

FOR PUBLICATION
UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

In re: BERG LITIGATION,

LOUIS BERG, et al.,
Plaintiffs-Appellants,

v.

E.I. DUPONT DE NEMOURS AND
COMPANY, a Delaware corporation;
GENERAL ELECTRIC Co.; UNC
NUCLEAR INDUSTRIES, INC., now
merged into UNC Holdings, Inc.,
a Delaware corporation; UNC
HOLDINGS INC., a Delaware
corporation; ATLANTIC RICHFIELD
COMPANY CAPITAL ACCUMULATION
PLAN II, (ARCO), a Delaware
corporation; ROCKWELL
INTERNATIONAL CORPORATION, a
Delaware corporation,
Defendants-Appellees.

No. 99-35979
D.C. No.
CV-96-03151-AAM

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OPINION

Appeal from the United States District Court
for the Eastern District of Washington
Alan A. McDonald, District Judge, Presiding

Argued and Submitted
October 15, 2001—San Francisco, California

Filed June 18, 2002

Before: Mary M. Schroeder, Chief Judge, Alfred T. Goodwin
and Michael Daly Hawkins, Circuit Judges.

Opinion by Chief Judge Schroeder

COUNSEL

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OPINION

SCHROEDER, Chief Judge:

This appeal is a companion to *In re Hanford Nuclear Reservation Litigation*, Nos. 98-36142, 98-36143, 98-36144, 98-36147, 98-36149, & 98-36173, also decided today, and also

involves the claims of multiple plaintiffs exposed to radiation from the Hanford Nuclear Reservation in southeastern Washington between 1943 and 1987. The facts underlying these claims are set forth in detail in our opinion in *In re Hanford Nuclear Reservation Litigation*. The plaintiffs in this case, originally part of the group of plaintiffs in *Hanford*, were severed from *Hanford* during the second phase of discovery on September 20, 1996, for reasons we need not detail here. The record in this appeal includes an expert's report that is not in the *Hanford* record. The same district judge who handled *Hanford* also granted partial summary judgment in favor of the defendants in this case, and also on the erroneous premise that only those plaintiffs who were shown to have been exposed to radiation that exceeded what is termed a "doubling dose" could recover. We therefore, as in *Hanford*, reverse the grant of partial summary judgment. We also deal with claims for emotional distress and medical monitoring not litigated in *Hanford*.

I. "Doubling Dose"

A "doubling dose" is a level of radiation that doubles the risk of the disease or injury in question when compared with the risk experienced by the general population as a whole. As we explained in *Hanford*, reliance on that standard was error because the "doubling of the risk" is a measure courts use to determine whether a substance is capable of causing harm in the absence of any evidence other than epidemiological evidence of toxicity. *Hanford* at 8698-8702. Here, we deal with a substance, radiation, that is known to be capable of causing harm. *See Hanford* at 8700-01. Indeed, there is no threshold harmful dosage level for radiation because it can cause harm at any level. *In re Three Mile Island Litig.*, 193 F.3d 613, 726-27 (3d Cir. 1999).

What differentiates these plaintiffs' causation cases from *Hanford* is the evidence relied upon by the plaintiffs. Plaintiffs in this case submitted a report prepared by Dr. F. Owen

Hoffman, Ph.D. Dr. Hoffman's report established a generic methodology that was intended to be used to estimate doses and risks to specific individuals. Dr. Hoffman, using "representative" plaintiffs, also provided ranges of the estimated probability that certain diseases were caused by the radiation exposure, depending upon gender, year of birth, age at first exposure, time since first exposure, and whether the exposure was acute or chronic.

The district court held that the only plaintiffs who could proceed were those whose median, or central value probability of causation ("PC") estimates, exceeded 50%, reasoning that this threshold equated to a showing of more than "doubling the risk" of disease. The 50% level corresponds to a probability that an individual has a disease caused by radiation that is twice the probability of such disease in the population as a whole. For example, according to Dr. Hoffman's estimates, a woman born in 1945 and living in Richland, Washington, who ingested milk from a backyard cow and was diagnosed with thyroid cancer in 1955, has a range of PC estimates from 59% to 99%. The median of that range is 94%. A man born in 1945 and living in Spokane, Washington, who ingested milk from a backyard cow and was diagnosed with thyroid cancer in 1995, has a PC estimate for thyroid cancer ranging from 1.6% to 71%. The median estimate is 15%. Under the district court's holding, only the woman proved generic causation because her median, or central value estimate, exceeded 50%.

[1] The district court's adoption of a "doubling of the risk" standard was error. We explained in *Hanford* that generic causation is only part of the causation inquiry. *Hanford* at 8693-94. In order to establish causation, a plaintiff must show that the radiation was both capable of causing his or her disease and that it in fact caused his or her disease. *See Bonner v. ISP Technologies, Inc.*, 259 F.3d 924, 928 (8th Cir. 2001) ("[t]o prove causation in a toxic tort case, a plaintiff must show both that the alleged toxin is capable of causing injuries

like that suffered by the plaintiff in human beings subjected to the same level of exposure as the plaintiff, and that the toxin was the cause of the plaintiff's injury"). Dr. Hoffman's report was offered during the generic causation phase of discovery and was intended as a general methodology that would take into account a few individual-specific factors to arrive at a PC estimate. According to Dr. Hoffman, to determine a specific individual's PC estimate, that individual's sex, age, diet, ethnicity, family history, type and duration of exposure, and actual mass of target organ must be taken into account. Plaintiffs never intended, nor was it understood from the district court's discovery orders, that Dr. Hoffman's report and the other, epidemiological evidence would be the only evidence they would be allowed to present to establish causation.

[2] Nor is epidemiological evidence the sole method of establishing causation. See *Glastetter v. Novartis Pharm. Corp.*, 252 F.3d 986, 992 (8th Cir. 2001) (per curiam) (noting "[t]he absence of epidemiological evidence did not doom [plaintiff's] case"); *In re Joint E. & S. Asbestos Litig.*, 964 F.2d 92, 97 (2d Cir. 1992) (plaintiff relied on clinical evidence as well as epidemiological studies to prove causation); *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 758 (3d Cir. 1994) (discussing differential diagnosis as a method of assessing causation); *Caraker v. Sandoz Pharm. Corp.*, 188 F. Supp.2d 1026, 1033 (S.D. Ill. 2001) ("[t]his Court imposes no absolute epidemiology requirement"). Indeed, Dr. Hoffman actually stated in his report that his methodology was not the only way to prove causation, noting that differential diagnosis or clinical evaluation may also establish a causal link. As in *Hanford*, the district court's determination at this stage that plaintiffs had to provide evidence that it was "more likely than not" that exposure to Hanford emissions caused their individual illnesses, "blurred . . . [t]he two-step causation inquiry" of generic and individual causation. *Hanford* at 8696. Thus, we conclude that the district court erred in dismissing plaintiffs' personal injury claims on summary judgment.

II. Emotional Distress Claims

The district court held that plaintiffs' claims for emotional distress and medical monitoring are cognizable under the Price-Anderson Act even if plaintiffs had not suffered any known physical injury. Although the defendants did not file a cross-appeal, our consideration of this issue is nevertheless appropriate. Parties may raise challenges to subject matter jurisdiction at any time. *May Dept. Store v. Graphic Process Co.*, 637 F.2d 1211, 1216 (9th Cir. 1980). The defendants do not challenge the availability of damages for emotional distress by a plaintiff who has also suffered injury to person or property.

[3] The district court upheld those emotional distress claims of plaintiffs who were not ill, but who could demonstrate that their exposure more than doubled their risk of disease. The court reasoned that such plaintiffs had shown it was "more likely than not" that they will contract an illness. The court further reasoned that when a plaintiff's exposure to Hanford emissions more than doubled that plaintiff's risk of developing a disease, such "exposure amounts to a 'bodily injury.'" It rejected the defendants' position that emotional distress was not a "bodily injury" covered by the Act. We conclude that this was error. This conclusion is supported by the statutory language, the legislative history, and case law analyzing a similar provision in the Warsaw Convention.

[4] First, the statutory language of the Price-Anderson Act provides jurisdiction in federal courts for an "action arising out of or resulting from a nuclear incident." 42 U.S.C. § 2210(n)(2). A "nuclear incident" is defined in the Act as "any occurrence, including an extraordinary nuclear occurrence, within the United States causing, . . . bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property." 42 U.S.C. § 2014(q). Physical harm to persons or property is thus a jurisdictional prerequisite.

[5] The Act also provides that “the substantive rules for decision in such action shall be derived from the law of the State in which the nuclear incident involved occurs, unless such law is inconsistent with the provisions of such section.” 42 U.S.C. § 2014(hh). Thus, although Washington law permits emotional distress claims in the absence of physical injury, *see Whaley v. State*, 956 P.2d 1100, 1108 (Wash. Ct. App. 1998), allowance of such claims here would be inconsistent with the Act’s “bodily injury” requirement.

In fact, Washington law respects binding restrictions on claims for emotional distress. The Washington Supreme Court interpreted a provision of an insurance contract with identical language to that contained in the Act and concluded that “bodily injury” precludes recovery for “purely emotional injuries.” *Daley v. Allstate Ins. Co.*, 958 P.2d 990, 993-94 (Wash. 1998) (en banc) (insurance policy permitted recovery for “bodily injury, sickness, disease or death”). The Washington court found that “[t]he term ‘bodily injury’ is not ambiguous and does not include recovery for emotional distress.” *Id.* at 997.

[6] We turn from the statutory language to the legislative history of the Price-Anderson Act. The legislative history indicates that Congress added the words “sickness” and “disease” after “bodily injury” in order to clarify what it meant by “bodily injury.” Congress intended to make clear “that the extent of bodily injury was the same as the definition of bodily injury as specified by the standard NELIA insurance policy.” S.Rep. No. 296, 85th Cong. 1st sess. 1817-18. NELIA is the Nuclear Energy Liability Insurance Association, an association that provided a specialized form of nuclear energy liability insurance. 10 C.F.R. § 140.91, Appendix A. NELIA policies insured against bodily injury or property damage caused by nuclear incidents. *Id.* Since NELIA policies did not provide coverage for purely emotional injuries, we conclude that Congress intended the same scope for the Act.

Finally, we take guidance from the jurisprudence interpreting a similar provision in the Warsaw Convention. The Convention is an international treaty that governs liability concerning “all international transportation of persons, baggage, or goods.” *Carey v. United Airlines*, 255 F.3d 1044, 1047 (9th Cir. 2001). The Convention was motivated by some of the same concerns that were behind the passage of the Price-Anderson Act. At the signing of the Convention in 1929, the signing parties “believed that limitations on liability would promote the development of the fledgling commercial air industry by allowing the airlines to predict their exposure to monetary damages and thereby obtain needed capital and adequate insurance coverage.” *Id.* (citing *In re Korean Air Lines Disaster of Sept. 1, 1983*, 932 F.2d 1475, 1484 (D.C. Cir. 1991)). Similarly, the Price-Anderson Act was passed in order to “protect the public and encourage the development of the atomic energy industry” by limiting the “potential civil liability of nuclear power plant operators and provid[ing] federal funds to help pay damages caused by nuclear accidents.” *In re Three Mile Island Litig.*, 193 F.3d at 624 n.7. In addition, both the Act and the Convention provide the exclusive means for pursuing claims under their respective provisions. *See El Al Israel Airlines, Ltd. v. Tseng*, 525 U.S. 155, 176 (1999) (holding that Warsaw Convention is preemptive and provides exclusive remedy); *El Paso Natural Gas Co. v. Neztosie*, 526 U.S. 473, 484-85 & n.6 (1999) (structure of Price-Anderson Act resembles complete preemption doctrine); *In re Three Mile Island Litig.*, 940 F.2d at 854 (holding that “claim growing out of any nuclear incident is compensable under the terms of the [] Act or *it is not compensable at all*”) (emphasis in original).

Article 17 of the Convention provides that an airline is “liable for damage sustained in the event of the death or wounding of a passenger or any other bodily injury suffered by the passenger” if caused while on the aircraft or while “embarking or disembarking.” *Carey*, 255 F.3d at 1047. Both the Supreme Court and our own cases addressing the meaning of

Article 17 of the Convention have interpreted “bodily injury” to include only a present physical injury. *Eastern Airlines, Inc. v. Floyd*, 499 U.S. 530, 542 (1991); *Carey*, 255 F.3d at 1052. Article 17 does not permit recovery for a claim of mental injury nor does it permit recovery for physical manifestations of emotional and mental distress. *Carey*, 255 F.3d at 1052. This further supports our decision that similar language in the Price-Anderson Act does not reach purely emotional injuries.

Our decision is in harmony with other federal court decisions. *See Dodge v. Cotter Corp.*, 203 F.3d 1190, 1201-02 (10th Cir. 2000) (rejecting plaintiffs’ contention that Colorado law permitted recovery for emotional distress under the Act absent “a permanent objective injury”); *Day v. NLO*, 851 F. Supp. 869, 877 n.3 (S.D. Ohio 1994) (noting that court had jurisdiction over plaintiffs’ claims for emotional distress because they arose “out of the bodily injury, sickness, disease, or death that the Plaintiffs allegedly suffered from as a result of excessive dosages of radiation”).

III. Medical Monitoring Claims

The district court also determined that it had jurisdiction to consider claims to recover costs of medical monitoring for plaintiffs who do not yet have a detectable illness but who were exposed to radiation dosages that exceeded federal dose limits. The district court correctly observed that the Washington Supreme Court had not yet recognized such a cause of action for medical monitoring. Defendants argue on appeal that claims for medical monitoring, like emotional distress claims, are not included within the Price-Anderson Act’s jurisdictional provisions, absent “bodily injury, sickness, disease, or death . . . or property damage.” 42 U.S.C. § 2014(q). They ask this Court to affirm the district court’s dismissal of plaintiffs’ medical monitoring claims on that ground.

[7] We agree with defendants that a cause of action for medical monitoring because of a future risk of disease, and

absent a present physical injury, also fails to meet the jurisdictional requirements of the Price-Anderson Act. We see no defensible distinction between emotional distress claims for plaintiffs who do not demonstrate “bodily injury, sickness, disease, or death . . . or property damage,” and medical monitoring causes of action brought by such plaintiffs.

The court in *Duncan v. Northwest Airlines, Inc.*, 203 F.R.D. 601 (W.D. Wash. 2001), provided insight when it held that Washington law does not recognize a claim for medical monitoring as an independent tort. The court explained this was because a medical monitoring cause of action would allow a plaintiff to sue twice: first for medical monitoring; and then again when the plaintiff develops a disease. *Id.* at 606. We of course are interpreting a federal statute. Given the purposes behind the enactment of the Price-Anderson Act, to “encourage the development of the atomic energy industry” and limit the “potential civil liability of nuclear power plant operators,” *In re Three Mile Island Litig.*, 193 F.3d at 624 n.7, we do not believe Congress intended the result rejected in *Duncan*.

Our conclusion is consistent with our decision in *Durfey v. E.I. DuPont de Nemours & Co.*, 59 F.3d 121 (9th Cir. 1995), where we upheld medical monitoring claims arising out of the clean-up of the Hanford site. We did so because they were not barred by the limited exclusions of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (“CERCLA”), 42 U.S.C. § 9613(h). *Id.* at 125. Here the Price-Anderson Act grants only limited jurisdiction that does not include emotional distress claims.

IV. Conclusion

We affirm the district court’s dismissal of medical monitoring claims because they are not cognizable under the Price-Anderson Act. We affirm for the same reason the district court’s dismissal of some of the emotional distress claims and remand for dismissal of the remaining emotional distress

claims, i.e., those of plaintiffs who claim no physical injury. We reverse the district court's partial summary judgment in favor of the defendants on causation issues. We recommend that the district court on remand reconsolidate these plaintiffs' claims with the claims of plaintiffs in the accompanying *Hanford* appeal.

AFFIRMED in part, REVERSED in part, and REMANDED. Costs are awarded to the Plaintiffs-Appellants.