



Ayers v. Jackson Tp.N.J.,1987.

Supreme Court of New Jersey.

Robert AYERS and Mae Ayers; Warren J. Adelung, Jr., Cheryl Adelung, and Jill Adelung, by her guardian ad litem, Warren J. Adelung, Jr.; Chris Baralus, Joyce Baralus, and Stella Baralus; John Bortolometti, Martha Bortolometti, and Adam Bortolometti, by his guardian ad litem, John Bortolometti; Carl L.

Battaglia, Denise Battaglia, and Sherry Ann and Joseph Peter Battaglia, by their guardian ad litem, Carl L. Battaglia; Theodore R. Beekman and Holly Beekman and Jacqueline and Jeffrey Beekman, by their guardian ad litem, Theodore R. Beekman; Anthony Bender, Marjorie Bender, David Bender, and Scott, James and Steven Bender, by their guardian ad litem, Anthony Bender; Reginald Benesch, Kathleen

Benesch, and Kelly and Reggie Benesch, by their guardian ad litem, Reginald Benesch; Bruce R. Bidwell; Daniel Bodnarchuk, Margaret Bodnarchuk, and

Matthew Bodnarchuk, by his guardian ad litem,

Daniel Bodnarchuk; Anthony Bracco, Jo Ann Bracco, and Lori Ann, Stephanie and Michelle Bracco, by their guardian ad litem, Anthony Bracco;

Louis Brandenburg, Patricia Brandenburg, Tami Brandenburg, and Rebecca, Melissa, and Jack Brandenburg, by their guardian ad litem, Louis Brandenburg; Clarence Brownlee, Gayle Brownlee, and Matthew and Adam Brownlee, by their guardian ad litem, Clarence Brownlee; Gary J. Burns; Angelo

Christo and Marie Christo; Mildred M. Clayton; James Coburn, Judy Coburn and James, Jr., and Jennifer

Coburn, by their guardian ad litem, James Coburn; Richard Cope, Christine Cope and Jason Cope, by his guardian ad litem, Richard Cope; Gerald Cribb and Linda Cribb; Joseph Crisantiello, Yvonne Crisantiello, and Gina, John and Patricia Caroccia, by their guardian ad litem, Joseph Crisantiello; Peter J. Culhari; Teresa Davis and Christina Davis, a/k/a Concetta Francesca Davis, by her guardian ad litem, Teresa Davis; Martin Dean, Bernice Dean, and Jerome, Steven and Robert Harrelson, by their guardian ad litem, Martin Dean; Joseph A. DeAngelo and Janice DeAngelo; Elizabeth DeWaard and Arie DeWaard

and Jolanda DeWaard, by her guardian ad litem, Arie DeWaard; Joseph DeVito, Joann DeVito and Michelle, Lenore and Joseph DeVito, by their guardian ad litem, Joseph DeVito; Vera Djambinov and Anna Djambinov; Kevin F. Doyle, Joann Doyle and James Doyle, by his guardian ad litem, Kevin Doyle; George Eckelson, Patricia Eckelson and John Eckelson, by his guardian ad litem, George Eckelson; Robert Etling, Elizabeth Etling and Keith and Robin Ann Etling, by their guardian ad litem, Robert Etling; John H. Floystrop and Linda, Deborah, David, James and Kenneth Floystrop, by their guardian ad litem, John H. Floystrop; Stephen Forgas, Jr., Rosemary Forgas and Stephen, III, by his guardian ad litem, Stephen Forgas, Jr.; Frederick Gattola; John Gerdes and Patricia Gerdes and Kathleen, John D. and Robert Gerdes, by their guardian ad litem, John Gerdes; Robert Grillo, Adele Grillo and Gina Grillo, by her guardian ad litem, Robert Grillo; Gary L. Gundacker, Janice M. Gundacker and Amy and Adam Gundacker, by their guardian ad litem, Gary L. Gundacker; Forrest Harpe and Else Harpe, Robert Helle and Else Helle and Julie Helle, by her guardian ad litem, Robert Helle; Mark E. Hayward, Susan Hayward and Mark E. Hayward, III, by his guardian ad litem, Mark E. Hayward; Edwin L. Keil and Marianne Keil and Edwin Keil, Jr., by his guardian ad litem, Edwin L. Keil; Robert Kelemen and Arlene Kelemen and Michael Kelemen, by his guardian ad litem, Robert Kelemen; Joseph E. Kelly, Anneliese Kelly and Sandra Kelly; Betty Ann Kemerle and Steven and Christina Kemerle, by their guardian ad litem, Betty Ann Kemerle; Arne Kjems, Else Kjems, Inge Lisa Kjems, and Arne, Jr., and Donna Marie Kjems, by their guardian ad litem, Arne Kjems; Edward Korzenok and Julia Korzenok and Christine Ann and Karen Lee Korzenok, by their guardian ad litem, Edward Korzenok; James Lafkas and Helen Lafkas; Joseph LaMonica, Peggy LaMonica, Joseph LaMonica, Jr., Lisa and Jennifer LaMonica, by their guardian ad litem, Joseph LaMonica; Kenneth C. LaPlante and Celeste LaPlante; J. Peter Leighton, Elayne A. Leighton and Sandra Claire Leighton, by her guardian ad litem, J. Peter Leighton; Richard Lindes and Mavis Lindes; Pearl Lippincott; William

J. Lodato and Patricia C. Lodato and Robin Aumack and Brian Aumack, by their guardian ad litem, William J. Lodato; Paul Logue and Mary Logue; Michael Luster, Erna Luster and Christine and Cathryn Luster, by their guardian ad litem, Michael Luster; Anthony Massaro, Phyllis Massaro and Anthony, III and Teresa Ann Massaro, by their guardian ad litem, Anthony Massaro; Theodore Mayo and Eileen Mayo and Robert Mayo, by his guardian ad litem, Theodore Mayo; James McCarthy, Susan McCarthy and Trevor and Dana McCarthy, by their guardian ad litem James McCarthy; and Tara McCarthy, by her administrator ad prosequendum, James McCarthy; Francis McElroy; Donald McGee and Susan McGee; Gordon McKinnon and Patricia McKinnon; R. David Merrill and Ruth Merrill; Eugene D. Mills, Sandra J. Mills and Wayne and Eric Mills, by their guardian ad litem, Eugene D. Mills; Dennis Moore, Margaret Moore and Scott Moore, by his guardian ad litem, Dennis Moore; John Mullen, Diane Mullen and John, Jr., and Joyce Mullen, by their guardian ad litem, John Mullen; Norman Myers, Hannah Myers and Mark, David and Ilana Myers, by their guardian ad litem, Norman Myers; Gilbert Ochs, Eleanor Ochs, Margaret Rickert and Debbie Ochs, by her guardian ad litem, Gilbert Ochs, Michael Palocin, Jean Palocin and Michael J. and Michelle Jean Palocin, by their guardian ad litem, Michael Palocin; Patrick Piaggio and Francis Piaggio and Jeannette Piaggio, by her guardian ad litem, Patrick Piaggio; Bruce Reinartsen and Joyce Reinartsen and Bruce Reinartsen, III, by his guardian ad litem, Bruce Reinartsen; Joseph Reisinger and Odette Reisinger; Ismael Rodriguez, Brigid Rodriguez and Ismael, Jr., Richard and William Rodriguez, by their guardian ad litem, Ismael Rodriguez; Renardo Romano and Joyce Romano and Ra and Carina Romano, by their guardian ad litem Renardo Romano and Ronald Romano, by his administrator ad prosequendum, Renardo Romano; Joseph Romeo, Debra Romeo and Rocco and Adena Romeo, by their guardian ad litem, Joseph Romeo; Vincent Salek, Marlene Salek, Karen Salek and Vincent Salek, by his guardian ad litem, Vincent Salek; William W. Schadewald, Linda Schadewald and Linda, Donna and William F. Schadewald, by their guardian ad litem, William W. Schadewald;

Wayne E. Schroth, Marie Schroth and Gerard and Marc Schroth, by their guardian ad litem, Wayne E. Schroth; David Skelton, Eleanor Skelton and David Skelton, by his guardian ad litem, David Skelton; Joseph Smedley and Maureen Smedley; Frank P. Spano and Carmella Spano; Gus Stamos, Karen Stamos and Helen, John and Ourania Stamos, by their guardian ad litem, Gus Stamos; John P. Stamos and Sylvia Stamos; James Swanson, Sheila Swanson and Tighe and Brenn Swanson, by their guardian ad litem, James Swanson; Laslo Takacs and Margaret Takacs; Ernest Tobias and Cynthia Tobias; Bello Toth, Patricia Toth, and Michelle and Robert Toth, by their guardian ad litem, Bello Toth; Barbara and Kathleen Treacy, by their guardian ad litem, Brian Treacy; Henry Tyranski, Joanne Tyranski and Kimberly, Troy and Martin Tyranski, by their guardian ad litem, Henry Tyranski; Charles Untisz and Mary Untisz; John M. Urgo and Diana M. Urgo and John Urgo, by his guardian ad litem, John M. Urgo; Ronald Van Note, Nancy Van Note and Ronald Van Note, Jr., by his guardian ad litem, Ronald Van Note; Frank Vilardi and Concetta Vilardi; Michael Wallace and Judith Wallace; Richard A. Wendt and Linda Wendt and Melinda and Lauri Wendt, by their guardian ad litem, Richard A. Wendt; William Wheeler and Joan Wheeler; Margaret Wojciechowski and Gregory Wojciechowski; Michael Adelung, by his guardian ad litem, Warren J. Adelung, Jr.; Toni Ann Bracco, by her guardian ad litem, Anthony Bracco; Michael Cope by his guardian ad litem, Richard Cope; Eli Djambinov and Nancy Djambinov; Richard Eckelson; Jennifer Grillo, by her guardian ad litem, Robert Grillo; Christine Helle, by her guardian ad litem, Robert Helle; Frederick Kelly; Kenneth Lindes and Douglas Lindes, by their guardian ad litem, Richard Lindes; Christine M. McElroy; John McKinnon, by his guardian ad litem Gordon McKinnon; Brian Moore, by his guardian ad litem Dennis Moore; Carlos A. Rodriguez, Carmen N. Rodriguez and Carlos D. Rodriguez by his guardian ad litem, Carlos A. Rodriguez; Jennifer Smedley, by her guardian ad litem, Joseph Smedley; Jason J. Tobias, by his guardian ad litem, Ernest Tobias; Brian Treacy and Virginia Treacy; Denise Untisz and Christine, by their guardian ad litem, Charles Untisz; William F. Wheeler, by his guardian ad litem, William Wheeler; De-

106 N.J. 557, 525 A.2d 287, 25 ERC 1953, 76 A.L.R.4th 571, 55 USLW 2620, 17 Env'tl. L. Rep. 20,858
(Cite as: 106 N.J. 557, 525 A.2d 287)

borah Wojciechowski; Kathleen Fox and Jerome Fox,
by his guardian ad litem, Kathleen Fox, Plaintiffs-
Appellants

and Cross-Respondents,

v.

TOWNSHIP OF JACKSON, a municipal corporation
of the State of New Jersey, Defendant-Respondent
and Cross-Appellant.
Argued Feb. 18, 1986.
Decided May 7, 1987.

SYNOPSIS

Residents brought nuisance action against township arising from contamination of water by toxic pollutants leaching into aquifer from township landfill. The Superior Court, Law Division, Ocean County, entered judgment in favor of residents and township appealed. The Superior Court, Appellate Division, [202 N.J.Super. 106, 493 A.2d 1314](#), affirmed as modified. The Supreme Court granted certification and, by Stein, J., held that: (1) damages for residents' emotional distress based on possible exposure to carcinogens and other toxic chemicals were not recoverable against township; (2) residents were entitled to damages for infringement on their "quality of life" caused by absence of potable water for 20 months; and (3) residents were entitled to damages for cost of medical surveillance based upon enhanced, although unquantified, risk of disease in future as result of exposure to toxic chemicals.

Affirmed in part and reversed in part.

Handler, J., concurred in part, dissented in part and filed opinion.

West Headnotes

[\[1\]](#) **Municipal Corporations 268** 743

[268](#) Municipal Corporations

[268XII](#) Torts

[268XII\(A\)](#) Exercise of Governmental and Corporate Powers in General

[268k743](#) k. Damages. [Most Cited Cases](#)

Statutory bar to recovery against public entity for "pain and suffering resulting from any injury" applies to intangible, subjective feelings of discomfort associated with personal injuries and does not bar claims

for inconvenience associated with invasion of property interest. [N.J.S.A. 59:1-1](#) to [59:12-3](#), [59:9-2](#), subd. d.

[\[2\]](#) **Municipal Corporations 268** 845(7)

[268](#) Municipal Corporations

[268XII](#) Torts

[268XII\(D\)](#) Defects or Obstructions in Sewers, Drains, and Water Courses

[268k845](#) Actions for Injuries

[268k845\(7\)](#) k. Damages. [Most Cited](#)

[Cases](#)

Award of \$5,396,940 for deterioration of township residents' "quality of life" during 20 months when they were deprived of potable water due to contamination of aquifer by pollutants leaching from township landfill did not constitute damages for "pain and suffering," so as to be nonrecoverable from public entity, but rather represented compensation for inconvenience, discomfort and annoyance associated with damage to property. [N.J.S.A. 59:1-1](#) to [59:12-3](#), [59:9-2](#), subd. d.

[\[3\]](#) **Municipal Corporations 268** 743

[268](#) Municipal Corporations

[268XII](#) Torts

[268XII\(A\)](#) Exercise of Governmental and Corporate Powers in General

[268k743](#) k. Damages. [Most Cited Cases](#)

Emotional distress is an "injury" for purposes of tort liability of municipality. [N.J.S.A. 59:1-1](#) to [59:12-3](#), [59:9-2](#), subd. d.

[\[4\]](#) **Municipal Corporations 268** 845(7)

[268](#) Municipal Corporations

[268XII](#) Torts

[268XII\(D\)](#) Defects or Obstructions in Sewers, Drains, and Water Courses

[268k845](#) Actions for Injuries

[268k845\(7\)](#) k. Damages. [Most Cited](#)

[Cases](#)

Emotional distress of township residents, characterized by such subjective symptoms as depression, fear and anxiety, as result of their deprivation of potable water due to contamination of aquifer by pollutants leaching from township landfill constituted "pain and

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suffering” and damages therefor were not recoverable from township, due to statutory bar. [N.J.S.A. 59:1-1](#) to [59:12-3](#), [59:9-2](#), subd. d.

[5] Environmental Law 149E ☞671

[149E](#) Environmental Law

[149EXIII](#) Judicial Review or Intervention

[149Ek668](#) Time for Proceedings

[149Ek671](#) k. Accrual, Computation, and Tolling. [Most Cited Cases](#)

(Formerly 199k25.15(5) Health and Environment)

Judgment 228 ☞606

[228](#) Judgment

[228XIII](#) Merger and Bar of Causes of Action and Defenses

[228XIII\(B\)](#) Causes of Action and Defenses Merged, Barred, or Concluded

[228k600](#) Successive Causes of Action

[228k606](#) k. Continuing Trespasses or Nuisances. [Most Cited Cases](#)

Neither “single controversy” rule nor statute of limitations bar timely filed cause of action for damages prompted by future “discovery” of disease or injury related to environmental contamination by tortious conduct, even if there has been prior litigation of different claims based on same tortious conduct. [N.J.S.A. 2A:14-2](#).

[6] Municipal Corporations 268 ☞723

[268](#) Municipal Corporations

[268XII](#) Torts

[268XII\(A\)](#) Exercise of Governmental and Corporate Powers in General

[268k723](#) k. Nature and Grounds of Liability. [Most Cited Cases](#)

Enhanced risk of disease caused by significant exposure to toxic chemicals is an “injury” within statutory provision for recovery from public entity. [N.J.S.A. 59:1-1](#) to [59:9-12-3](#).

[7] Municipal Corporations 268 ☞845(7)

[268](#) Municipal Corporations

[268XII](#) Torts

[268XII\(D\)](#) Defects or Obstructions in Sewers,

Drains, and Water Courses

[268k845](#) Actions for Injuries

[268k845\(7\)](#) k. Damages. [Most Cited](#)

[Cases](#)

Residents could not recover damages from township for enhanced risk of disease from contamination of aquifer by pollutants leaching from township landfill and residents' exposure to such contamination, absent quantification of the enhanced risk. [N.J.S.A. 59:1-1](#) to [59:12-3](#).

[8] Damages 115 ☞43

[115](#) Damages

[115III](#) Grounds and Subjects of Compensatory Damages

[115III\(A\)](#) Direct or Remote, Contingent, or Prospective Consequences or Losses

[115III\(A\)1](#) In General

[115k41](#) Expenses

[115k43](#) k. Medical Treatment and Care of Person Injured. [Most Cited Cases](#)
(Formerly 304k6 Poisons)

Damages 115 ☞191

[115](#) Damages

[115IX](#) Evidence

[115k183](#) Weight and Sufficiency

[115k191](#) k. Expenses. [Most Cited Cases](#)

(Formerly 304k6 Poisons)

Cost of presymptom medical surveillance is a compensable item of damages in action based on exposure to toxic chemicals, where proofs demonstrate, through reliable expert testimony predicated on significance and extent of that exposure, the toxicity of the chemicals, the seriousness of the diseases for which individuals are at risk, the relative increase in the chance of onset of disease in those exposed and the value of early diagnosis, that such surveillance to monitor the effect of exposure to toxic chemicals is reasonable and necessary.

[9] Waters and Water Courses 405 ☞104

[405](#) Waters and Water Courses

[405III](#) Subterranean and Percolating Waters

[405k104](#) k. Pollution. [Most Cited Cases](#)

Township residents were entitled to damages against

106 N.J. 557, 525 A.2d 287, 25 ERC 1953, 76 A.L.R.4th 571, 55 USLW 2620, 17 Env'tl. L. Rep. 20,858
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township for costs of medical surveillance for future symptoms of disease subsequent to exposure to pollutants leaching into aquifer from township landfill, even in the absence of quantification of risk of future injury or disease, since expert medical testimony established existence of significant risk and that medical testing and evaluation was reasonably necessary for purposes of diagnosis and treatment. [N.J.S.A. 59:1-1](#) to [59:12-3](#).

[\[10\] Judgment 228](#) 213

[228](#) Judgment

[228VI](#) On Trial of Issues

[228VI\(A\)](#) Rendition, Form, and Requisites in General

[228k213](#) k. Application for Judgment. [Most Cited Cases](#)

(Formerly 304k6 Poisons)

In “toxic tort” litigation involving public entity defendants, medical surveillance payments should generally be administered through a fund rather than through a lump-sum award, absent factors rendering use of a fund impractical or inappropriate. [N.J.S.A. 59:1-1](#) to [59:12-3](#).

[\[11\] Appeal and Error 30](#) 1004(8)

[30](#) Appeal and Error

[30XVI](#) Review

[30XVI\(D\)](#) Questions of Fact, Verdicts, and Findings

[30XVI\(D\)2](#) Verdicts

[30k1004](#) Amount of Recovery

[30k1004\(6\)](#) Particular Cases and

Items

[30k1004\(8\)](#) k. Personal Injuries.

[Most Cited Cases](#)

(Formerly 30k1004.1(6))

Lump-sum award to township residents for medical surveillance costs subsequent to exposure to toxic chemicals would not be disturbed on appeal, notwithstanding preferable method of creating fund to administer medical surveillance costs, since award was based on jury's consideration of factors distinguishing individual residents and neither party requested court to withhold jury's power to return lump-sum verdict for each plaintiff. [N.J.S.A. 59:1-1](#) to [59:12-3](#).

[\[12\] Courts 106](#) 97(1)

[106](#) Courts

[106II](#) Establishment, Organization, and Procedure

[106II\(G\)](#) Rules of Decision

[106k88](#) Previous Decisions as Controlling or as Precedents

[106k97](#) Decisions of United States Courts as Authority in State Courts

[106k97\(1\)](#) k. In General. [Most Cited](#)

[Cases](#)

In action against township concerning leaching of pollutants into aquifer from township landfill, trial court was entitled to reexamine validity of residents' § 1983 claim against township and was not precluded by “law of the case” doctrine from considering or departing from prior ruling of federal court in related case. [42 U.S.C.A. § 1983](#).

[\[13\] Civil Rights 78](#) 1071

[78](#) Civil Rights

[78I](#) Rights Protected and Discrimination Prohibited in General

[78k1071](#) k. Property Rights. [Most Cited Cases](#)

(Formerly 78k130, 78k110.1, 78k110, 78k13.4(1))

[Civil Rights 78](#) 1395(1)

[78](#) Civil Rights

[78III](#) Federal Remedies in General

[78k1392](#) Pleading

[78k1395](#) Particular Causes of Action

[78k1395\(1\)](#) k. In General. [Most Cited](#)

[Cases](#)

(Formerly 78k235(1), 78k13.12(3))

Residents alleging injury as result of negligent, rather than intentional, acts by township in permitting pollution of aquifer by leaching of toxic chemicals from landfill were not “deprived” of their property within meaning of due process clause and did not state § 1983 cause of action against township. [42 U.S.C.A. § 1983](#); [U.S.C.A. Const.Amends. 5, 14](#).

[\[14\] Damages 115](#) 63

[115](#) Damages

[115III](#) Grounds and Subjects of Compensatory Damages

[115III\(B\)](#) Aggravation, Mitigation, and Reduction of Loss

[115k63](#) k. Reparation by Wrongdoer. [Most Cited Cases](#)

Even if township engineer who settled with residents in nuisance action was not joint tort-feasor, township was entitled to reduction of judgment against it by settlement amount engineer paid to residents pursuant to specific statutory provision. [N.J.S.A. 59:1-1](#) to [59:12-3](#), [59:9-2](#), subd. e.

****290 *564** Steven J. Phillips, New York City, and Arnold C. Lakind, Lawrenceville, for plaintiffs-appellants and cross-respondents (Levy Phillips & Konigsberg, New York City, and Szaferman, Lakind, Blumstein, Watter & Blader, Lawrenceville, ***565** attorneys; Steven J. Phillips, New York City, Arnold ****291** C. Lakind, Lawrenceville, and Donald I. Marlin, New York City, on the briefs).

James Stewart, Roseland, and H. Curtis Meanor, for defendant-respondent and cross-appellant (Podvey, Sachs, Meanor & Catenacci, Newark, attorneys). *Steven J. Phillips* and *Arnold C. Lakind* argued the cause for appellants and cross-respondents (*Levy Phillips & Konigsberg* and *Szaferman, Lakind, Blumstein, Watter & Blader*, attorneys; *Steven J. Phillips, Arnold C. Lakind* and *Donald I. Marlin*, on the briefs). *James Stewart* and *H. Curtis Meanor* argued the cause for respondent and cross-appellant (*Podvey, Sachs, Meanor & Catenacci*, attorneys).

The opinion of the Court was delivered by STEIN, Justice.

In this case we consider the application of the New Jersey Tort Claims Act (the Act), [N.J.S.A. 59:1-1](#) to 12-3, to the claims asserted by 339 residents of Jackson Township against that municipality.

The litigation involves claims for damages sustained because plaintiffs' well water was contaminated by toxic pollutants leaching into the Cohansey Aquifer from a landfill established and operated by Jackson Township. After an extensive trial, the jury found that the township had created a "nuisance" and a "dangerous condition" by virtue of its operation of the landfill, that its conduct was "palpably unreasonable,"-a prerequisite to recovery under [N.J.S.A. 59:4-2](#)-and that it was the proximate cause of the con-

tamination of plaintiffs' water supply. The jury verdict resulted in an aggregate judgment of \$15,854,392.78, to be divided among the plaintiffs in varying amounts. The jury returned individual awards for each of the plaintiffs that varied in accordance with such factors as proximity to the landfill, duration and extent of the exposure to contaminants, and the age of the claimant.

The verdict provided compensation for three distinct claims of injury: \$2,056,480 was awarded for emotional distress caused by the knowledge that they had ingested water contaminated by toxic chemicals for up to six years; \$5,396,940 was awarded for the deterioration of their quality of life during the twenty months when they were deprived of running water; and \$8,204,500 was awarded to cover the future cost of annual medical surveillance that plaintiffs' expert testified would be ***566** necessary because of plaintiffs' increased susceptibility to cancer and other diseases. The balance of the verdict, approximately \$196,500, represented miscellaneous expenses not involved in this appeal. [FN1](#)

[FN1](#). The components of the jury verdict were computed on the basis of the jury verdict summaries prepared by the trial court. They vary somewhat from the amounts set forth in the opinion of the Appellate Division.

The Appellate Division upheld that portion of the judgment awarding plaintiffs damages for impairment of their quality of life. [202 N.J. Super. 106, 120, 493 A.2d 1314 \(1985\)](#). It reversed the award for emotional distress, concluding that such damages constituted "pain and suffering" for which recovery is barred by [N.J.S.A. 59:9-2\(d\)](#). *Id.* at 116, [493 A.2d 1314](#). The Appellate Division also set aside the \$8,204,500 award for medical surveillance expenses, concluding that it is "impossible to say that defendant has so significantly increased the 'reasonable probability' that any of the plaintiffs will develop cancer so as to justify imposing upon defendant the financial burden of lifetime medical surveillance for early clinical signs of cancer." *Id.* at 122, [493 A.2d 1314](#) (citation omitted).

106 N.J. 557, 525 A.2d 287, 25 ERC 1953, 76 A.L.R.4th 571, 55 USLW 2620, 17 Env'tl. L. Rep. 20,858
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In addition, the Appellate Division affirmed the trial court's dismissal of plaintiffs' claim for damages for their enhanced risk of disease, *id.* at 125-26, 493 A.2d 1314, and upheld the trial court's reduction of the judgment by \$850,000, the amount for which plaintiffs settled before trial with codefendant John Ernst, the Jackson Township engineer, *id.* at 126-27, 493 A.2d 1314.^{FN2} The Appellate Division also affirmed the trial court's dismissal of plaintiffs' claim under the federal Civil Rights Act of 1871, 42 U.S.C.A. § 1983. *Id.* at 128, 493 A.2d 1314.

^{FN2} In its final judgment, the trial court reduced plaintiffs' award by an additional \$450,000. This sum represented the proceeds of a settlement reached between plaintiffs and the Township as third-party plaintiff, and various defendants and third-party defendants, including Mastercraft Builders, Chadwick Associates, Jacob Becker, East Windsor Municipal Utilities Authority, Freehold Cartage, Hecht Brothers, Stanley Hans Septic, John Lewis, and David Italiano. The propriety of this setoff is not contested in this appeal.

****292 *567** We granted plaintiffs' petition for certification to review the adverse portions of the Appellate Division decision, and granted defendant's cross-petition to review the affirmance of the damage award for impairment of plaintiffs' quality of life. 102 N.J. 306, 493 A.2d 1314 (1985). We now affirm in part and reverse in part the judgment of the Appellate Division.

I

The evidence at trial provided ample support for the jury's conclusion that the township had operated the Legler landfill in a palpably unreasonable manner, a finding that the township did not contest before the Appellate Division. Briefly summarized, the proof showed that prior to 1971 the township operated another landfill that was the subject of complaints by neighboring residents and at least one citation for violation of state regulations. When the prior landfill's capacity was exhausted, the township opened the Legler landfill in 1972. The Department of Environ-

mental Protection (DEP) granted a conditional permit for the new landfill, excluding liquid or soluble industrial wastes and limiting the depth of waste deposits to a specific grade above the level of the groundwater. The evidence indicated that, from the inception of the landfill's operation, the township failed to monitor the quantity and types of liquid waste dumped at the landfill, and ignored its duty to control and limit the depth of the trenches in which wastes were deposited. There was substantial evidence that the township disregarded the conditions imposed by DEP, and that the township's negligent operation of the landfill resulted in chemical contamination of the groundwater in the area and the underlying aquifer.

At trial plaintiffs offered expert testimony to prove that the chemical contamination of their wells was caused by the township's improper operation of the landfill. The testimony established that, in varying concentrations, the following chemical substances had infiltrated various wells used by plaintiffs as a ***568** water source: acetone; benzene; chlorobenzene; chloroform; dichlorofluoromethane; ethylbenzene; methylene chloride; methyl isobutyl ketone; 1,1,2,2-tetrachloroethane; tetrahydrofuran; 1,1,1-trichloroethane; and trichloroethylene. A groundwater expert described the probable movement and concentration of the chemicals as they migrated from the landfill toward plaintiffs' wells. A toxicologist summarized the known hazardous characteristics of the chemical substances. He testified that of the twelve identified chemicals, four were known carcinogens. Other potential toxic effects identified by the toxicologist included liver and kidney damage, mutations and alterations in genetic material, damage to blood and reproductive systems, neurological damage and skin irritations. The toxicologist also testified about differences in the extent of the chemical exposure experienced by various plaintiffs. An expert in the diagnosis and treatment of diseases caused by exposure to toxic substances testified that the plaintiffs required annual medical examinations to afford the earliest possible diagnosis of chemically induced illnesses. Her opinion was that a program of regular medical surveillance for plaintiffs would improve prospects for cure, treatment, prolongation of life, and minimization of pain and disability.

A substantial number—more than 150—of the plaintiffs gave testimony with respect to damages, describing in detail the impairment of their quality of life during the period that they were without running water, and the emotional distress they suffered. With regard to the emotional distress claims, the plaintiffs' testimony detailed their emotional reactions to the chemical contamination of their wells and the deprivation of their water supply, as well as their fears for the health of their family members. Expert psychological testimony was offered to document plaintiffs' claims that they had sustained compensable psychological damage as a result of the contamination of their wells.

***569** We now consider each of the plaintiffs' damage claims in the context of the evidence adduced at trial and the legal principles that should inform our application of the Tort Claims Act.

****293** *Quality of Life*

In November 1978, the residents of the Legler area of Jackson Township were advised by the local Board of Health not to drink their well water, and to limit washing and bathing to avoid prolonged exposure to the water. This warning was issued by the Board after tests disclosed that a number of wells in the Legler area of the township were contaminated by toxic chemicals. Initially, the township provided water to the affected residents in water tanks that were transported by tank trucks to various locations in the neighborhood. Plaintiffs brought their own containers, filled them with water from the tanks, and transported the water to their homes.

This water-supply system was soon discontinued and replaced by a home-delivery system. Residents in need of water tied a white cloth on their mailbox and received a 40 gallon barrel containing a plastic liner filled with water. The filled barrels weighed in excess of 100 pounds and were dropped off, as needed, on the properties of the Legler-area residents. The family-members frequently were required to move the barrels to a protected area, either inside a garage or inside the residence. Residents who stored the barrels in garages testified that the water froze in cold weather. Other residents rolled or dragged their barrels into their homes. In order to use the water for drinking,

cooking, washing or bathing, the residents filled containers with water from the barrels to meet the varying needs of their households. On occasion, there was dirt or debris in the water and the township would be requested to provide a replacement barrel.

The Appellate Division opinion described the inconvenience experienced by one resident:

***570** One witness, who suffered from arthritis, testified to hauling her water for drinking, cooking and bathing up nine steps because, as she said, [t]here was no way that I could get the water upstairs except by hauling pot after pot out of the containers, ... which was a considerable amount of hauling everyday just to use for drinking and bathing the children and cooking. [[202 N.J.Super. at 117, 493 A.2d 1314.](#)]

As the Appellate Division noted, the lack of running water was an understandable source of tension and friction among members of the plaintiffs' households, who for nearly two years were compelled to obtain water in this primitive manner. *Id.*

The trial court charged the jury that plaintiffs' claim for “quality of life” damages encompassed “inconveniences, aggravation, and unnecessary expenditure of time and effort related to the use of the water hauled to their homes, as well as to other disruption in their lives, including disharmony in the family unit.” The aggregate jury verdict on this claim was \$5,396,940. This represented an average award of slightly over \$16,000 for each plaintiff; thus, a family unit consisting of four plaintiffs received an average award of approximately \$64,000.

In the Appellate Division and before this Court, defendant argues that this segment of the verdict is barred by the New Jersey Tort Claims Act, which provides:

No damages shall be awarded against a public entity or public employee for pain and suffering resulting from any injury; provided, however, that this limitation on the recovery of damages for pain and suffering shall not apply in cases of permanent loss of a bodily function, permanent disfigurement or dismemberment where the medical treatment expenses are in excess of \$1,000.00. [[N.J.S.A. 59:9-2\(d\).](#)]

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Defendant contends that the legislative intent in restricting damages for “pain and suffering” was to encompass claims for all “non-objective” injuries, unless the statutory threshold of severity of injury or expense of treatment is met. The township asserts that the inconvenience, aggravation, effort and disruption of the family unit that resulted from the loss of plaintiff's water supply was but a form of “pain and suffering” and therefore uncompensable under the Act.

****294** The Appellate Division rejected the township's contention, concluding that there was a clear distinction between

***571** the subjectively measured damages for pain and suffering, which are not compensable by the Tort Claims Act, and those which objectively affect quality of life by causing an interference with the use of one's land through inconvenience and the disruption of daily activities. [[202 N.J.Super. at 118, 493 A.2d 1314.](#)]

[1] We agree with the Appellate Division's conclusion. The Tort Claims Act's ban against recovery of damages for “pain and suffering resulting from any injury” is intended to apply to the intangible, subjective feelings of discomfort that are associated with personal injuries. It was not intended to bar claims for inconvenience associated with the invasion of a property interest. As the trial court's charge explained, plaintiffs sought damages to compensate them for the multiple inconveniences associated with a lack of running water. Although the disruption of plaintiffs' water supply is an “injury” under the Act, [N.J.S.A. 59:1-3](#), the interest invaded here, the right to obtain potable running water from plaintiffs' own wells, is qualitatively different from “pain and suffering” related to a personal injury.

[2] As the Appellate Division acknowledged, plaintiffs' claim for quality of life damages is derived from the law of nuisance. [202 N.J.Super. at 117-18, 493 A.2d 1314.](#) It has long been recognized that damages for inconvenience, annoyance, and discomfort are recoverable in a nuisance action. See [Sterling v. Velsicol Chem. Corp., 647 F.Supp. 303, 321 \(W.D.Tenn.1986\)](#); D. Dobbs, *Remedies* § 5.3, at 334 (1973); see also W. Keeton, D. Dobbs, R. Keeton &

D. Owen, *Prosser and Keeton on the Law of Torts* § 89, at 639 (5th ed. 1984) (quoting with approval from Dobbs, *supra*). The [Restatement \(Second\) of Torts § 929 \(1977\)](#) sets out three distinct categories of compensation with respect to invasions of an interest in land:

- (a) the difference between the value of the land before the harm and the value after the harm, or at [plaintiff's] election in an appropriate case, the cost of restoration that has been or may be reasonably incurred;
- (b) the loss of use of the land, and
- (c) discomfort and annoyance to him as occupant. [*Id.*]

While the first two of these components constitute damages for the interference with plaintiff's use and enjoyment of his land, ***572** the third category compensates the plaintiff for his personal losses flowing directly from such an invasion. See [Kornoff v. Kingsburg Cotton Oil Co., 45 Cal.2d 265, 273-75, 288 P.2d 507, 512-13 \(1955\)](#); [Miller v. Carnation Co., 39 Colo.App. 1, 4, 564 P.2d 127, 130 \(Colo.Ct.App.1977\)](#); [Rust v. Guinn, 429 N.E.2d 299, 303-04 \(Ind.Ct.App.1981\)](#). As such, damages for inconvenience, discomfort, and annoyance constitute “distinct grounds of compensation for which in ordinary cases the person in possession is entitled to recover *in addition to* the harm to his proprietary interests.” [Restatement Second of Torts § 929](#) comment e (1977).

Accordingly, we conclude that the quality of life damages represent compensation for losses associated with damage to property, and agree with the Appellate Division that they do not constitute pain and suffering under the Tort Claims Act. We therefore sustain the judgment for quality of life damages.

Emotional Distress

The jury verdict awarded plaintiffs damages for emotional distress in the aggregate amount of \$2,056,480. The individual verdicts ranged from \$40 to \$14,000.

Many of the plaintiffs testified about their emotional reactions to the knowledge that their well-water was contaminated. Most of the plaintiffs' testimony on the

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issue of emotional distress was relatively brief and general. Typically, their testimony did not indicate that the emotional distress resulted in physical symptoms or required medical treatment. No treating physicians testified regarding plaintiffs' emotional distress claims. Nevertheless, the consistent thrust of the testimony offered by numerous witnesses was that they ****295** suffered anxiety, stress, fear, and depression, and that these feelings were directly and causally related to the knowledge that they and members of their family had ingested and been exposed to contaminated water for a substantial time period.

***573** Plaintiffs also presented testimony from an experienced clinical psychologist, Dr. Margaret Gibbs, who had administered a variety of psychological tests to 88 of the adult plaintiffs. The tests measured stress levels, depression, feelings of control, and personality. Dr. Gibbs testified that the sample of plaintiffs she tested manifested abnormally high levels of stress, depression, health concerns and psychological problems. She expressed the opinion that the psychological conditions observed by her were causally related to the contamination of plaintiffs' water supply.

Before the Appellate Division, the township challenged the jury verdict awarding damages for emotional distress on two grounds. The township contended that plaintiffs had not proved that the emotional distress experienced by them was manifested by any discernible physical symptoms or injuries, arguing that proof of related physical symptoms was a prerequisite to recovery under *Falzone v. Busch*, 45 N.J. 559, 569, 214 A.2d 12 (1965), and *Portee v. Jaffee*, 84 N.J. 88, 93, 417 A.2d 521 (1980). The trial court, in denying defendant's motion for summary judgment, had acknowledged the significance of proof of physical injury or sickness to sustain a damage claim based on emotional distress. *Ayers v. Township of Jackson*, 189 N.J.Super. 561, 570, 461 A.2d 184 (Law Div.1983); see also *Eyrich for Eyrich v. Dam*, 193 N.J.Super. 244, 253-54, 473 A.2d 539 (App.Div.) (citing *Restatement (Second) of Torts* § 436A (1965)), certif. denied, 97 N.J. 583, 483 A.2d 127 (1984).

In addition, the township contended that the jury verdict for emotional distress constituted damages for

“pain and suffering resulting from any injury,” recovery for which is expressly barred by the Tort Claims Act, *N.J.S.A. 59:9-2(d)*. The Appellate Division, without deciding the issue of the sufficiency of plaintiffs' proofs, agreed that the verdict for emotional distress was barred by the Act:

We cannot conceive how plaintiffs' concern that their exposure to toxic wastes might have precipitated a serious illness can be characterized as anything other than pain and suffering. It is a measure of their entirely subjective responses to a situation which, though threatening, never materialized ***574** into objective manifestations of injury. Under the circumstances, we conclude that although damages for these intangible harms might be recoverable from a non-governmental entity, as consequential to a nuisance, the language of *N.J.S.A. 59:9-2(d)*, barring damages from a public entity “for pain and suffering resulting from any injury,” clearly precludes recovery herein. [*202 N.J.Super. at 116, 493 A.2d 1314.*]

Before us, plaintiffs contend that the Appellate Division misconstrued the bar of the Tort Claims Act. They argue that the Legislature's intent was to prohibit damages for pain and suffering resulting from a *physical* injury only. Plaintiffs maintain that their emotional distress claims should not be barred by the Act, because they are based on “independent injuries,” and do not constitute pain and suffering incidental to a physical injury. They also emphasize that their emotional distress claims are compensable because we have abandoned the requirement of physical impact as a condition to recovery for emotional distress.

We acknowledge that our cases no longer require proof of causally-related physical impact to sustain a recovery for emotional distress. See *Portee v. Jaffee*, *supra*, 84 N.J. at 93, 417 A.2d 521, and *Falzone v. Busch*, *supra*, 45 N.J. at 569, 214 A.2d 12. Nevertheless, we reject plaintiffs' assertion that the Tort Claims Act's limitation against recovery for “pain and suffering resulting from any injury” does not apply to claims based on emotional distress.

In construing the statutory language, we are cognizant that the legislative intent was to re-establish the immunity of all governmental bodies in New Jersey

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except in the circumstances enumerated in the Act. See ****296** *Birchwood Lakes Colony Club v. Borough of Medford Lakes*, 90 N.J. 582, 596, 449 A.2d 472 (1982); *English v. Newark Housing Auth.*, 138 N.J.Super. 425, 428-29, 351 A.2d 368 (App.Div.1976). We are cautioned by the Comment to [N.J.S.A. 59:2-1](#) that

[t]he approach should be *whether an immunity applies and if not, should liability attach*. It is hoped that in utilizing this approach the courts will exercise restraint in the acceptance of novel causes of action against public entities. [Comment, [N.J.S.A. 59:2-1.1](#)]

***575** In addition to barring damages for pain and suffering resulting from an injury, the Act also precludes recovery against governmental entities for prejudgment interest, [N.J.S.A. 59:9-2\(a\)](#), strict liability claims, *id.* at 59:9-2(b), punitive damages, *id.* at 59:9-2(c), and subrogation claims, *id.* at 59:9-2(e).

[3] Addressing first plaintiffs' contention that emotional distress is not an "injury" as that term is used in the Tort Claims Act, we observe that the Act broadly defines injury to include death, injury to a person, damage to or loss of property or any other injury that a person may suffer that would be actionable if inflicted by a private person. [[N.J.S.A. 59:1-3.1](#)]

The statutory definition is expansive and unqualified and clearly accommodates "emotional distress" as an injury "that a person may suffer that would be actionable if inflicted by a private person." The term "injury" is also used in [N.J.S.A. 59:4-2](#), which defines the scope of public entity liability.^{FN3} Plainly, if emotional distress did not constitute an injury under this section, plaintiffs could not have asserted a cause of action for emotional distress under the Act. We discern no basis in the legislative history or in the statutory scheme of the Act for assigning a more restrictive meaning to the term "injury" as used in [N.J.S.A. 59:9-2\(d\)](#), the section that limits liability for pain and suffering, than that accorded to the same word in the section of the Act that imposes liability on a public entity. Accordingly, we hold that claims for emotional distress are encompassed by the term "injury" in [N.J.S.A. 59:9-2\(d\)](#).^{FN4}

^{FN3} [N.J.S.A. 59:4-2](#) provides, in pertinent part, that

[a] public entity is liable for *injury* caused by a condition of its property if the plaintiff establishes that the property was in dangerous condition at the time of the *injury*, that the *injury* was proximately caused by the dangerous condition, [and] that the dangerous condition created a reasonably foreseeable risk of the kind of *injury* which was incurred * * *. [Emphasis added.]

^{FN4} Interpreting the California Tort Claims Act, which served as a model for the New Jersey Act, [S.E.W. Friel Co. v. New Jersey Turnpike Auth.](#), 73 N.J. 107, 122, 373 A.2d 364 (1977), the Supreme Court of California held that the term "injury" in that statute encompassed claims for emotional distress, reasoning that an injury to "feelings" is "of the kind that the law would redress if it were inflicted by a private person." [Delta Farms Reclamation Dist. No. 2028 v. Superior Court of San Joaquin Cty.](#), 33 Cal.3d 699, 711, 190 Cal.Rptr. 494, 502, 660 P.2d 1168, 1176, cert. denied, 464 U.S. 915, 104 S.Ct. 277, 78 L.Ed.2d 257 (1983).

The term "injury" is defined in the California Act as death, injury to a person, damage to or loss of property, or any other injury that a person may suffer to his person, reputation, character, feelings or estate, of such nature that it would be actionable if inflicted by a private person. [[Cal.Gov't.Code § 810.8](#) (West 1980).]

***576** [4] The term "pain and suffering" is not defined in the Act. The Comment to [N.J.S.A. 59:9-2](#) describes the limitation on damages for pain and suffering as reflecting "the policy judgment that in view of the economic burdens presently facing public entities a claimant should not be reimbursed for non-objective types of damages, such as pain and suffering, except in aggravated circumstances * * *." Comment, [N.J.S.A. 59:9-2](#). We are in full accord with the conclusion of the Appellate Division that the subjective symptoms of depression, stress, health concerns, and

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anxiety described by the plaintiffs and their expert witness constitute “pain and suffering resulting from any injury” as that phrase is used in [N.J.S.A. 59:9-2\(d\)](#).

We have recognized in other contexts involving damages for emotional distress that the injury sought to be redressed can fairly be described as pain and suffering. See [Evers v. Dollinger](#), 95 N.J. 399, 410, 471 A.2d 405 (1984) (“Certainly compensable**297 injury in the form of mental pain and suffering in a context of medical malpractice is not new”); [Berman v. Allen](#), 80 N.J. 421, 433, 404 A.2d 8 (1979) (“courts have come to recognize that mental and emotional distress is just as ‘real’ as physical pain”); [Zahorian v. Russell Fitt Real Estate Agency](#), 62 N.J. 399, 416, 301 A.2d 754 (1973) (affirming an award of \$750 for “pain and suffering” intended to compensate plaintiff for mental distress experienced as a result of discrimination); cf. [DePass v. U.S.](#), 721 F.2d 203, 206 (7th Cir.1983) (Posner, J., dissenting) (“ ‘pain and suffering’ *577 does not mean just physical pain and suffering but includes the unhappiness caused by disfiguring and crippling injuries”).

Assuming as we do that tortiously-inflicted emotional distress is as much an “injury” under the Act as a broken limb, it is evident that subjective symptoms such as depression, fear, and anxiety—either as a consequence of emotional distress or a broken limb—constitute “pain and suffering” for the purposes of the Tort Claims Act.

We have no doubt, based on our review of the record, that many of the plaintiffs understandably experienced substantial emotional distress as a result of the contamination of their water supply. However, the legislature has expressly determined that the pain and suffering occasioned by their emotional distress is not compensable by damages from Jackson Township. The New Jersey Tort Claims Act bars the recovery of such damages. Accordingly, we affirm the Appellate Division's reversal of that portion of the jury verdict awarding damages for emotional distress.

Claims for Enhanced Risk and Medical Surveillance

No claims were asserted by plaintiffs seeking recov-

ery for specific illnesses caused by their exposure to chemicals. Rather, they claim damages for the enhanced risk of future illness attributable to such exposure. They also seek to recover the expenses of annual medical examinations to monitor their physical health and detect symptoms of disease at the earliest possible opportunity.

Before trial, the trial court granted defendant's motion for summary judgment dismissing the enhanced risk claim. It held that plaintiffs' proofs, with the benefit of all favorable inferences, would not establish a “reasonable probability” that plaintiffs would sustain future injury as a result of chemical contamination of their water supply. [189 N.J.Super. at 567-68, 461 A.2d 184](#) (citing [Coll v. Sherry](#), 29 N.J. 166, 175, 148 A.2d 481 (1959)). The trial court also observed that recognition of the enhanced risk claim would *578 cause the jury to “speculate * * * [as] to the future health of each plaintiff,” and raise “the spectre of potential claims * * * increasing in boundless proportion.” *Id.* However, the court specifically noted that future claims for injury attributable to exposure to contaminants in the water supply would not be barred by the statute of limitations. [Id.](#) [189 N.J.Super. at 568, 461 A.2d 184](#) (citing [Lopez v. Swyer](#), 62 N.J. 267, 300 A.2d 563 (1973), and [Lynch v. Rubacky](#), 85 N.J. 65, 424 A.2d 1169 (1982)). The Appellate Division affirmed the dismissal of the enhanced risk claim, but characterized the trial court's observation that future claims for physical injury would not be barred by the statute of limitations as “dictum only,” having “no controlling significance to the future rights of the parties.” [Id.](#) at 125, 424 A.2d 1169.

With regard to the claims for medical surveillance expenses, the trial court denied defendant's summary judgment motion, [189 N.J.Super. at 573, 461 A.2d 184](#), and the jury verdict included damages of \$8,204,500 for medical surveillance. The Appellate Division reversed, concluding that the claims for medical surveillance expenses, like the claims for “enhanced risk,” were too speculative to warrant recognition under the Tort Claims Act:

Faced with the admitted inability of the expert witness to quantify the increased risk, we cannot rule out the probability that such increase is so microscopic—ally small as to be meaningless. Without some quan-

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tifying guidance it becomes ****298** impossible to say that defendant has so significantly increased the "reasonable probability," [Coll v. Sherry, 29 N.J. 166, 175 \[148 A.2d 481\] \(1959\)](#), that any of the plaintiffs will develop cancer so as to justify imposing upon defendant the financial burden of lifetime medical surveillance for early clinical signs of cancer. In reaching this conclusion we heed the Legislature's hopeful expectation that "the courts will exercise restraint in the acceptance of novel causes of action against public entities." *Comment, N.J.S.A. 59:2-1. [202 N.J.Super. at 122-23, 493 A.2d 1314.]*

As a result of the trial court's and Appellate Division's rulings, plaintiffs are left to await actual manifestation of physical injury attributable to their exposure to toxic chemicals before they can institute and sustain a damage claim for personal injuries against the defendant. Although the trial court observed that any such future suits could avoid the bar of the statute of limitations by virtue of our "discovery rule," 189 ***579** *N.J.Super.* at 568, [461 A.2d 184](#), the Appellate Division's characterization of that statement as nonbinding dictum defers to this or another court the task of determining whether subsequent personal injury suits against this defendant may indeed be maintained. In the interim, under the Appellate Division ruling, any plaintiff who obtains regular or periodic medical surveillance for the express purpose of detecting adverse physical conditions attributable to exposure to toxic chemicals must personally bear the expense of that evaluation to the extent its cost is not covered by plaintiffs' own health insurance.

In our view, these decisions fall short of effectuating the policies of the Tort Claims Act where claims are asserted against a public entity for wrongful exposure to toxic chemicals. Although we concur with the Appellate Division's refusal to recognize plaintiffs' damage claim based on enhanced risk, we disagree with its conclusion that an award for medical surveillance damages cannot be supported by this record. We also deem it appropriate to clarify the effect of the statute of limitations, [N.J.S.A. 2A:14-2](#), and the single controversy doctrine on future claims for personal injuries.

1.

Our evaluation of the enhanced risk and medical surveillance claims requires that we focus on a critical issue in the management of toxic tort litigation: at what stage in the evolution of a toxic injury should tort law intercede by requiring the responsible party to pay damages?

At the outset, we must recognize that the issues presented by this case and others like it will be recurring. We note the difficulty that both law and science experience in attempting to deal with the emerging complexities of industrialized society and the consequent implications for human health. One facet of that problem is represented here, in the form of years of inadequate and improper waste disposal practices. However dimly or callously the consequences of those waste management ***580** practices may have been perceived, those consequences are now upon us. According to the Senate Committee on Environment and Public Works, more than ninety percent of all hazardous chemical wastes produced in the United States have been disposed of improperly. S.Rep. No. 848, 96th Cong., 2d Sess. 3 (1980) (citing EPA estimates).

In addition to the staggering problem of removing-or at least containing-the hazardous remnants of past practices, there remains the moral and legal problem of compensating the human victims of past misuse of chemical products. Governmental response to the problem of compensation has been slow. In enacting the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), [42 U.S.C.A. §§ 9601-9657](#) (West 1983), more commonly called the Superfund legislation, Congress deliberately made no provision for the recovery of damages for personal injury and property damage resulting from exposure to hazardous waste. Zazzali & Grad, "Hazardous Wastes: New Rights and Remedies? The Report and Recommendations of the Superfund Study Group," 13 *Seton Hall L.Rev.* 446, 446 (1983) (hereinafter Zazzali & Grad). Instead, Congress provided for the creation ****299** of a Study Group to propose solutions to the problem of victims' compensation. [42 U.S.C.A. § 9651\(e\)](#). The Superfund Study Group, recognizing the difficulty in adapting traditional legal doctrines to redress the grievances of the toxic tort victim, recommended a no-fault victims'

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compensation fund similar in structure to the workers' compensation laws in place in the states. See Zazzali & Grad, *supra*, 13 *Seton Hall L.Rev.* at 464 (1983). Under the Study Group's recommendations, victims compensated by the fund would maintain their right to sue under traditional tort principles, assuming they could overcome the numerous problems of proving injury and causation. *Id.* at 464-65. To date, none of the Study Group's recommendations regarding victims' *581 compensation has been adopted.^{FN5} Without a comprehensive governmental response to the problem of compensating victims of toxic exposure, the only available remedy lies within the legal system.

^{FN5}. The Superfund Amendments and Authorization Act of [1986, Pub.L. No. 99-499](#), 100 Stat. 1613 (codified at [42 U.S.C.A. § 9658 \(West Supp.1987\)](#)) makes no provision for a victims' compensation fund.

In the absence of statutory or administrative mechanisms for processing injury claims resulting from environmental contamination, courts have struggled to accommodate common-law tort doctrines to the peculiar characteristics of toxic-tort litigation. The overwhelming conclusion of the commentators who have evaluated the result is that the accommodation has failed, that common-law tort doctrines are ill-suited to the resolution of such injury claims, and that some form of statutorily-authorized compensation procedure is required if the injuries sustained by victims of chemical contamination are to be fairly redressed. See Ginsberg & Weiss, "Common Law Liability for Toxic Torts: A Phantom Remedy," 9 *Hofstra L.Rev.* 859, 920-30 (1981) (hereinafter Ginsberg & Weiss); Rosenberg, "The Causal Connection in Mass Exposure Cases: A 'Public Law' Vision of the Tort System," 97 *Harv.L.Rev.* 851, 855-59 (1984) (hereinafter Rosenberg); Trauberman, "Statutory Reform of 'Toxic Torts': Relieving Legal, Scientific, and Economic Burdens on the Chemical Victim," 7 *Harv.Env'tl.L.Rev.* 177, 188-202 (1983) (hereinafter Trauberman); "Developments in the Law-Toxic Waste Litigation," 99 *Harv.L.Rev.* 1458, 1602-31 (1986) (hereinafter "Developments-Toxic Waste"); Note, "The [Inapplicability of Traditional Tort Analysis to Environmental Risks: The Example of Toxic](#)

[Waste Pollution Victim Compensation.](#)" 35 *Stan.L.Rev.* 575, 581-88 (1983) (hereinafter Note, "Traditional Tort Analysis").

A variety of factors are cited to demonstrate that judicial resolution of mass exposure claims is unworkable. Among the obstacles cited are practical difficulties endemic to mass exposure*582 litigation, including the identification of the parties responsible for environmental damage; the risk that responsible parties are judgment-proof; the expense of compensating expert witnesses in specialized fields such as toxicology and epidemiology; and the strong temptation for premature settlement because of the cost and complexity of protracted multi-party litigation. Ginsberg & Weiss, *supra*, 9 *Hofstra L.Rev.* at 924-28; Trauberman, *supra*, 7 *Harv.Env'tl.L.Rev.* at 189-91, 200-01; Note, "[Traditional Tort Analysis.](#)" *supra*, 35 *Stan.L.Rev.* at 584-86.

[5] Although state statutes of limitations are invariably identified as procedural obstacles to mass exposure litigation, the extent of the problem posed by such statutes varies widely among jurisdictions. Ginsberg & Weiss, *supra*, 9 *Hofstra L.Rev.* at 921 & n. 259; "Developments-Toxic Waste," *supra*, 99 *Harv.L.Rev.* 1606-07. Because of the long latency period typical of illnesses caused by chemical pollutants, victims often discover their injury and the existence of a cause of action long after the expiration of the personal-injury statute of limitations, where the limitations period is calculated from the date of the exposure. Most jurisdictions have remedied this problem by adopting a version of the "discovery rule" that tolls the statute until the injury is discovered. Few states **300 follow New Jersey's discovery rule that tolls the statute until the victim discovers both the injury and the facts suggesting that a third party may be responsible. *Lynch v. Rubacky*, *supra*, 85 N.J. at 70, 424 A.2d 1169 (citing *Lopez v. Swyer*, 62 N.J. 267, 272, 274, 300 A.2d 563 (1973)); see "Developments-Toxic Waste," *supra*, 99 *Harv.L.Rev.* at 1606-07. However, we note that CERCLA now pre-empts state statutes of limitation where they provide that the limitations period for personal-injury or property-damage suits prompted by exposure to hazardous substances starts on a date earlier than the "federally required commencement date." That term

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is defined as “the date plaintiff knew (or reasonably should have known) that the personal injury or property damages * * * were caused or contributed to by the hazardous substance * * * concerned.”*583 Superfund Amendments and Authorization Act of 1986, [Pub.L. No. 99-499](#), 100 Stat. 1613, 1695-96 (codified at [42 U.S.C.A. § 9658 \(West Supp.1987\)](#)).

The single controversy rule “requires that a party include in the action all related claims against an adversary and its failure to do so precludes the maintenance of a second action.” [Aetna Ins. Co. v. Gilchrist Bros., Inc.](#), 85 N.J. 550, 556-57, 428 A.2d 1254 (1981). The doctrine may bar recovery where, as here, suit is instituted to recover damages to compensate for the immediate consequences of toxic pollution, but the initiation of additional litigation depends upon when, if ever, physical injuries threatened by the pollution are manifested.

As the Appellate Division implied, [202 N.J.Super. at 125, 493 A.2d 1314](#), we need not resolve such issues for the litigants in this case. Nevertheless, it is appropriate that all of the parties in interest understand that neither the single controversy doctrine nor the statute of limitations, [N.J.S.A. 2A:14-2](#), will preclude a timely-filed cause of action for damages prompted by the future “discovery” of a disease or injury related to the tortious conduct at issue in this litigation. The bar of the statute of limitations is avoided because, under New Jersey's discovery rule, the cause of action does not accrue until the victim is aware of the injury or disease and of the facts indicating that a third party is or may be responsible. [Lynch v. Rubacky](#), *supra*, 85 N.J. at 70, 424 A.2d 1169. Moreover, the single controversy rule, intended “ ‘to avoid the delays and wasteful expense of the multiplicity of litigation which results from the splitting of a controversy,’ ” *id.* at 557 (quoting [Ajajian v. Schlanger](#), 14 N.J. 483, 485, 103 A.2d 9, *cert. denied*, 348 U.S. 835, 75 S.Ct. 58, 99 L.Ed.2d 659 (1954)), cannot sensibly be applied to a toxic-tort claim filed when disease is manifested years after the exposure, merely because the same plaintiff sued previously to recover for property damage or other injuries. In such a case, the rule is literally inapplicable since, as noted, the second cause of action does not accrue until the disease is manifested; hence, it could not have been

joined with the earlier claims.

*584 Accordingly, we concur with the principle advanced by the trial court, [189 N.J.Super. at 568, 461 A.2d 184](#), and endorsed by other federal and state courts, *see Hagerty v. L & L Marine Servs., Inc.*, 788 F.2d 315, 320-21 (5th Cir.), modified on other grounds, 797 F.2d 256 (5th Cir.1986); [Eagle-Picher Indus. v. Cox](#), 481 So.2d 517, 519-21 (Fla. Dist. Ct. App. 1985), that neither the statute of limitations nor the single controversy rule should bar timely causes of action in toxic-tort cases instituted after discovery of a disease or injury related to tortious conduct, although there has been prior litigation between the parties of different claims based on the same tortious conduct. *See Devlin v. Johns-Manville Corp.*, 202 N.J.Super. 556, 568-70, 495 A.2d 495 (Law Div. 1985).

Another commonly identified obstacle to judicial resolution of mass exposure tort claims is the difficulty encountered by plaintiffs in proving negligence. Although causes of action for trespass and nuisance may be available to redress property injuries, *see Ginsberg & Weiss, supra*, 9 Hofstra L.Rev. at 880; Note, “[Traditional Tort Analysis](#),” *supra*, 35 Stan.L.Rev. at 581, most personal injury actions in toxic tort litigation seek recovery on the basis of the **301 defendant's negligence, *see* “[Developments-Toxic Waste](#),” *supra*, 99 Harv.L.Rev. at 1610-11. *But cf. State of New Jersey, Dep't of Env'tl. Protection v. Ventron Corp.*, 94 N.J. 473, 488-93, 468 A.2d 150 (1983) (holding that the disposal of toxic wastes is an abnormally dangerous activity and that a landowner is strictly liable for damage to others caused by toxic wastes stored or disposed of on his property); [N.J.S.A. 58:10-23.11g\(c\)](#) (imposing strict liability for cleanup and removal costs on any person who has discharged a hazardous substance). It is frequently argued that a negligence standard unfairly imposes on plaintiffs the difficult burden of establishing by a cost-benefit analysis that the cost to defendant of taking precautionary measures is outweighed by the probability and gravity of harm. Trauberman, *supra*, 7 Harv.Env'tl.L.Rev. at 192-97; “[Developments-Toxic Waste](#),” *supra*, 99 Harv.L.Rev. at 1611-12 (citing [Restatement \(Second\) of Torts](#) § 291 (1965)). A frequent proposal involves the

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substitution of strict liability doctrine in place of a negligence standard. Ginsberg & Weiss, *supra*, 9 *Hofstra L.Rev.* at 899-913; "Developments-Toxic Waste," *supra*, 99 *Harv.L.Rev.* at 1612-17.

By far the most difficult problem for plaintiffs to overcome in toxic tort litigation is the burden of proving causation. "Developments-Toxic Waste," *supra*, 99 *Harv.L.Rev.* at 1617-30; Note, "Traditional Tort Analysis," *supra*, 35 *Stan.L.Rev.* at 583-84. In the typical tort case, the plaintiff must prove tortious conduct, injury and proximate cause. W. Keeton, D. Dobbs, R. Keeton & D. Owen, *Prosser & Keeton on the Law of Torts* § 30, at 164-65 (1984). Ordinarily, proof of causation requires the establishment of a sufficient nexus between the defendant's conduct and the plaintiff's injury. In toxic tort cases, the task of proving causation is invariably made more complex because of the long latency period of illnesses caused by carcinogens or other toxic chemicals. The fact that ten or twenty years or more may intervene between the exposure and the manifestation of disease highlights the practical difficulties encountered in the effort to prove causation. Moreover, the fact that segments of the entire population are afflicted by cancer and other toxically-induced diseases requires plaintiffs, years after their exposure, to counter the argument that other intervening exposures or forces were the "cause" of their injury. The thoughtful analysis by District Judge Jenkins in *Allen v. United States*, 588 *F.Supp.* 247 (D. Utah 1984), rev'd on other grounds, 816 *F.2d* 1417 (10th Cir.1987), a case involving the causal relationship between nuclear fallout and cancer, graphically explains the causation problem in mass exposure litigation:

In most cases, the factual connection between defendant's conduct and plaintiff's injury is not genuinely in dispute. Often, the cause-and-effect is obvious: A's vehicle strikes B, injuring him; a bottle of A's product explodes, injuring B; water impounded on A's property flows onto B's land, causing immediate damage.

In this case, the factual connection singling out the defendant as the source of the plaintiffs' injuries and deaths is very much in genuine dispute. Determination*586 of the cause-in-fact, or factual connection, issue is complicated by the nature of the injuries

suffered (various forms of cancer and leukemia), the nature of the causation mechanism alleged (ionizing radiation from nuclear fallout * * *), the extraordinary time factors and other variables involved in tracing any causal relationship between the two.

At this point, there appears to be no question whether or not ionizing radiation causes cancer and leukemia. It does. Once more, however, it seems important to clarify what is meant by "cause" in relation to radiation and cancer.

When we refer to radiation as a cause, we do not mean that it causes every case of cancer or leukemia. Indeed, the evidence we have indicating radiation in the causation of cancer and leukemia shows that not all cases of cancer are caused by radiation. Second, when we refer to radiation as **302 a cause of cancer, we do not mean that every individual exposed to a certain amount of radiation will develop cancer. We simply mean that a population exposed to a certain dose of radiation will show a greater incidence of cancer than that same population would have shown in the absence of the added radiation.

J. Gofman, M.D., *Radiation and Human Health* 54-55 (1981), PX-1046.

The question of cause-in-fact is additionally complicated by the long delay, known often as the *latency period*, between the exposure to radiation and the observed cancer or leukemia. Assuming that cancer originates in a single cell, or a few cells, in a particular organ or tissue, it may take years before those cells multiply into the millions or billions that comprise a detectable tumor.

The problem of the latency period is one factor distinguishing * * * cancer causation questions from the cause-in-fact relationships found in most tort cases; normally "cause" is far more direct, immediate and observable, *e.g.*, A fires a gun at B, seriously wounding him. The great length of time involved * * * allows the possible involvement of "intervening causes," sources of injury wholly apart from the defendant's activities, which obscure the factual connection between the plaintiff's injury and the defendant's purportedly wrongful conduct. The mere passage of time is sufficient to raise doubts about "cause" in the minds of a legal system accustomed to far more immediate chains of events. [*Id.* at 405-06 (citations

omitted).]

These difficulties forced the *Allen* court to invoke analogies to other cases that have relied upon factual connections between plaintiffs and defendants as a basis for liability, where proof of causation was unavailable. *Id.* at 407 (citing [Summers v. Tice](#), 33 Cal.2d 80, 199 P.2d 1 (1948) (during a hunting accident, two defendants acted negligently, but only one caused plaintiff's injury; since plaintiff could not prove which defendant was responsible for the injury, burden of proof shifted to each defendant to disprove causation), and *587 [Ybarra v. Spangard](#), 25 Cal.2d 486, 154 P.2d 687 (1944) (application of doctrine of *res ipsa loquitur* to a "foreign-instrument" medical-malpractice case where several physicians and nurses participated in an operation)). The same difficulties encountered in *Allen* have also troubled commentators assessing the application of common-law doctrines to toxic tort litigation. Hence, recommendations have been made for a legislative response to the problem of causation when the injury has been manifested. See [Allen v. United States](#), *supra*, 588 F.Supp. at 414; Ginsberg & Weiss, *supra*, 9 Hofstra L.Rev. at 938-40; Trauberman, *supra*, 7 Harv.Env'tl.L.Rev. at 225-36; Note, "Traditional Tort Analysis," *supra*, at 614-15; Zazzali & Grad, *supra*, 13 Seton Hall L.Rev. at 464-67.

Although we acknowledge, as we must, the array of complex practical and doctrinal problems that confound litigants and courts in toxic-tort mass-exposure litigation, we are confronted in this case with fairly narrow and manageable issues. A legally and financially responsible defendant has been identified and a jury has determined fault under the "palpably unreasonable" standard of the Tort Claims Act, [N.J.S.A. 59:4-2](#), a standard more difficult to satisfy than ordinary negligence. No statute of limitations questions are raised in this litigation. Nor are we confronted with insurmountable issues of causation: the testimony of plaintiffs' experts has persuasively established the relationship between defendant's wrongful conduct and the contamination of plaintiffs' wells; and plaintiffs do not seek damages for presently-existing illness or disease attributable to defendant's wrongful conduct. The legal issue we must resolve, in the context of the jury's determination of defendant's liability under the

Act, is whether the proof of an unquantified enhanced risk of illness or a need for medical surveillance is sufficient to justify compensation under the Tort Claims Act. In view of the acknowledged difficulties of proving causation once evidence of disease is manifest, a determination of the compensability of **303 post-exposure, pre-symptom injuries is particularly*588 important in assessing the ability of tort law to redress the claims of plaintiffs in toxic-tort litigation.

2.

Much of the same evidence was material to both the enhanced risk and medical surveillance claims. Dr. Dan Raviv, a geohydrologist,^{[FN6](#)} testified as to the movements and concentrations of the various chemical substances as they migrated from the landfill toward plaintiffs' wells. Dr. Joseph Highland, a toxicologist, applied Dr. Raviv's data and gave testimony concerning the level of exposure of various plaintiffs. Dr. Highland also compiled toxicity profiles of the chemical substances found in the wells, and testified concerning the health hazards posed by the chemicals and the exposure levels at which adverse health effects had been experimentally observed. According to Dr. Highland, four of the chemicals were known to be carcinogenic, and at least four of the chemicals were capable of adversely affecting the reproductive system or causing birth defects. Most of the chemical substances could produce adverse effects on the liver and kidney, as well as on the nervous system. For at least six of the chemicals, no data was available regarding carcinogenic potential. He also testified that the exposure to multiple chemical substances posed additional hazards to plaintiffs because of the possibility of biological interaction among the chemicals that enhanced the risk to plaintiffs.

^{[FN6](#)} Geohydrology deals with the occurrence, flow, behavior, and production of underground water.

Dr. Highland testified that the Legler area residents, because of their exposure to toxic chemicals, had an increased risk of cancer; that unborn children and infants were more susceptible to the disease because of their immature biological defense systems; and that

the extent of the risk was variable with the degree of exposure to the chemicals. Dr. Highland testified that *he could not quantify the extent of the enhanced risk of cancer* because of the lack of scientific information concerning *589 the effect of the interaction of the various chemicals to which plaintiffs were exposed. However, the jury could reasonably have inferred from his testimony that the risk, although unquantified, was medically significant.

Dr. Highland also testified that a sample of twelve plaintiffs was studied to assess their increased susceptibility to liver and kidney disease. A table prepared by Dr. Highland and admitted in evidence described these twelve plaintiffs as having a moderate, high, or very high likelihood of contracting liver or renal disorders because of their exposure to chemical substances known as chlorinated aliphatic hydrocarbons (CAH's).^{FN7} Dr. Highland also testified that the exposure to chemicals had already caused actual physical injury to plaintiffs through its adverse effects on the genetic material within their cells.^{FN8}

^{FN7}. The chemicals found in plaintiffs' wells in this category were: methylene chloride, chloroform, 1,1,1-trichloroethane, dichlorofluoromethane, 1,1,2-trichloroethylene, and 1,1,2,2-tetrachloroethane.

^{FN8}. Dr. Highland explained the effect of exposure to carcinogenic materials in terms of a "switch" that, when turned on, affects the genetic material and may or may not result in cancer:

We don't understand scientifically yet the real biological steps throughout the whole chain, how exposure today to some agent initiates or starts a process which in 20, 30 years from now ultimately manifests itself or is seen as a cancer in an individual. * * *

What we do know is that there is a progression of steps that must be occurring. There is an injury or insult that occurs. I use the analogy to a switch being turned on upon exposures, that generally, usually, when a switch is turned on, it's not turned off.

There are some cases where a switch can be

turned off; but, in general, we believe that this is a process of throwing switches and that the series of switches need[s] to be thrown before the disease is ultimately seen. Therefore, if you picture one cell of thousands, of millions, in the body, which is being exposed, you may get a switch turned on. That's the biological damage, injury, insult, whatever term you wish to use, that occurs upon the exposure. It may be actually seen in terms of 20 years from now when a cancer becomes evident, or it may never be seen. That's why what we did was a risk assessment which deals with probabilities.

We are saying the population is at risk, increased risk of disease, of cancer, not a certainty that everyone will get cancer. There's a[n] increased risk from the exposure. In some individuals where the switches are turned on, ultimately they may have wound up with a cancer, and in others where the switch is turned on, where there's biological insult, maybe other factors take place in life and that never becomes clearly manifested.

By the kind of biological change, something that occurs, we believe, with the genetic material in the cell to start the process, and along the way other things affect that cell, flip more switches, make it ultimately become a cancer cell and ultimately manifest as a physical cancer.

****304 *590** Dr. Susan Daum, a physician affiliated with the Mount Sinai Hospital in New York and specializing in the diagnosis and treatment of diseases induced by toxic substances, testified that plaintiffs required a program of regular medical surveillance. Acknowledging her reliance on the report of Dr. Highland, Dr. Daum stated that plaintiffs' exposure to chemicals had produced "a reasonable likelihood that they have now or will develop health consequences from this exposure."

She testified that the purpose of the medical surveillance program was to permit the earliest possible diagnosis of illnesses, which could lead to improved prospects for cure, prolongation of life, relief of pain, and minimization of disability. Dr. Daum specified

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the series of tests and procedures that would constitute an appropriate program, described each procedure and explained its purpose, and estimated the annual cost of each test.

Although both the enhanced risk and medical surveillance claims are based on Dr. Highland's testimony, supplemented by Dr. Daum's testimony in the case of the surveillance claim, these claims seek redress for the invasion of distinct and different interests. The enhanced risk claim seeks a damage award, not because of any expenditure of funds, but because plaintiffs contend that the unquantified injury to their health and life expectancy should be presently compensable, even though no evidence of disease is manifest. Defendant does not dispute the causal relationship between the plaintiffs' exposure to toxic chemicals and the plaintiffs' increased risk of diseases, *591 but contends that the probability that plaintiffs will actually become ill from their exposure to chemicals is too remote to warrant compensation under principles of tort law.

By contrast, the claim for medical surveillance does not seek compensation for an unquantifiable injury, but rather seeks specific monetary damages measured by the cost of periodic medical examinations. The invasion for which redress is sought is the fact that plaintiffs have been advised to spend money for medical tests, a cost they would not have incurred absent their exposure to toxic chemicals. Defendant contends that the claim for medical surveillance damages cannot be sustained, as a matter of law, if the plaintiffs' enhanced risk of injury is not sufficiently probable to be compensable. In our view, however, recognition of the medical surveillance claim is not necessarily dependent on recognition of the enhanced risk claim.

3.

The trial court declined to submit to the jury the issue of defendant's liability for the plaintiffs' increased risk of contracting cancer, kidney or liver damage, or other diseases associated with the chemicals that had migrated from the landfill to their wells. If the issue had not been withheld, the jury could have concluded from the evidence that most or all of the plaintiffs

had a significantly but unquantifiably enhanced risk of the identified diseases, and that such enhanced risk was attributable to defendant's conduct.

[6] A preliminary question is whether a significant exposure to toxic chemicals resulting in an enhanced risk of disease is an "injury" for the purposes of the Tort Claims Act. The Act defines injury to include "damage to or loss of property or any other injury that a person may suffer that would be actionable if inflicted by a private person." *N.J.S.A. 59:1-3*. We also note that the Restatement defines "injury" as "the invasion of any legally protected interest of another." *Restatement (Second) of Torts § 7(1) (1965): **305 *592* The word "injury" is used * * * to denote the fact that there has been an invasion of a legally protected interest which, if it were the legal consequence of a tortious act, would entitle the person suffering the invasion to maintain an action of tort. * * * The most usual form of injury is the infliction of some harm, but there may be an injury although no harm is done. [*Id.* Comment a.]

In our view, an enhanced risk of disease caused by significant exposure to toxic chemicals is clearly an "injury" under the Act. In this case, neither the trial court nor the Appellate Division challenged the contention that the enhanced risk of disease was a tortiously-inflicted injury, but both concluded that the proof quantifying the likelihood of disease was insufficient to submit the issue to the jury. As the Appellate Division observed: While it is true that damages are recoverable for the prospective consequences of a tortious injury, it must be demonstrated that the apprehended consequences are reasonably probable. *Coll v. Sherry, 29 N.J. at 174-175 [148 A.2d 481]*. As we explained in connection with plaintiffs' claims for future medical surveillance, the degree of increased risk was in no way quantified. Indeed, that function was described by plaintiffs' expert witness as "impossible," and we therefore conclude that a reasonable probability of enhanced risk is not supported by the evidence. We discern no way to compensate one for enhanced risk without knowing in some way the degree of enhancement. Additionally, the recoverability of damages for enhanced risk in this state has not been decided. See *Evers v. Dollinger, 95 N.J. 399, 406 [471 A.2d 403] (1984)*. [*202 N.J.Super. at*

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[125-26, 493 A.2d 1314.](#)]

Except for a handful of cases involving traumatic torts causing presently discernible injuries in addition to an enhanced risk of future injuries, [FN9](#) courts have generally been reluctant to *593 recognize claims for potential but unrealized injury unless the proof that the injury will occur is substantial. Our most recent encounter with the question of enhanced risk damages occurred in [Evers v. Dollinger, 95 N.J. 399, 471 A.2d 405 \(1984\)](#). There, plaintiff's doctor failed to diagnose breast cancer and plaintiff's claim for damages sought recovery for her enhanced risk of recurrent disease occasioned by the misdiagnosis. Plaintiff underwent an extended mastectomy after her cancer was properly diagnosed, but by the time the case was decided by this Court her cancer had recurred. In reversing the judgment for defendant entered at the close of plaintiff's case, we held that on retrial plaintiff was entitled to prove that defendant's negligence increased the risk of metastasis and that such increased risk was a substantial factor in producing the recurrence of disease. *Id.* at 417. We declined to address the compensability of enhanced risk in the abstract:

[FN9](#). See, e.g., [Martin v. City of New Orleans, 678 F.2d 1321, 1327 \(5th Cir.1982\)](#) (bullet lodged in neck; despite plaintiff's favorable prognosis, the fact that there would always be a risk of life threatening future complications supported large damage award), cert. denied, [459 U.S. 1203, 103 S.Ct. 1189, 75 L.Ed.2d 435 \(1983\)](#); [Starlings v. Ski Roundtop Corp., 493 F.Supp. 507, 510 \(M.D.Pa.1980\)](#) (knee injury; it was proper to submit to jury evidence regarding plaintiff's possible increased risk of arthritis, in view of existing injury to plaintiff's knee); [Davis v. Graviss, 672 S.W.2d 928, 932 \(Ky.1984\)](#) (basal skull fracture causing leakage of cerebral spinal fluid; compensation for increased likelihood of future complications permitted if supported by substantial evidence); [Feist v. Sears, Roebuck & Co., 267 Or. 402, 412, 517 P.2d 675, 680 \(1973\)](#) (four-year-old child sustained basal skull fracture; based on expert testimony, trial

court permitted jury to award damages for enhanced susceptibility to meningitis); [Schwegel v. Goldberg, 209 Pa.Super. 280, 286-87, 228 A.2d 405, 408-09 \(Pa.Super.Ct.1967\)](#) (four-year-old child sustained fractured skull, brain contusion, and traumatic hemorrhage, and had a 5% likelihood of experiencing epileptic seizures in the future; recovery for enhanced risk of future epilepsy allowed despite its low probability because there was "no speculation or guessing" regarding serious present injury.)

Whether "increased risk," standing alone, is an actionable element of damage in a malpractice case is a provocative question the determination of which we leave for an appeal that requires, as this **306 case does not, the answer. [\[95 N.J. at 412 n. 7, 471 A.2d 405.\]](#) [FN10](#)

[FN10](#). In his concurring opinion in *Evers*, Justice Handler expressed the view that "there was an ample evidential basis in this case at the time of trial for recognizing the unquantified increased risk of future cancer as a compensable form of medical injury and an element of damages independent of an actual recurrence of cancer." [95 N.J. at 429, 471 A.2d 405.](#)

Among the recent toxic tort cases rejecting liability for damages based on enhanced risk is [Anderson v. W.R. Grace & Co., 628 F.Supp. 1219 \(D.Mass.1986\)](#). That case, recently settled for an undisclosed amount, see N.Y. Times, Sept. 23, 1986, at A16, col. 1, involved defendants' alleged chemical contamination of the groundwater in areas of Woburn, Massachusetts. See generally P. DiPerna, *Cluster Mystery: Epidemic and the Children of Woburn, Mass.* (1985) (containing background information*594 on the Woburn case). Plaintiffs alleged that two wells supplying water to the City of Woburn drew upon the contaminated water, and that exposure to the contaminated water caused five deaths and severe personal injuries among plaintiffs. Among the claims for personal injuries dismissed before trial were plaintiff's claims for damages based on enhanced risk. Relying on the Massachusetts rule regarding prospective dam-

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ages, the *Anderson* court reasoned that “recovery depends on establishing a ‘reasonable probability’ that the harm will occur.” *Id.* at 1231 (citing [Restatement \(Second\) of Torts § 912](#) comment e). However, the *Anderson* court held that the plaintiffs failed to satisfy this threshold standard. They had not quantified their alleged enhanced risk: “Nothing in the present record indicates the magnitude of the increased risk or the diseases which plaintiffs may suffer.” *Id.*

The court in *Anderson* explained that its reluctance to recognize the enhanced risk claims was based on two policy considerations. Its first concern was that recognition of the cause of action would create a flood of speculative lawsuits. *Id.* at 1232. In addition, the court stated:

A further reason for denying plaintiffs' damages for the increased risk of future harm in this action is the inevitable inequity which would result if recovery were allowed. “To award damages based on a mere mathematical probability would significantly under-compensate those who actually do develop cancer and would be a windfall to those who do not.” [*Id.* (quoting *Arnett v. Dow Chem. Corp.*, No. 729586, slip op. at 15 (Cal.Super.Ct. Mar. 21, 1983)).]

The majority of courts that have considered the enhanced risk issue have agreed with the disposition of the District Court in *Anderson*. See [Schweitzer v. Consolidated Rail Corp.](#), 758 F.2d 936, 942 (3rd Cir.1985) (“[S]ubclinical injury resulting from exposure to asbestos is insufficient to constitute the actual loss or damage to a plaintiff's interest required to sustain a cause of action * * *”), *cert. denied*, 474 U.S. 864, 106 S.Ct. 183, 88 L.Ed.2d 152 (1985); [Laswell v. Brown](#), 683 F.2d 261, 269 (8th Cir.1982) (alleged latent cellular or genetic defects associated with nuclear testing; “[A] lawsuit for personal injuries cannot be based upon the mere possibility of some future harm.”), *cert. denied*, 459 U.S. 1210, 103 S.Ct. 1205, 75 L.Ed.2d 446 (1983); [Mink v. University of Chicago](#), 460 F.Supp. 713, 719 (N.D.Ill.1978) (DES; “The mere fact of risk without any accompanying physical injury is insufficient to state a claim * * * ”); [Morrissey v. Eli Lilly & Co.](#), 76 Ill.App.3d 753, 761, 32 Ill.Dec. 30, 37, 394 N.E.2d 1369, 1376 (Ill.App.Ct.1979) (DES; mere exposure and the possibility of developing future illness is in-

sufficient to state a present injury).

Other courts have acknowledged the propriety of the enhanced risk cause of action, but have emphasized the requirement that proof of future injury be reasonably certain. See [Hagerty v. L & L Marine Servs.](#), *supra*, 788 F.2d at 319 (“[A] plaintiff can recover [damages for enhanced risk] only where he can show that the toxic exposure more probably than not will lead to cancer.”); [Wilson v. Johns-Manville Sales Corp.](#), 684 F.2d 111, 116-19 (D.C.Cir.1982) (holding that in latent disease cases statute of limitations period does not begin until disease is manifest and observing that “recovery**307 of damages based on future consequences may be had only if such consequences are ‘reasonably certain.’ ”); [Sterling v. Velsicol Chemical Corp.](#), *supra*, 647F.Supp. at 321-22, (upholding cause of action for enhanced susceptibility to injury based on chemical contamination of plaintiffs' wells where “reasonable probability” standard is met); [Lorenc v. Chemirad Corp.](#), 37 N.J. 56, 76, 179 A.2d 401 (1962) (holding that evidence was sufficient to raise jury question whether future onset of cancer was probable); [Devlin v. Johns-Manville Corp.](#), *supra*, 202 N.J.Super. at 565, 495 A.2d 495 (rejecting enhanced risk claim except where there is proof that it is reasonably probable or as a basis for damages for emotional distress or medical surveillance).

Additionally, several courts have permitted recovery for increased risk of disease, but only where the plaintiff exhibited some present manifestation of disease. See [Jackson v. Johns-Manville Sales Corp.](#), 781 F.2d 394, 412-13 (5th Cir.) (allowing recovery for increased risk of cancer where evidence indicated that due to asbestos exposure, plaintiff had greater than fifty *596 percent chance of contracting cancer; “[o]nce the injury becomes actionable—once some effect appears—then the plaintiff is permitted to recover for all probable future manifestations as well”), *cert. denied*, ---U.S. 3339, 106 S.Ct. 3339, 92 L.Ed.2d 743 (1986); [Braftord v. Susquehanna Corp.](#), 586 F.Supp. 14, 17-18 (D.Colo.1984) (acknowledging that cause of action for increased risk of cancer requires proof of present physical injury, but denying defendant's motion for summary judgment to permit plaintiff to offer proof of present genetic and chromosomal dam-

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age due to exposure to radiation); cf. *DePass v. United States*, *supra*, 721 F.2d at 210 (Posner, J., dissenting) (“Accidents that require the amputation of a limb * * * create a *high risk* of premature death from heart disease * * *. [T]he case should be remanded * * * for a determination of the amount of damages necessary to compensate DePass for an 11-year reduction in his life expectancy.”).

We observe that the overwhelming weight of the scholarship on this issue favors a right of recovery for tortious conduct that causes a significantly enhanced risk of injury. Gale & Goyer, “Recovery for Cancerphobia and Increased Risk of Cancer,” 15 *Cum.L.Rev.* 723 (1985); Ginsberg & Weiss, *supra*, 9 *Hofstra L.Rev.* 859; Rosenberg, *supra*, 97 *Harv.L.Rev.* 849; Trauberman, *supra*, 7 *Harv.Env'tl.L.Rev.* 177; Note, “Personal Injury Hazardous Waste Litigation: A Proposal for Tort Reform,” 10 *B.C.Env'tl.Aff.L.Rev.* 797 (1982-1983); Note, “Increased Risk of Cancer as an Actionable Injury,” 18 *Ga.L.Rev.* 563 (1984); Note, “Traditional Tort Analysis,” *supra*, 35 *Stan.L.Rev.* 575; Note, “Increased Risk of Disease From Hazardous Waste: A Proposal for Judicial Relief,” 60 *Wash.L.Rev.* 635 (1985). For the most part, the commentators concede the inadequacy of common-law remedies for toxic-tort victims. Instead, they recommend statutory or administrative mechanisms that would permit compensation to be awarded on the basis of exposure and significant risk of disease, without the necessity of proving the existence of present injury.

*597 [7] Our disposition of this difficult and important issue requires that we choose between two alternatives, each having a potential for imposing unfair and undesirable consequences on the affected interests. A holding that recognizes a cause of action for unquantified enhanced risk claims exposes the tort system, and the public it serves, to the task of litigating vast numbers of claims for compensation based on threats of injuries that may never occur. It imposes on judges and juries the burden of assessing damages for the risk of potential disease, without clear guidelines to determine what level of compensation may be appropriate. It would undoubtedly increase already escalating insurance rates. It is clear that the recognition of an “enhanced risk” cause of

action, particularly when the risk is unquantified, would generate substantial litigation that would be difficult to manage and resolve.

Our dissenting colleague, arguing in favor of recognizing a cause of action based on an unquantified claim of enhanced risk, **308 points out that “courts have not allowed the difficulty of quantifying injury to prevent them from offering compensation for assault, trespass, emotional distress, invasion of privacy or damage to reputation.” *Post* at 318. Although lawsuits grounded in one or more of these causes of action may involve claims for damages that are difficult to quantify, such damages are awarded on the basis of events that have occurred and can be proved at the time of trial. In contrast, the compensability of the enhanced risk claim depends upon the likelihood of an event that has not yet occurred and may never occur—the contracting of one or more diseases the risk of which has been enhanced by defendant's conduct. It is the highly contingent and speculative quality of an unquantified claim based on enhanced risk that renders it novel and difficult to manage and resolve. If such claims were to be litigated, juries would be asked to award damages for the enhanced risk of a disease that may never be contracted, without the benefit of expert testimony sufficient to establish the likelihood that the contingent event will ever occur.

*598 On the other hand, denial of the enhanced-risk cause of action may mean that some of these plaintiffs will be unable to obtain compensation for their injury. Despite the collateral estoppel effect of the jury's finding that defendant's wrongful conduct caused the contamination of plaintiffs' wells, those who contract diseases in the future because of their exposure to chemicals in their well water may be unable to prove a causal relationship between such exposure and their disease. We have already adverted to the substantial difficulties encountered by plaintiffs in attempting to prove causation in toxic tort litigation. *Supra* at 301-302. Dismissal of the enhanced risk claims may effectively preclude any recovery for injuries caused by exposure to chemicals in plaintiffs' wells because of the difficulty of proving that injuries manifested in the future were not the product of intervening events or causes.

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It may be that this dilemma could be mitigated by a legislative remedy that eases the burden of proving causation in toxic-tort cases where there has been a statistically significant incidence of disease among the exposed population. Other proposals for legislative intervention contemplate a funded source of compensation for persons significantly endangered by exposure to toxic chemicals. We invite the legislature's attention to this perplexing and serious problem.

In deciding between recognition or nonrecognition of plaintiffs' enhanced-risk claim, we feel constrained to choose the alternative that most closely reflects the legislative purpose in enacting the Tort Claims Act. We are conscious of the admonition that in construing the Act courts should "exercise restraint in the acceptance of novel causes of action against public entities." Comment, [N.J.S.A. 59:2-1](#). In our view, the speculative nature of an unquantified enhanced risk claim, the difficulties inherent in adjudicating such claims, and the policies underlying the Tort Claims Act argue persuasively against the recognition of this cause of action. Accordingly, we decline to recognize plaintiffs' cause of action for the *unquantified* enhanced risk of disease, and affirm the judgment of the Appellate*599 Division dismissing such claims. We need not and do not decide whether a claim based on enhanced risk of disease that is supported by testimony demonstrating that the onset of the disease is reasonably probable, *see Coll v. Sherry, supra, 29 N.J. at 175, 148 A.2d 481*, could be maintained under the Tort Claims Act.^{FN11}

^{FN11}. As noted, this Court in *Evers v. Dollinger, supra, 95 N.J. at 412 n. 7, 471 A.2d 405*, declined to decide whether "increased risk" is an actionable element of damage in a malpractice case. *Supra* at 303.

4.

[8] The claim for medical surveillance expenses stands on a different footing from the claim based on enhanced risk. It seeks to recover the cost of periodic medical examinations intended to monitor plaintiffs' health and facilitate early diagnosis and treatment of disease caused by plaintiffs' exposure to toxic chemicals. At trial, **309 competent medical testimony

was offered to prove that a program of regular medical testing and evaluation was reasonably necessary and consistent with contemporary scientific principles applied by physicians experienced in the diagnosis and treatment of chemically-induced injuries.^{FN12}

^{FN12}. Plaintiff's expert, Dr. Daum, testified that it would be appropriate to initiate the medical surveillance testing for a period ranging from one to three years after the exposure, for the purpose of establishing baseline data. She testified that regular medical surveillance examinations should then be commenced at the onset of the risk of disease, which she estimated to be ten years after exposure, and that the surveillance should be continued annually thereafter.

The Appellate Division's rejection of the medical surveillance claim is rooted in the premise that even if medical experts testify convincingly that medical surveillance is necessary, the claim for compensation for these costs must fall, as a matter of law, if the risk of injury is not quantified, or, if quantified, is not reasonably probable. [202 N.J.Super. at 122-23, 493 A.2d 1314](#). This analysis assumes that the reasonableness of medical intervention, and, therefore, its compensability, depends solely on the sufficiency of proof that the occurrence of the disease is *600 probable. We think this formulation unduly impedes the ability of courts to recognize that medical science may necessarily and properly intervene where there is a significant but unquantified risk of serious disease.

This point is well-illustrated by the hypothetical case discussed in the opinion of the Court of Appeals in *Friends For All Children v. Lockheed Aircraft Corp., 746 F.2d 816 (D.C.Cir.1984)*:

Jones is knocked down by a motorbike when Smith is riding through a red light. Jones lands on his head with some force. Understandably shaken, Jones enters a hospital where doctors recommend that he undergo a battery of tests to determine whether he has suffered any internal head injuries. The tests prove negative, but Jones sues Smith solely for what turns out to be the substantial cost of the diagnostic examinations.

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From our example, it is clear that even in the absence of physical injury Jones ought to be able to recover the cost for the various diagnostic examinations proximately caused by Smith's negligent action. A cause of action allowing recovery for the expense of diagnostic examinations recommended by competent physicians will, in theory, deter misconduct, whether it be negligent motorbike riding or negligent aircraft manufacture. The cause of action also accords with commonly shared intuitions of normative justice which underlie the common law of tort. The motorbike rider, through his negligence, caused the plaintiff, in the opinion of medical experts, to need specific medical services—a cost that is neither inconsequential nor of a kind the community generally accepts as part of the wear and tear of daily life. Under these principles of tort law, the motorbiker should pay. [*Id.* at 825.]

In *Friends for All Children*, suit was instituted on behalf of 149 Vietnamese orphaned children who survived a plane crash during the evacuation of Vietnam in 1975. The complaint alleged that because of decompression, as well as the impact of the crash, the children suffered from a neurological disorder known as Minimal Brain Dysfunction (MBD). The trial was delayed by numerous pretrial proceedings, and by the resolution of three “bellwether” cases intended to provide information that would lead to a full settlement of all claims. When it became apparent that settlement was unlikely, the District Court, *sua sponte*, invited motions for summary judgment on the issue of defendant's liability for diagnostic expenses and medical treatment, and for injunctive relief compelling Lockheed to pay for such expenses and treatment in advance of *601 trial. *Id.* at 819-20. Lockheed contended that tort law in the District of Columbia did not recognize a cause of action for the cost of diagnostic examinations. *Id.* at 823. Lockheed also argued that the children had neurological damage before they left Vietnam, so that the crash was not the proximate cause of their need for medical diagnosis and treatment. *Id.* at 825.

****310** The district court held that “it * * * cannot be disputed that the requirement for *reasonable* diagnostic examination of these children is a proximate result of the crash,” [Friends For All Children v.](#)

[Lockheed Aircraft Corp., 587 F.Supp. 180, 185 \(D.D.C.1984\)](#). The court granted partial summary judgment resolving the issue of Lockheed's liability for diagnostic examinations, but not the amount of that liability. To facilitate the examinations, the court ordered Lockheed to establish a \$450,000 fund from which the initial cost of the children's examinations could be drawn. A voucher system that would permit Lockheed to review and contest disbursements from the fund was also established. [Friends For All Children, supra, 746 F.2d at 823](#).

The D.C. Circuit Court of Appeals affirmed the imposition of liability on Lockheed for diagnostic expenses, agreeing that the crash “proximately caused the need for a comprehensive diagnostic examination.” *Id.* at 825. The Court adopted the District Court's reasoning that no diagnostic examinations would be necessary “but for the fact that these children endured explosive decompression and hypoxia aboard a plane which subsequently crashed.” *Id.* The Court of Appeals rejected Lockheed's argument that the need for diagnostic examination was not a compensable injury, citing with approval the *Restatement's* definition of injury as “the invasion of any legally protected interest of another.” *Id.* at 826 (quoting [Restatement \(Second\) of Torts § 7](#)). The court held that a reasonable need for medical examinations is itself compensable, without proof of other injury:

It is difficult to dispute that an individual has an interest in avoiding expensive diagnostic examinations just as he or she has an interest in avoiding physical *602 injury. When a defendant negligently invades this interest, the injury to which is neither speculative nor resistant to proof, it is elementary that the defendant should make the plaintiff whole by paying for the examinations. [*Ibid.*]

The same issue was recently considered by the Fifth Circuit in [Hagerty v. L & L Marine Servs., Inc., supra, 788 F.2d 315](#). In *Hagerty*, the plaintiff was employed as a tankerman on a barge being loaded with chemicals at a Union Carbide plant in Puerto Rico. Because of a defect in the barge or loading equipment, or both, Hagerty was completely drenched with dripolene, a carcinogenic chemical containing benzene, toluene, and xyolene. In a later mishap he was sprayed again with the same chemical.

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He experienced dizziness, leg cramps, and a stinging sensation in his extremities. He consulted several doctors and, at their suggestion, obtained periodic medical and laboratory tests to ensure early detection and treatment of cancer. *Id.* at 317. He sued his employer and Union Carbide Corporation seeking damages for his enhanced risk of disease, for emotional distress associated with the fear of contracting cancer, and for the cost of medical examinations to aid in detecting symptoms of disease. The district court granted summary judgment for defendants. *Id.* at 316.

Although affirming the grant of summary judgment on the enhanced risk claim, the court of appeals reversed as to the claims for emotional distress and medical surveillance. The court held that these causes of action were cognizable because plaintiff's injury was "discernible on the occasion when he was drenched with the toxic chemical," and that he was therefore "entitled to recover damages for all of his past, present and probable future harm attributable to defendant's tortious conduct." *Id.* at 317. Despite its dismissal of the enhanced risk claim because of the insufficiency of proof of the likelihood of disease, the court viewed the cost of medical surveillance as an appropriate item of damage:

In addition to any damages for mental distress, Hagerty correctly asserts that he is entitled to recover for the continuing expense of his periodic medical checkups. A plaintiff ordinarily may recover reasonable medical expenses, past and future, which he incurs as a result of a demonstrated injury. C. McCormick, *603 *The Law of Damages* § 90 (1935); see, e.g., *Ross v. United States*, 640 F.2d 511, 521 (5th Cir.1981). Moreover, under the **311 "avoidable consequences rule," he is required to submit to treatment that is medically advisable; failure to do so may bar future recovery for a condition he could thereby have alleviated or avoided. McCormick, *supra*, at § 36, see also *Gideon [v. Johns-Manville Corp.]*, 761 F.2d 1129, 1139 (5th Cir.1985). Hagerty testified that he undergoes the checkups at the advice of his physician to ensure early detection and treatment of a possible cancerous condition. We agree that the reasonable cost of those checkups may be included in a damage award to the extent that, in the past, they were medically advisable and, in the future, will

probably remain so. [*Id.* at 319 (footnote omitted).]

The same conclusion was reached by the court in *Askey v. Occidental Chemical Corp.* 102 A.D.2d 130, 477 N.Y.S.2d 242 (1984). There, the court affirmed the denial of class certification in a toxic tort suit involving a Niagara, New York, landfill that was the successor to the Love Canal site maintained by defendant. An issue underlying the request for class certification was plaintiffs' contention that persons exposed to the toxic chemicals were entitled to be reimbursed for the cost of medical surveillance out of a fund to be established by defendant. Although denying class certification, the court acknowledged that under New York law plaintiffs could maintain a cause of action to recover the expense of medical surveillance:

[I]t would appear that under the proof offered here persons exposed to toxic chemicals emanating from the landfill have an increased risk of invisible genetic damage and a present cause of action for their injury, and may recover all "reasonably anticipated" consequential damages. The future expense of medical monitoring, could be a recoverable consequential damage provided that plaintiffs can establish with a reasonable degree of medical certainty that such expenditures are "reasonably anticipated" to be incurred by reason of their exposure. There is no doubt that such a remedy would permit the early detection and treatment of maladies and that as a matter of public policy the tort-feasor should bear its cost. [*Id.* at 137, 477 N.Y.S.2d at 247.]

Compensation for reasonable and necessary medical expenses is consistent with well-accepted legal principles. See C. McCormick, *Handbook on the Law of Damages* § 90 at 323-27 (1935). It is also consistent with the important public health interest in fostering access to medical testing for individuals whose exposure to toxic chemicals creates an enhanced risk of disease. The value of early diagnosis and treatment for cancer patients *604 is well-documented. See *Evers v. Dollinger*, *supra*, 95 N.J. at 424, 471 A.2d 405 (Handler, J., concurring):

Harm in the form of increased risk of future cancer attributable to delay in diagnosis and treatment has become so widely accepted by the medical community that the existence of such harm could be reas-

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onably inferred from this professional common knowledge. A survey of the medical literature indicates that it is universally agreed within the medical community that delay in cancer diagnosis and treatment usually increases the risk of metastasis.

Although some individuals exposed to hazardous chemicals may seek regular medical surveillance whether or not the cost is reimbursed, the lack of reimbursement will undoubtedly deter others from doing so. An application of tort law that allows post-injury, pre-symptom recovery in toxic tort litigation for reasonable medical surveillance costs is manifestly consistent with the public interest in early detection and treatment of disease.

Recognition of pre-symptom claims for medical surveillance serves other important public interests. The difficulty of proving causation, where the disease is manifested years after exposure, has caused many commentators to suggest that tort law has no capacity to deter polluters, because the costs of proper disposal are often viewed by polluters as exceeding the risk of tort liability. Ginsberg & Weiss, *supra*, 9 *Hofstra L.Rev.* at 903-04; Rosenberg, *supra*, 97 *Harv.L.Rev.* at 862-63; Trauberman, **312 *supra*, 7 *Harv.Env'tl.L.Rev.* at 209-10. However, permitting recovery for reasonable pre-symptom, medical-surveillance expenses subjects polluters to significant liability when proof of the causal connection between the tortious conduct and the plaintiffs' exposure to chemicals is likely to be most readily available. The availability of a substantial remedy before the consequences of the plaintiffs' exposure are manifest may also have the beneficial effect of preventing or mitigating serious future illnesses and thus reduce the overall costs to the responsible parties.

Other considerations compel recognition of a pre-symptom medical surveillance claim. It is inequitable for an individual, wrongfully exposed to dangerous toxic chemicals but unable to *605 prove that disease is likely, to have to pay his own expenses when medical intervention is clearly reasonable and necessary. In other contexts, we have intervened to provide compensation for medical expenses even where the underlying disease was not compensable. In *Procanik by Procanik v. Cillo*, 97 N.J. 339, 478 A.2d 755

(1984), an action for "wrongful birth," we allowed compensation for medical expenses but disallowed the claims for pain and suffering and for a diminished childhood attributable to birth defects. In *Schroeder v. Perkel*, 87 N.J. 53, 432 A.2d 834 (1981), we upheld the claim of parents for incremental medical costs associated with raising a child who suffers from cystic fibrosis, without recognizing a "wrongful birth" cause of action based on that condition.

We find a helpful analogy in *Reserve Mining Co. v. E.P.A.*, 514 F.2d 492 (8th Cir.1975), where the issue was whether to grant injunctive relief compelling defendant to cease discharging wastes from its iron ore processing plant into the air of Silver Bay, Minnesota, and the waters of Lake Superior. The court concluded that "[i]n assessing probabilities in this case, it cannot be said that the probability of harm is more likely than not." *Id.* at 520. Moreover, the court said, "the level of probability does not readily convert into a prediction of consequences." *Id.* The best that could be said was that the existence of the contaminant in the air and water gave rise to "a reasonable medical concern for the public health." *Id.* The public's exposure to the contaminant in the air and water created "some health risk." *Id.* The court ruled that "the existence of this risk to the [affected] public justifies * * * requiring abatement of the health hazard on reasonable terms as a precautionary and preventive measure to protect the public health." *Id.* The critical holding for our purposes is that the public health interest may justify judicial intervention even when the risk of disease is problematic.

Our conclusion regarding the compensability of medical surveillance expenses is not dissimilar to the result in the *Reserve Mining* case. The likelihood of disease is but one element in *606 determining the reasonableness of medical intervention for the plaintiffs in this case. Other critical factors are the significance and extent of their exposure to chemicals, the toxicity of the chemicals, the seriousness of the diseases for which individuals are at risk, and the value of early diagnosis. Even if the likelihood that these plaintiffs would contract cancer were only slightly higher than the national average, medical intervention may be completely appropriate in view of the attendant circumstances. A physician treating a Legler-area child

who drank contaminated well water for several years could hardly be faulted for concluding that that child should be examined annually to assure early detection of symptoms of disease.

Accordingly, we hold that the cost of medical surveillance is a compensable item of damages where the proofs demonstrate, through reliable expert testimony predicated upon the significance and extent of exposure to chemicals, the toxicity of the chemicals, the seriousness of the diseases for which individuals are at risk, the relative increase in the chance of onset of disease in those exposed, and the value of early diagnosis, that such surveillance to monitor the effect of exposure to toxic chemicals is reasonable and necessary. In our view, this holding is thoroughly consistent with our rejection of plaintiffs' claim ****313** for damages based on their enhanced risk of injury. That claim seeks damages for the impairment of plaintiffs' health, without proof of its likelihood, extent, or monetary value. In contrast, the medical surveillance claim seeks reimbursement for the specific dollar costs of periodic examinations that are medically necessary notwithstanding the fact that the extent of plaintiffs' impaired health is unquantified.

[\[9\]](#) We find that the proofs in this case were sufficient to support the trial court's decision to submit the medical surveillance ***607** issue to the jury, and were sufficient to support the jury's verdict. [FN13](#)

[FN13.](#) The medical surveillance tests were characterized by plaintiffs' expert as either "conventional" or "non-conventional." She testified that the tests should be administered at an appropriate medical center, such as Mount Sinai Hospital in New York City, by a team that included "immunologists, epidemiologists and clinicians with toxicologic background." The conventional tests include procedures that would be administered in the course of an annual routine physical examination and also include tests that are generally used in cancer diagnosis. The non-conventional tests were described as "not widely available" and based on the "improved understanding of [the] biology of tumors and the developing information

about the immunologic system * * *." The jury award for medical surveillance for each plaintiff averaged approximately \$500 per year of life expectancy, or about one-half the annual expense projected by Dr. Daum.

Defendant did not object at trial to the submission to the jury of the cost of the conventional, as opposed to the non-conventional, tests. In the Appellate Division and before us, defendant contends that it was plain error to submit to the jury the cost of the conventional tests since these tests were suitable for the general population. We are satisfied that the record supports the trial court's determination to permit the jury to consider both the cost of conventional and non-conventional tests.

5.

The medical surveillance issue was tried as if it were a conventional claim for compensatory damages susceptible to a jury verdict in a lump sum. The jury was so instructed by the trial court, and neither plaintiffs' nor defendant's request to charge on this issue sought a different instruction.

In the Appellate Division, defendant argued for the first time that a lump-sum damage award for medical surveillance was inappropriate. Defendant contended that if the court were to uphold all or any part of the medical surveillance award, it should "create an actuar[i]ally-sound fund, to which the plaintiffs may apply in the future for the cost of medical surveillance upon proof that those costs are not otherwise compensable * * * or after deduction of the amounts so reimbursed," and should leave to the trial court, on remand, the task of establishing "details of the creation and supervision of such a fund." Defendant contends that use of a fund to disburse ***608** medical surveillance benefits is particularly suitable for claims against public entities because of the requirements of the Tort Claims Act that judgments be reduced by the amount of payments from collateral sources. [N.J.S.A. 59:9-2\(e\)](#).

The indeterminate nature of damage claims in toxic-tort litigation suggests that the use of court-su-

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pervised funds to pay medical-surveillance claims as they accrue, rather than lump-sum verdicts, may provide a more efficient mechanism for compensating plaintiffs. A funded settlement was used in the Agent Orange litigation. *In re "Agent Orange" Prod. Liab. Litig.*, 611 F.Supp. 1396, 1399 (E.D.N.Y.1985), aff'd, 818 F.2d 194 (2d Cir.1987). The use of insurance to fund future medical claims is frequently recommended by commentators. Ginsberg & Weiss, *supra*, 9 Hofstra L.Rev. at 928-40; Rosenberg, *supra*, 97 Harv.L.Rev. at 919-24; Trauberman, *supra*, 7 Harv.Env'tl L.Rev. at 237-46; Note, "Traditional Tort Analysis," *supra*, 35 Stan.L.Rev. at 614-16; Note, "Increased Risk of Disease from Hazardous Waste: A Proposal for Judicial Relief," *supra*, 60 Wash.L.Rev. at 648-52.

After oral argument we requested supplemental briefs from the parties on this issue. Plaintiffs contend that medical surveillance expenses are a customary item of compensatory damages; that a fund remedy would be unfair to plaintiffs and would impose severe administrative problems; and that the fund remedy might prove ****314** more expensive for defendants since improvements in medical technology could increase the long-term costs of medical surveillance. Defendant contends that a fund mechanism would insure that plaintiffs actually use the money for medical surveillance and would also provide a mechanism for crediting defendant with payments from collateral sources, as required by the Tort Claims Act.

[10] In our view, the use of a court-supervised fund to administer medical-surveillance payments in mass exposure cases, particularly for claims under the Tort Claims Act, is a highly appropriate exercise of the Court's equitable powers. ***609** Cf. *In re "Agent Orange" Prod. Liab. Litig.*, *supra*, 611 F.Supp. at 1402-03 (since "implementation of any distribution plan based on traditional tort principles is impossible because of a virtual absence of proof of causation," it was appropriate to consider "alternate methods of distributing [the] settlement fund [that] may be premised on a rationale similar to the *cy pres* doctrine of testamentary interpretation."); *Salorio v. Glaser*, 93 N.J. 447, 469, 461 A.2d 1100 (1983) ("Equity courts have often recognized matters of public policy, convenience of administration, and practicality as

matters to be weighed' " in framing equitable decrees) (quoting D. Dobbs, *Remedies* § 2.5, at 56 (1973)); 30A C.J.S. *Equity* § 599 (1965) (a court of equity "has a broad discretion in framing its decrees in order to adapt the relief to the circumstances of particular cases."). Such a mechanism offers significant advantages over a lump-sum verdict. For Tort Claims Act cases, it provides a method for offsetting a defendant's liability by payments from collateral sources. Although the parties in this case sharply dispute the availability of insurance coverage for surveillance-type costs, a fund could provide a convenient method for establishing credits in the event insurance benefits were available for some, if not all, of the plaintiffs.

In addition, a fund would serve to limit the liability of defendants to the amount of expenses actually incurred. A lump-sum verdict attempts to estimate future expenses, but cannot predict the amounts that actually will be expended for medical purposes. Although conventional damage awards do not restrict plaintiffs in the use of money paid as compensatory damages, mass-exposure toxic-tort cases involve public interests not present in conventional tort litigation. The public health interest is served by a fund mechanism that encourages regular medical monitoring for victims of toxic exposure. Where public entities are defendants, a limitation of liability to amounts actually expended for medical surveillance tends to reduce insurance costs and taxes, objectives consistent with the ***610** legislature's admonition to avoid recognition of novel causes of action. Comment, *N.J.S.A. 59:2-1*.

Although there may be administrative and procedural questions in the establishment and operation of such a fund, we encourage its use by trial courts in managing mass-exposure cases. In litigation involving public-entity defendants, we conclude that the use of a fund to administer medical-surveillance payments should be the general rule, in the absence of factors that render it impractical or inappropriate. ^{FN14} This will insure that in future mass-exposure litigation against public entities, medical-surveillance damages will be paid only to compensate for medical examinations and tests actually administered, and will encourage plaintiffs to safeguard their health by not allow-

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ing them the option of spending the money for other purposes. The fund mechanism will also foster the legislative objective of limiting the liability of public entities and facilitating the deduction from damage awards of collateral-source benefits.

FN14. It is beyond the scope of this opinion to set down guidelines for trial courts in establishing and administering such funds. A court-appointed administrator will be required. The cost of administration should be borne by defendants. A procedure should be established for the submission and review of claims for payment, and to determine the availability of collateral source benefits. We are confident that satisfactory procedures can be developed by trial courts on a case-by-case basis.

****315 [11]** However, we decline to upset the jury verdict awarding medical-surveillance damages in this case. Such a result would be unfair to these plaintiffs, since the medical-surveillance issue was tried conventionally, and neither party requested the trial court to withhold from the jury the power to return a lump-sum verdict for each plaintiff in order that relief by way of a fund could be provided. Moreover, the jury verdict for medical-surveillance damages was based, as was the verdict for plaintiffs' other claims, on various factors distinguishing the individual plaintiffs, including age, and duration and extent of exposure to toxic chemicals. Accordingly, the verdict for medical-surveillance*611 damages was in a specific amount for each of the plaintiffs, thereby limiting in this case the applicability of the fund concept, which contemplates an aggregate lump-sum award available to reimburse the medical-surveillance expenses of any plaintiff, without the constraint of individually-allocated limitations. We also recognize that the fund mechanism that we now endorse in toxic-tort cases is novel and represents a sharp break with our prevailing practice. In such circumstances, we have previously recognized the wisdom of limiting the application of a new rule of law or confining its application only to matters that arise after the rule has been announced. See *Coons v. American Honda Motor Co.*, 96 N.J. 419, 476 A.2d 763 (1984), cert. denied, 469 U.S. 1123, 105 S.Ct.

808, 83 L.Ed.2d 800 (1985). Under the circumstances, we think it would be inappropriate to impose this effective but novel procedure on these litigants at this late stage in litigation that has already been protracted and extensive. Accordingly, the judgment of the Appellate Division setting aside the jury verdict for medical surveillance damages is reversed and the jury verdict is reinstated.

II

[12] Plaintiffs also contend that the trial court and Appellate Division erred in dismissing their claim under the federal Civil Rights Act of 1871, 42 U.S.C.A. § 1983. Plaintiffs assert that the ruling in *Adelung v. Jackson Township* (unreported), a related case in the federal district court for the District of New Jersey recognizing a valid § 1983 cause of action for the unlawful taking of their wells and property, is binding in this action. The trial court in this case re-examined the issue, and concluded that because of the availability of an adequate state remedy under the Tort Claims Act, plaintiffs were not deprived of their property without due process of law, citing *Parratt v. Taylor*, 451 U.S. 527, 101 S.Ct. 1908, 68 L.Ed.2d 420 (1981), 189 N.J.Super. at 576, 461 A.2d 184. The Appellate Division upheld the trial court's ruling and rejected plaintiffs' reliance on the "law of the case" doctrine, describing it as a "non-binding discretionary *612 rule of practice" that "does not prohibit one judge from reviewing the prior ruling of another judge." 202 N.J.Super. at 128, 493 A.2d 1314. We agree that it was not improper for the trial court to re-examine the validity of plaintiffs' § 1983 claim. See *State v. Reldan*, 100 N.J. 187, 203-07, 495 A.2d 76 (1985).

[13] We also note that since the decision of the federal district court, the United States Supreme Court, partially overruling *Parratt v. Taylor*, supra, 451 U.S. 527, 101 S.Ct. 1908, 68 L.Ed.2d 420, has determined that no "deprivation" of property occurs within the meaning of the due process clause of the fourteenth amendment when the loss of or injury to property is the result of negligent, rather than intentional, acts on the part of state officials. *Daniels v. Williams*, 474 U.S. 327, ----, 106 S.Ct. 662, 663, 88 L.Ed.2d 662, 666 (1986). Accordingly, although based on different grounds, the trial court's dismissal of the § 1983

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claim is consistent with the Supreme Court's decision in *Daniels v. Williams*. We therefore affirm the dismissal of plaintiffs' [§ 1983](#) cause of action.

[14] Finally, the Appellate Division affirmed the trial court's determination that plaintiffs' judgment should be reduced by \$850,000, the amount for which plaintiffs settled their claims against township engineer John Ernst, a named codefendant. [202 N.J.Super. at 126-27, 493 A.2d 1314](#). **316 The court held that such a result was mandated by [N.J.S.A. 59:9-2\(e\)](#), whether or not Ernst was found to be a joint tortfeasor. *Id.* We are in full agreement with the reasoning employed by the Appellate Division.

For the reasons stated in this opinion, the judgment of the Appellate Division is affirmed in part and reversed in part.

HANDLER, J., concurring in part and dissenting in part.

This case involves a municipality that operated a landfill over a long period of time in a palpably unreasonable way, directly subjecting its own residents to carcinogenic and otherwise toxic chemicals. These chemicals caused medical injury in the residents, creating a significant risk that they would develop cancer *613 and other diseases equally grave. The risk of disease to these residents is indisputably greater than the risk of disease experienced by the general population. Because of limitations in current scientific knowledge and because of the number and variety of toxic chemicals involved, the victims of this toxic exposure were unable to measure or quantify the enhancement of their risk of disease. The Court focuses on this inability to measure the risk, rather than on the fact of contamination, and rules that these residents cannot therefore recover any damages referable to that enhanced risk. Further, while the majority does recognize a claim for medical monitoring that is clearly referable to the enhanced risk of disease, it rules that in the future the award of this limited item of special damages is not to be treated as compensation paid directly to aggrieved plaintiffs, but will be used only to reimburse actual expenses through a court-supervised fund. In effect, the Court's holding leaves these grievously wronged persons uncompensated for the injuries caused by the defendant's palpably unreasonable conduct. The Court thus af-

fords the victims of tortious toxic exposure significantly less protection than it would plaintiffs in other tort actions. While in some respects the Court is influenced by the provisions of the New Jersey Tort Claims Act, [N.J.S.A. 59:1-1](#) to [59:12-3](#), and the status of defendant as a governmental entity covered by the Act, these considerations do not require or justify the unfairness to plaintiffs. Accordingly, I dissent in part from the majority's reasoning and holding.

I.

In 1971, the New Jersey Department of Environmental Protection granted Jackson Township a permit to use the Legler landfill as a municipal landfill, this permit being conditioned on the municipality's following certain safety guidelines. The municipality failed to follow these guidelines during the next seven years. Its conduct was found to be "palpably unreasonable," not simply "negligent." As a result, the area's groundwater and underlying aquifer were seriously contaminated.

*614 At least 36 contaminants entered the drinking and bathing water of 339 residents of the Township. Among the identified chemicals were proven carcinogens, and toxic chemicals known to damage the liver, the kidneys, the skin, genetic material, and the reproductive system.

Residents dependent upon this water supply very early sensed the danger. From 1972, within a year of the Township's operation of the landfill, residents expressed concern about the quality of their water. They were assured by the Township that the water was fit to drink. Residents' complaints eventually prompted the Department of Environmental Protection to investigate the contamination. After testing well water in the Township, the Department and the local Board of Health advised residents in late 1978 to minimize their exposure to the well water. For the next two years, residents were forced to get their water from forty-gallon containers weighing approximately 100 pounds delivered-not always reliably-to their homes.

II.

The essence of the claim for damages here is the reality of the physical injury caused by the wrongful ex-

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posure to toxic chemicals and the increased peril of cancer **317 and other serious diseases that the residents have incurred. The Court does not dispute the fact of toxic contamination, nor does it contest the characterization of a significantly enhanced risk of disease as a tortiously inflicted injury. The majority also admits that “[d]ismissal of the enhanced risk claims may effectively preclude any recovery for injuries caused by exposure to chemicals in plaintiffs’ wells.” *Ante* at 308. Nonetheless, the majority effectively denies plaintiffs any meaningful recovery. It asserts that “the speculative nature of an unquantified enhanced risk claim, the difficulties inherent in adjudicating such claims, and the policies underlying the Tort Claims Act argue persuasively against the recognition of this cause of action.” *Ante* at 308. *615 The Court exaggerates the difficulties in recognizing this cause of action and minimizes the imperative to provide fair compensation for seriously injurious wrongs.

The Court cannot, and does not, dispute or denigrate the expert testimony presented at trial “that the exposure to chemicals had already caused actual physical injury to plaintiffs through its adverse effects on the genetic material within their cells” and “that plaintiffs’ exposure to chemicals had produced ‘a reasonable likelihood that they have now and will develop health consequences from this exposure.’ ” *Ante* at 303, 304. Dr. Joseph Highland gave uncontested testimony that plaintiffs had already suffered physical injury from the damage to their cellular and genetic material caused by the chemicals to which they were exposed. These chemicals are mutagenic agents: they destroy parts of the genetic material of cells they contact. This destruction may affect only the function of a few cells or it may lead to the failure of major organs. It may make the cells likely starting points for cancer, and it may lead to mutations in the victims’ children.

The majority recognizes that plaintiffs have suffered injury. It is self-evident that exposure to highly toxic chemicals is the “infliction of ... harm,” “an invasion of a legally protected interest.” See *Restatement (Second) of Torts, § 7(1)* and Comment a (1965) (defining “injury”). See *ante* at 304. Nevertheless, the majority concludes that plaintiffs’ injury cannot be re-

dressed.^{FN1} Its reasons for treating their claims different from *616 other injury claims are an unsupported fear of “vast numbers of claims” and a belief that no “clear guidelines [exist] to determine what level of compensation may be appropriate.” *Ante* at 307.

^{FN1}. The Court also concludes that plaintiffs’ claims deriving from “subjective symptoms such as depression, fear and anxiety” are “pain and suffering.” Claims for “pain and suffering” apart from injury itself are not compensable under the Tort Claims Act. *Ante* at 296-297. In this case the evidence demonstrated essentially subjective symptoms consistent with mental and emotional suffering and distress; it did not establish, as to any of the plaintiffs, mental or emotional injury or disability (i.e. clinically-diagnosed depression, anxiety, phobia, etc.). Hence we are not presented with the issue of whether such proved mental or emotional condition would be a compensable injury under the Tort Claims Act. Cf. *Saunderslin v. E.I. DuPont Co.*, 102 N.J. 402, 405, 508 A.2d 1095 (1986) (a showing by “‘demonstrable objective medical evidence’ [of] psychiatric disability” would be compensable under Workers’ Compensation Act).

These reasons are an evasion of the challenge posed by tortious injury that carries with it an enhanced risk of even greater injury, and the need to provide fair compensation for innocent victims suffering this form of injury. The Court postponed a similar determination in *Evers v. Dollinger*, 95 N.J. 399, 471 A.2d 405 (1984). There a woman brought suit claiming that her doctor’s negligent diagnosis and treatment enhanced the risk that her cancer would recur. While her appeal of the trial court’s judgment was pending, she suffered a recurrence of the cancer. The majority decided that it need not decide whether enhanced risk, standing alone, is an actionable element. *Id.* at 412 n. 7, 471 A.2d 405. Nevertheless, the Court held that because the disease had recurred, plaintiff would be allowed to recover damages for enhanced risk. *Id.* at 417, 471 A.2d 405.

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Allowing recovery for enhanced risk in *Evers* where the plaintiff suffered subsequent**318 harm cannot be reconciled with the denial of recovery for enhanced risk in the present case. The majority professes to deny compensation because it cannot “measure” or “quantify” the enhanced risk of future injury. The fact that the plaintiffs in the present case have not-yet-suffered extreme symptoms is no justification for denying recovery. As in *Evers v. Dollinger*, “[t]he Court is ... troubled by a seeming inability to quantify the risk of future cancer. But, adding the incurrence of future harm as a requirement for the recovery for such increased risk does not resolve the dilemma since the risk still remains unquantified.” *Id.* at 421, 471 A.2d 405 (Handler, J., concurring). When the Court allowed *617 recovery for enhanced risk in *Evers*, it did not in the slightest way insist that the risk be quantified.

The majority reasons that plaintiffs' claim is not cognizable in part because the risk of future disease does not rise to the level of “reasonable probability.” *See ante* at 304-308. Yet the court concedes that the plaintiffs have proven that they have a “significantly ... enhanced risk” of contracting serious diseases. *Ante* at 304-307. It nowhere explains why a risk that generates the “reasonable probability” of future injury can be compensated while one that “significantly enhances” the likelihood of future injury cannot.

I do not criticize the Court for illogic or inconsistency. I stress only that if it is just and fair, and it is, to compensate a victim in one case for an unquantified enhanced risk of future disease, it cannot be right to deny recovery in a second case also involving a claim of unquantified enhanced risk. “[T]o deny ... redress for ... injuries merely because damages cannot be measured with precise exactitude would constitute a perversion of fundamental principles of justice.” *Berman v. Allan*, 80 N.J. 421, 433, 404 A.2d 8 (1979) (Handler, J., concurring in part and dissenting in part). “[E]ven where the pitfalls of measuring damages have been genuine, we have not refused to grapple with the complexities in order to recognize the justness and fairness of relief.” *Schroeder v. Perkel*, 87 N.J. 53, 77, 432 A.2d 834 (1981) (Handler, J., concurring in part, dissenting in part). It is the reality of injury presented by evidence, informed by

experts, and tested by common sense and ordinary experience, that is the benchmark for damages. “Some of these losses ... might be hard to sense, difficult to define and puzzling to evaluate. They are, nonetheless, actual and constitute a sound basis for a lawful claim for redress and compensation.” *Berman v. Allan*, *supra*, 80 N.J. at 446, 404 A.2d 8 (Handler, J., concurring in part and dissenting in part).

The courts have not allowed the difficulty of quantifying injury to prevent them from offering compensation for assault, *618 trespass, emotional distress, invasion of privacy, or damage to reputation. The claim in this case involves a tortious invasion, as much an invasion as the trespass of gas and microscopic deposits on someone else's property, *see, e.g., Reynolds Metals Co. v. Martin*, 337 F.2d 780 (9th Cir.1964), or as in surgery performed without the patient's consent, *see, e.g., Schloerndorff v. Society of New York Hospital*, 211 N.Y. 125, 105 N.E. 92 (N.Y.1914). *Cf. Brafford v. Susquehanna Corp.*, 586 F.Supp. 14 (D.Colo.1984) (recognizing plaintiffs' claim of present injury in the form of chromosomal damage and increased risk of contracting cancer). Where new forms of injury have been put before the courts, the courts have developed procedures, standards, and formulas for determining appropriate compensation. This perception was expressed in Capron, “Tort Liability in Genetic Counseling”, 79 *Colum.L.Rev.* 618, 649 (1979):

[T]he collective wisdom of the community on the proper redress for a particular harm, informed by experience, common sense, and a desire to be fair to the parties, seems an acceptable way of arriving at a damage verdict and probably one that is preferable to a more scientific (and sterile) process that excludes nonquantifiable elements to achieve an aura of objectivity and precision.

The plaintiffs' claim of an unquantified enhanced risk should not be characterized as “depend[ing] upon the likelihood of an **319 event that has not yet occurred and may never occur.” *Ante* at 308. The injury involved is an actual event: exposure to toxic chemicals. The tortious contamination, moreover, is an event that has surely occurred; it is not a speculative or remote possible happening. Among the consequences of this unconsented-to invasion are genetic damage

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and a tangible risk of a major disease, a peril that is real even though it cannot be precisely measured or weighed. The peril, moreover, is unquestionably greater than that experienced by persons not similarly exposed to toxic chemicals. The toxic injury and claim for damages are not attributable only to some possible future event. Like claims based on the doctrines of trespass, assault, invasion of privacy, or defamation, the damages suffered are not solely actual consequential damages, but also the disvalue *619 of being subjected to an intrinsically harmful event. The risk of dreadful disease resulting from toxic exposure and contamination is more frightening and palpable than any deficits we may feel or imagine from many other wrongful transgressions.

I am bothered by the unintended morbidity of the Court's attitude. My discomfort was similar with respect to the Court's refusal to recognize a claim for enhanced risk in *Evers*:

The inadvertent effect of such a court rule is that those victims, who undeservedly have been put in greater peril in terms of their survival, are not permitted to be compensated for this peril unless they have suffered ... cancer. [*Evers, supra, 95 N.J. at 418, 471 A.2d 405* (Handler, J., concurring).]

In deciding whether to recognize plaintiffs' claims, the majority focuses on the problem of sovereign defendants in tort suits involving the unquantified nature of certain injuries. The majority, however, fails to note the long-term benefits lost when compensation is not allowed for injuries caused. Compensation serves to deter negligent behavior. See, e.g., R. Posner, *Economic Analysis of Law* 142-43 (2nd ed. 1977). We disserve this policy in this case, where the defendant municipality has engaged not simply in negligent conduct, but in "palpably unreasonable" conduct causing real and serious injury to its residents. This Court recently offered the following reply to an argument that a particular cause of action not be recognized:

In addressing these arguments, we must keep in mind the central goals of the law of torts. As we said in [*People Exp. Airlines, Inc. v. Consolidated Rail, 100 N.J. 246, 255 [495 A.2d 107] (1985)*], the primary purpose of the tort law is "that wronged persons should be compensated for their injuries and that

those responsible for the wrong should bear the cost of their tortious conduct." Moreover, forcing tortfeasors to pay for the harm they have wrought provides a proper incentive for reasonable conduct. [*Weinberg v. Penns Grove, 106 N.J. 469, 486-487, 524 A.2d 366, 375 (1987)*.]

But not merely as a matter of deterrence and efficiency, also as a matter of justice, those who cause injuries should be required to pay for them. Recognizing a claim for enhanced risks appropriate in order to prevent a tortfeasor from being insulated from the real but elusive consequences of his negligent conduct. A tortfeasor should not be allowed to escape responsibility for causing an increased risk that would not have existed but for his negligence simply because of the statistical uncertainty of the risk. [*Evers, supra, 95 N.J. at 418, 471 A.2d 405* (Handler, J., concurring).]

*620 The assertion that recognition of plaintiffs' claims will open a flood gate of litigations seems insubstantial when compared to the actuality of plaintiffs' injury. Courts should not allow speculative fears or undifferentiated anxiety over a possible rush of litigation to defeat a sound and fair cause of action. See *Kelly v. Gwinnell, 96 N.J. 538, 556, 476 A.2d 1219 (1984)*. The majority does not even make the effort to consider standards-e.g., burdens of proofs, presumptions, required minimal showings-that might make claims for enhanced risk more manageable and more limited. The proper course is not to leave the injured without a legal recourse. If **320 social conditions and legal standards interact in such a way that litigating a certain kind of claim becomes burdensome, interested parties can then go to the legislature seeking reform. There is no reason to believe that, if circumstances warranted it, the legislature would not respond to problems in toxic tort litigation. I reject the majority's solution of avoiding complexities in litigation by excusing negligence and allowing injuries to go uncompensated.

The majority speaks of the speculative nature of compensating claims of enhanced risk as if such would be an anomaly in the logical and orderly work of tort law compensation. The truth is to the contrary. There are relatively few injuries that can be easily or logic-

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ally quantified. It is not merely the relatively new tort claims like “pain and suffering” and “emotional distress” that are difficult to quantify. What is the logical method of evaluation for compensating a claim of trespass on land, the battery of unconsented-to surgery, a violation of personal privacy, or an insult to character? When a jury awards \$50,000 for an accident that led to the loss of a limb, how is that \$50,000 a logical quantification of that injury? [FN2](#)

[FN2.](#) *But cf.* Posner, *supra*, at 144, 149:

A victim who loses a finger sustains a cost that can be conceived of in various ways including the price he would have demanded from someone who made a credible offer to purchase the finger.

....

It is true that such losses, if they do not impair market earning capacity, have no pecuniary dimension. But this is not because they are not true economic losses; it is because of the absence of markets in mutilation.

If anything, it is more sensible to speak in terms of how much persons would have to be paid before they would consent to being exposed to toxic chemicals than it would to ask a similar question about a loss of a limb.

***621** The severe limitation of damages imposed by the Court in this case is inadequate and unfair. No person in her right mind would trade places with any one of these plaintiffs. Does this not suggest that a person would have to be paid a considerable sum of money, more than that permitted here by the Court, before tolerating the injuries suffered by these plaintiffs? Why should not a jury be permitted to make this determination? [FN3](#)

[FN3.](#) I note that because the majority's rejection of the claim for enhanced risk relies so heavily on the Tort Claims Act, today's holding must be read narrowly as applying only to claims brought against public-entity defendants. I disagree with the Court's denial of compensation for such enhanced risk even as against a governmental defendant. Nevertheless, I consider the general question of whether a claim for enhanced risk can be

brought in the New Jersey courts to still be an open question.

III.

The Court does award limited compensation to plaintiffs. It upholds an award of \$8.2 million representing the cost of future annual medical surveillance. Nevertheless, the majority determines that, at least for future cases, “the use of a court-supervised fund [rather than a lump-sum verdict] to administer medical-surveillance payments in mass exposure cases, particularly for claims under the Tort Claims Act, is a highly appropriate exercise of the Court's equitable powers.” *Ante* at 314. The majority argues that the use of a fund provides a method for offsetting a defendant's liability by payments from collateral sources, serves the public health interest by creating an incentive for plaintiffs to use their judgments to pay for medical monitoring, and serves the purpose of the Tort Claims Act by limiting the liability of public entities.

***622** The fundamental assumption of the tort law is that individuals who are wrongfully injured should be compensated. *See, e.g., Merenoff v. Merenoff, 76 N.J. 535, 547, 388 A.2d 951 (1978).* Where the Court recognizes that the defendant has breached its legal duties and that an injury has occurred, the Court should recognize the plaintiffs' cause of action and entitlement to damages. *See Berman v. Allan, supra, 80 N.J. at 436-37, 444-46, 404 A.2d 8* (Handler, J., dissenting).

The majority in the present case seems to want to have it both ways. It accepts the lower court's judgment that the Township violated its legal duties, and that the Township's citizens were injured by that ****321** violation. The majority does not claim that some overriding policy reasons justify immunizing the Township's actions. Further, it recognizes plaintiffs' entitlement to damages, at least *some* damages, to compensate them for their injury. However, the Court holds that for future cases of this type, compensation should not be given to plaintiffs for the injuries they suffered. Instead a type of escrow account must be established under judicial supervision, with payment going to the injured plaintiffs only un-

der limited circumstances.

I am not persuaded that fairness or practicability dictate such stringent limitations on plaintiffs' damages award. Ordinarily, reference to future expenses or the loss of future income is one way to estimate what reasonable compensation would be for a victim's losses (keeping in mind the limitations of such compensation: money can rarely compensate fully for what was lost, but it is the best approximation to compensation that our system offers). To assume that these special damages are the equivalent of fair and adequate compensation and, then, to attach conditions and judicial supervision to such attempts at compensation is to misunderstand the underlying system. This Court has never before so weakened the common-law system of compensation. It is singularly unfair and inappropriate to apply this more limited approach to judgment awards, discriminating against this particular class of tort plaintiffs.

*623 The Court in this case purports to divine and adopt this special rule of compensation as an exercise of its equitable judicial powers. It is, however, hardly equitable to deny plaintiffs adequate recovery for the acknowledged tortiously inflicted injury, and compound this unfairness by denying them full enjoyment of the only item of damages that the Court recognizes. In a series of cases involving children born with serious birth defects due to negligent medical care, this Court held that both the parents and the child could recover-as lump sum damages-an award based upon the child's future medical expenses. [*Procanik v. Cillo*, 97 N.J. 339, 478 A.2d 755 \(1984\)](#); *Schroeder v. Perkel*, *supra*. In neither of those cases was the recovery kept under judicial supervision or made contingent upon a showing that the money would indeed go to pay for the medical expenses. To do so in the toxic tort cases would be an injustice to these plaintiffs.

IV.

The citizens of Jackson Township endured extended exposure to serious toxic chemicals because of the township's palpably unreasonable misconduct. Their injuries are substantial-as real and as readily measurable as other injuries for which the courts allow com-

pensation. Plaintiffs' claims in this case should be recognized and fully compensated. The majority's decision to grant only a limited portion of full compensation disrespects what the plaintiffs have had to go through.

For the reasons given, I would dissent in part from the majority's holdings.

For affirmance in part and reversal in part-Chief Justice WILENTZ, and Justices CLIFFORD, POLLOCK, GARIBALDI and STEIN-5.

Concurring in part; dissenting in part-Justice HANDLER-1.

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