little] data are available on the occurrence of hypothyroidism in persons exposed to low or moderate doses of radiation (<750 rads),” Aplt. App., Vol. II at 1623.

<sup>8</sup> Defendants contend that bodily injury is not a prerequisite to subject-matter jurisdiction under the Price-Anderson Act but merely a required element of the cause of action. They therefore assert that the dismissal should have been with prejudice rather than without prejudice. *See Brereton v. Bountiful City Corp.*, 434 F.3d 1213, 1218 (10th Cir. 2006) (our “cases requir[e] that a dismissal for

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The Price-Anderson Act of 1957 protects the public while promoting the generation of nuclear power by establishing an insurance and indemnification scheme that caps liability in the event of a nuclear mishap. *See Duke Power Co. v. Carolina Env'tl. Study Group, Inc.*, 438 U.S. 59, 64–65 (1978). The Act has been amended on several occasions. In its present form it grants federal district courts jurisdiction to hear “public liability action[s].” 42 U.S.C. § 2210(n)(2). A “public liability action” is “any suit asserting public liability.” *Id.* § 2014(hh). The term *public liability* encompasses, with a few exceptions, “any legal liability arising out of or resulting from a nuclear incident.” *Id.* § 2014(w).<sup>9</sup> A “nuclear

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<sup>8</sup>(...continued)

lack of jurisdiction be without prejudice”). Defendants may be correct on the law. *See Phillips v. E.I. DuPont de Nemours & Co. (In re Hanford Nuclear Reservation Litig.)*, 534 F.3d 986, 1009–10 (9th Cir. 2008) (bodily injury is not prerequisite to subject-matter jurisdiction under Price-Anderson Act). But their failure to cross-appeal on this issue precludes us from remanding for entry of a dismissal with prejudice. Under the cross-appeal rule, “an appellate court may not alter a judgment to benefit a nonappealing party.” *Greenlaw v. United States*, 128 S. Ct. 2559, 2564 (2008). “This rule applies to preclude an appellate court, in the absence of a cross-appeal, from changing a dismissal without prejudice to a dismissal with prejudice.” *Standard Inv. Chartered, Inc. v. Nat’l Ass’n of Sec. Dealers, Inc.*, 560 F.3d 118, 126 (2d Cir. 2009); *see* 15A Charles Alan Wright, Arthur R. Miller & Edward H. Cooper, *Federal Practice and Procedure* § 3904, at 198 (2d ed. 1991). Also, our standard of appellate review of the bodily-injury issue would be the same in this case whether we treat the issue as a matter of jurisdiction or of the sufficiency of the evidence on summary judgment. *See Montoya*, 296 F.3d at 954–55 (review of legal issues underlying dismissal for lack of subject-matter jurisdiction is *de novo*); *Navair*, 519 F.3d at 1137 (review of summary judgment is *de novo*). Therefore, we need not decide whether bodily injury is a jurisdictional requirement.

<sup>9</sup> The term does not encompass (1) workers’ compensation claims under  
(continued...)

incident,” in turn, is defined as “any occurrence . . . causing . . . *bodily injury*, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear, or byproduct material.” 42 U.S.C. § 2014(q) (emphasis added).

The parties agree that whether the medical-monitoring Plaintiffs (who do not claim to have suffered a sickness or disease) can sue under the Price-Anderson Act depends on whether they have suffered “bodily injury.” The medical-monitoring Plaintiffs contend that they have suffered bodily injury in the form of “DNA damage and cell death” resulting from their exposure to radiation at Uravan. Aplt. App., Vol. VIII at 1384–85. Although these injuries are subclinical—not having been manifested in any diagnosed disease or injury—Plaintiffs contend that the alleged injuries have enhanced the risk that they will develop disease in the future. They seek damages to cover the cost of detecting latent radiation-related health problems.

In support of this claim, Plaintiffs rely on reports prepared by Dr. Colin K. Hill, a radiation biologist. Dr. Hill’s reports explain that when radiation hits a

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<sup>9</sup>(...continued)  
state or federal law brought by persons “employed at the site of and in connection with the activity where the nuclear incident occurs”; (2) “claims arising out of an act of war”; and (3) when used in 42 U.S.C. § 2210(a), (c), and (k), “claims for loss of, or damage to, or loss of use of property which is located at the site of and used in connection with the licensed activity where the nuclear incident occurs.” 42 U.S.C. § 2014(w).

human cell, it can break DNA strands in the cell's nucleus, by direct or indirect action. Although the vast majority of such breaks are properly repaired by the body, some mutations in the DNA remain and can lead to the development of a cancerous cell. Strand breaks also can result in death of the cell. Such radiation-induced cell injury, Dr. Hill explained, can lead to thyroid disease. Dr. Hill concluded that although a particular exposure to radiation may not trigger these processes, there is no dosage threshold; any exposure to radiation can break DNA strands and set the train in motion.

In our view, "DNA damage and cell death," which creates only a possibility of clinical disease, does not constitute a "bodily injury" under the Price-Anderson Act. It is true that a number of courts have recognized medical-monitoring claims (not brought under the Price-Anderson Act) premised on subclinical effects of toxic exposure. But, tellingly, these courts have not reasoned that subclinical injuries from a toxic agent are *bodily* or *physical* injuries. Rather, those that have recognized medical-monitoring claims absent clinical symptoms have grounded the cause of action on the plaintiff's "legally protected interest in avoiding . . . expensive medical evaluations caused by the tortious conduct of others."<sup>10</sup> Other

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<sup>10</sup> *Meyer ex rel. Coplin v. Fluor Corp.*, 220 S.W.3d 712, 717 (Mo. 2007); *see, e.g., Bower v. Westinghouse Elec. Corp.*, 522 S.E. 2d 424, 426–27, 430 (W. Va. 1999) (in claim for medical-monitoring relief brought by asymptomatic plaintiffs exposed to toxic substances, court rejects contention that claim "must rest upon the existence of present physical harm"; "the exposure itself and the concomitant need for medical testing constitute the injury" (internal quotation (continued...))

courts that have permitted medical-monitoring relief have required a present physical injury; and they have generally presumed that the subclinical effects of toxic exposure do not constitute *physical* injury.<sup>11</sup>

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<sup>10</sup>(...continued)

marks omitted)); *Bourgeois v. A.P. Green Indus., Inc.*, 716 So. 2d 355, 356–57, 359 (La. 1988) (although asymptomatic plaintiffs did not suffer “bodily harm” from exposure to asbestos, their medical-monitoring claim rested on “legally protected interest” of avoiding “costly medical bills”), *abrogated by statute*, La. Civ. Code Ann. art. § 2315(B); *Potter v. Firestone Tire & Rubber Co.*, 863 P.2d 795, 801–03, 822 (Cal. 1993) (although plaintiffs could not trace any physical symptom to their exposure to carcinogens, their need to pay for medical monitoring was a “harm” even if not a “physical harm” within the meaning of Restatement (Second) of Torts § 7); *see also Owens-Illinois, Inc. v. United Ins. Co.*, 650 A.2d 974, 985 (N.J. 1987) (New Jersey law allows recovery for medical-monitoring expenses “even without evidence of physical injury.”)

<sup>11</sup> *See, e.g., Trimble v. Asarco, Inc.*, 232 F.3d 946, 950, 963 (8th Cir. 2000) (rejecting medical-monitoring claim by neighbors of refinery that released “lead and other particulates” into the air because Nebraska law does not recognize such a claim absent “present physical injury”), *abrogated on other grounds by Exxon Mobil Corp. v. Allapattah Serv., Inc.*, 545 U.S. 546 (2005); *Ball v. Joy Techs., Inc.*, 958 F.2d 36, 38–39 (4th Cir. 1991) (exposure to and absorption of toxic chemicals does not constitute “physical injury” supporting medical-monitoring claim under Virginia or West Virginia law), *overruled in part by Bower*, 522 S.E.2d 424 (W. Va.) (recognizing cause of action for medical monitoring absent proof of physical injury); *Houston County Health Care Auth. v. Williams*, 961 So. 2d 795, 811 (Ala. 2006) (costs of medical monitoring can be recovered only on a claim of “present physical injury,” so costs cannot be recovered by plaintiffs who had not undertaken procedure to remove breast implants or developed “. . . infection or other adverse “bodily injury” (which was defined as “bodily injury, sickness, or disease . . . sustained . . . during the policy period”). *Id.* effects”); *Wood v. Wyeth-Ayerst Labs., Div. of Am. Home Prods.*, 82 S.W.3d 849, 850–51, 859 (Ky. 2002) (appellant who ingested diet drugs linked to heart problems could obtain medical monitoring as component of damages when “testing demonstrates the presence of disease”). *But see Werlein v. United States*, 746 F. Supp. 887, 901, 904–05 (D. Minn. 1990) (chromosomal injury can constitute “present physical injury” supporting medical-monitoring claim), *vacated in part by* 793 F. (continued...)

Perhaps more significantly, adopting the Plaintiffs' understanding of the term *bodily injury* would render it superfluous in the statute. *See McCloy v. U.S. Dept. of Agric.*, 351 F.3d 447, 451 (10th Cir. 2003) ("Under a long-standing canon of statutory interpretation, one should avoid construing a statute so as to render statutory language superfluous."). This superfluity becomes apparent when we review what both Plaintiffs and Defendants agree to be the requirements for a Price-Anderson claim.

The Price-Anderson Act is limited to claims arising from "nuclear incident[s]," 42 U.S.C. § 2210(n)(2), which are occurrences caused by radioactive substances, *see id.* § 2014(q) (defining *nuclear incident* as occurrence arising from the "hazardous properties of source, special nuclear or byproduct material"); *id.* § 2014(z) (defining *source material*); *id.* § 2014(aa) (defining *special nuclear material*); *id.* § (2014)(e) (defining *byproduct material*). In addition, a plaintiff's cause of action must be recognized by the law of the state where the nuclear incident occurred. *See id.* § 2014(hh). Further, the cause of action must be a claim for property damage, *see id.* § 2014(q) (nuclear incident may be occurrence causing "loss of or damage to property, or loss of use of property"), or a personal-injury claim for "bodily injury, sickness, disease, or death," *id.* This much, as we understand the briefs before us, is not disputed. Given this context, however,

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<sup>11</sup>(...continued)  
Supp. 898 (1992).

what purpose is served by the limitation to “bodily injury, sickness, disease, or death” if, as Plaintiffs contend (and we do not question their science), every exposure to radiation causes intracellular damage and such damage is a “bodily injury”? Under Plaintiffs’ analysis, every personal-injury claim that satisfied state law would also meet the requirements of Price-Anderson. The term *bodily injury* (as well as the terms *sickness* and *disease*) would impose no limit on claims; it would be superfluous. *See Dumontier v. Schlumberger Tech. Corp.*, 543 F.3d 567, 570 (9th Cir. 2008) (“[This] interpretation of bodily injury would render the term surplusage, as every exposure to radiation would perforce cause [bodily] injury.”).

Plaintiffs counter that “numerous courts interpreting insurance policies . . . have held that ‘bodily injury’ for purposes of coverage and/or the duty to defend includes” the subclinical injuries that they suffer. *Aplt. Br.* at 60. The insurance cases that they rely upon fall into two categories. One category includes two cases that concerned the allocation of indemnification responsibilities between insurers who provided coverage for different periods during which disease developed. For example, in *Insurance Co. of North America v. Forty-Eight Insulations, Inc.*, 633 F.2d 1212 (6th Cir. 1980), the insured manufacturer of asbestos was being sued by persons who had developed asbestosis. Asbestosis is a disease that develops from exposure over time to asbestos. *See id.* at 1214. The insured had obtained coverage from various companies for different periods of

time. *See id.* at 1215. The issue was whether a policy insuring against claims for “bodily injury” (which was defined as “bodily injury, sickness, or disease . . . sustained . . . during the policy period”), *id.* at 1216, would provide coverage if the policy was not in effect when the asbestosis was diagnosed, but only when the claimant was exposed to asbestos, *see id.* The court held that in this context “bodily injury” encompassed asymptomatic tissue damage from asbestos that was not diagnosable, and a policy in effect at the time of exposure therefore provided coverage. *Id.* at 1223; *see Sandoz, Inc. v. Employer’s Liab. Assurance Corp.*, 554 F. Supp. 257, 265–66 (D.N.J. 1983) (following *Forty-Eight Insulations*, in a case involving a different disease, to reject view that “bodily injury” must be manifest).

The second category of Plaintiffs’ cases includes decisions holding that an insurer providing bodily-injury coverage has a duty to defend against claims when there was an unmanifested injury during the policy period. *See Guar. Nat’l Ins. Co. v. Azrock Indus. Inc.*, 211 F.3d 239, 244 (5th Cir. 2000) (inhalation of asbestos fibers during policy period triggers bodily-injury insurer’s duty to defend), *abrogated on other grounds by Don’s Bldg. Supply, Inc. v. OneBeacon Ins. Co.*, 267 S.W.3d 20, 31–32 (Tex. 2008); *Zurich Am. Ins. Co. v. Nokia, Inc.*, 268 S.W.3d 487, 492–93 (Tex. 2008) (allegations of cellular injuries from use of cellphones triggered bodily-injury insurers’ duty to defend)).

These insurance cases are readily distinguishable. As *Forty-Eight Insulations* recognized, the legal meaning of the term *bodily injury* depends on context. *See* 633 F.2d at 1220–22. It observed that other courts had interpreted “bodily injury” to require a manifest injury when resolving questions regarding a statute of limitations, liability for workers’ compensation, and health-insurance coverage. *See id.* But it decided that none of those decisions would be controlling on the issue before it. *See id.* Most important to the courts in all the cases relied on by Plaintiffs was the proposition that they should construe insurance policy language—and thus the term *bodily injury*—broadly “to promote coverage.” *Id.* at 1219; *accord Zurich*, 268 S.W.3d at 491 (“We resolve all doubts regarding the duty to defend in favor of the duty.”). *Guaranty National*, for example, acknowledged that another construction of the term *bodily injury* was “arguably the truest to the . . . policy language,” 211 F.3d at 251, yet held that ““bodily injury”” encompassed “subclinical tissue damage,” *id.* at 243–44.

The term *bodily injury* arises in this case in a substantially different context. Here it governs whether Plaintiffs can pursue a federal cause of action—namely, the Price-Anderson Act’s “public liability action.” 42 U.S.C. § 2014(hh), (w), (q). Plaintiffs have not directed us to any interpretative canon instructing courts to construe personal-injury causes of action broadly. Indeed, public policy may well argue for denying relief to those without symptomatic, diagnosed ailments so that scarce resources can be directed to compensate those

who have suffered more serious harms. *See Metro-North Commuter R.R. Co. v. Buckley*, 521 U.S. 424, 442 (1997) (in support of decision not to recognize claims for medical-monitoring damages under Federal Employers' Liability Act by plaintiffs who lack manifest symptoms of disease, Court notes that permitting medical-monitoring claims "could threaten both a flood of less important cases (potentially absorbing resources better left available to those more seriously harmed) and the systemic harms that can accompany unlimited and unpredictable liability (for example, vast testing liability adversely affecting the allocation of scarce medical resources)" (citation and internal quotation marks omitted)). Accordingly, we see no reason to abandon traditional methods of statutory interpretation and adopt a meaning for "bodily injury" that renders superfluous several words in 42 U.S.C. § 2014(q).

Finally, we address Plaintiffs' contention that the legislative history of the Price-Anderson Act implies that we must interpret the term *bodily injury* in the Act the way it would be interpreted in an insurance policy. The legislative history on which they rely consists of the following sentence in a congressional committee report: "The words 'sickness, disease' were added following bodily injury [in the definition of *nuclear incident*] in order to make it perfectly clear that the extent of bodily injury was the same as the definition of bodily injury as specified by the standard NELIA [Nuclear Energy Liability Insurance Association] insurance policy." S. Rep. No. 85-296 (1957), *reprinted in* 1957

U.S.C.C.A.N. 1803, 1817–18; *see Berg v. E.I. Dupont De Nemours & Co. (In re Berg Litig.)*, 293 F.3d 1127, 1131 (9th Cir. 2002) (relying on this history to support proposition that Price-Anderson Act does not impose liability for purely emotional injuries). We are not persuaded. To begin with, we are reluctant to base our interpretation of a statute on a single sentence in a committee report that does not appear to be addressing the specific issue before us—namely, whether asymptomatic, undiagnosable cellular injury constitutes a bodily injury under the Act. Moreover, inspection of what was apparently the NELIA standard policy of the time, *see* 23 Fed. Reg. 6681, 6684–87 (Aug. 28, 1958), suggests that “bodily injury” did not encompass cellular, or any other undetectable, injury. Section IV of the policy, entitled “Application of policy,” stated: “This policy applies only to bodily injury or property damage (1) which results from nuclear incidents occurring during the policy period and (2) which is *discovered*, and for which written claim is made against the insured, not later than two years after the end of the policy period.” *Id.* at 6685 (emphasis added); *see* 10 C.F.R. § 140.91 (current standard-policy provision with identical language in § IV(2)). Because the policy covers only “discovered” bodily injury, it apparently would not insure against claims for undetectable injuries such as those at the cellular level. (This is not to say that there would be no compensation under the Act for persons with latent injuries that are detected years after the nuclear incident. For example, the government’s contribution to paying liability claims could include such injuries.

*See, e.g.*, 42 U.S.C. § 2210(i)(2)(C) (when claims from a nuclear incident may exceed Act’s liability cap, President must submit to Congress “1 or more compensation plans” that may include “recommendations that funds be allocated or set aside for the payment of claims that may arise as a result of latent injuries that may not be discovered until a later date”).)

In short, under the Price-Anderson Act the asymptomatic DNA damage and cell death that results whenever one is exposed to radiation is not in itself a bodily injury.<sup>12</sup>

### **III. CONCLUSION**

The judgment of the district court is **AFFIRMED**.

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<sup>12</sup> Because we conclude that the Plaintiffs have not suffered bodily injury, we need not determine whether Colorado law would recognize a cause of action for medical-monitoring relief.

No. 07-1532, *June v. Union Carbide Corp.*

**HOLLOWAY**, Circuit Judge, concurring and dissenting:

I

I join Part II-B of the majority opinion affirming the dismissal of the medical monitoring claims. However, I must respectfully dissent from Part II-A of the majority opinion to the extent that it affirms the district judge's grant of summary judgment on the personal injury claims of the plaintiffs with thyroid disease.

I acknowledge that the thyroid disease plaintiffs did not timely argue before the district judge that they had produced sufficient evidence of but-for causation. And as the majority indicates on p. 29 of their opinion, “[a]bsent special circumstances, we will not reverse on a ground not raised below.” *Hutton Contracting Co. v. City of Coffeyville*, 487 F.3d 772, 782 (10th Cir. 2007). However, assuming that the but-for issue was not raised below, I am convinced that “special circumstances” are present here. Therefore, I conclude that we should exercise our discretion to reverse the district judge's erroneous determination that the thyroid disease plaintiffs did not produce sufficient evidence of but-for causation.

II

“Whether to address the argument despite the litigant's failure to raise it below is subject to this court's discretion based on the circumstances of the individual case.” *United States v. Jarvis*, 499 F.3d 1196, 1202 (10th Cir. 2007) (citing *Singleton v. Wulff*, 428 U.S. 106, 120 (1976)). We have exercised this discretion

where the argument “involves a pure matter of law and the proper resolution of the issue is certain.” *Id.* “We have justified our decision to exercise discretion in these situations because no additional findings of fact or presentation of evidence were required for the issue’s disposition and both parties had the opportunity to address the issue in their appellate briefing.” *Id.* The circumstances of the case before us clearly support the exercise of our discretion to address whether the thyroid disease plaintiffs produced sufficient evidence of but-for causation.

First, whether the thyroid disease plaintiffs presented sufficient evidence of but-for causation to survive summary judgment is a legal question. *See Strate v. Midwest Bankcentre, Inc.*, 398 F.3d 1011, 1018 (8th Cir. 2005) (“[T]he focus of inquiry at the summary judgment stage always remains on the ultimate question of law: whether the evidence is sufficient to create a genuine issue of fact . . . .” (internal quotations omitted)); 9B Charles Alan Wright, Arthur R. Miller & Edward H. Cooper, *Federal Practice & Procedure* § 2524, at 232 (3d ed. 1998) (“It has long been established . . . that whether the evidence presented at trial is sufficient to create an issue of fact for the jury . . . is solely a question of law . . . .”); *see also Shorter v. ICG Holdings, Inc.*, 188 F.3d 1204, 1215 (10th Cir. 1999) (Lucero, J., dissenting) (indicating that whether sufficient evidence has been presented to survive summary judgment is a legal question). Further, if the thyroid plaintiffs had argued that they produced sufficient evidence of but-for causation, and the district judge had rejected that argument, we would review that rejection *de novo*. *See Jarvis*, 499 F.3d

at 1202 (finding a “pure issue of law” and stating that “[h]ad the trial court been given the opportunity to rule [on the issue first presented on appeal], our review would be *de novo*, just as it is now”); *Navair, Inc. v. IFR Ams., Inc.*, 519 F.3d 1131, 1137 (10th Cir. 2008) (“We review a grant of summary judgment *de novo*.”).

Second, taking the evidence in the light most favorable to the thyroid disease plaintiffs, I am convinced that those plaintiffs produced sufficient evidence of but-for causation to survive summary judgment. The thyroid disease plaintiffs relied on the expert opinion of Dr. Inder Chopra as evidence that the defendants’ operations were a but-for cause of their injuries. Dr. Chopra opined that “[i]t is more probable than not that *each* of these two sources [i.e., the Nevada Test Site radiation and the radiation from the defendants’ uranium operations] *of itself* was a substantial contributing factor to each Plaintiff’s thyroid disease, *without which the Plaintiff’s respective thyroid disease would not have happened.*” Aplt. App., Vol. XII at 2131–32 (Affidavit of Inder Chopra, M.D.) (emphasis added); *see also id.* Vol. XIII at 2295 (Deposition of Inder Chopra, M.D.) (“When I use in this particular case that radiation was a substantial factor contributing to occurrence of their medical—the illness that we are talking about, in my mind, I am thinking that if they had not been exposed to radiation, there is small or—probably they would not have—the disease would not have occurred in them.”).

Third, the circumstances of this case fit squarely into our rationale for addressing unraised legal questions whose resolution is certain. No additional

findings of fact or presentation of evidence would be required to determine whether sufficient evidence of but-for causation was presented by the thyroid disease plaintiffs. And both parties have thoroughly taken advantage of the opportunity to address whether the thyroid disease plaintiffs produced sufficient evidence of but-for causation in their appellate briefing.

Therefore, although the thyroid disease plaintiffs did not timely argue before the district judge that they had sufficient evidence of but-for causation, I am convinced we should exercise our discretion to consider and correct the district judge's error in holding that those plaintiffs did not present sufficient evidence of but-for causation to survive summary judgment. Accordingly, I must respectfully dissent from the majority's ruling affirming the summary judgment against the personal injury claims of the thyroid disease plaintiffs.

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FOR THE TENTH CIRCUIT  
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**RE: 07-1532, June, et al v. Union Carbide Corporation, et al**  
Dist/Ag docket: 1:04-CV-00123-MSK-MJW

Dear Counsel:

Enclosed is a copy of the opinion of the court in the captioned case. Judgment was entered today.

Please contact this office if you have questions.

Sincerely,



Elisabeth A. Shumaker  
Clerk of the Court

cc: Joel A. Blanchet  
Daniel J. Dunn  
Michael P. Foradas  
Alan J. Gilbert  
Christopher Landau  
James T. McLaughlin Jr.  
Douglas M. Poland  
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EAS/jm