

1993

Judicial Control of Evidence of Cancer Causation: A Comparative Analysis of the Divergent Motion Practices in New Jersey and New York

Vern R. Walker

Maurice A. Deane School of Law at Hofstra University

Christine Beggs Hickey

Erica M. Bernhardt

Follow this and additional works at: https://scholarlycommons.law.hofstra.edu/faculty_scholarship

Recommended Citation

Vern R. Walker, Christine Beggs Hickey, and Erica M. Bernhardt, *Judicial Control of Evidence of Cancer Causation: A Comparative Analysis of the Divergent Motion Practices in New Jersey and New York*, 57 Alb. L. Rev. 441 (1993)

Available at: https://scholarlycommons.law.hofstra.edu/faculty_scholarship/63

This Article is brought to you for free and open access by Scholarly Commons at Hofstra Law. It has been accepted for inclusion in Hofstra Law Faculty Scholarship by an authorized administrator of Scholarly Commons at Hofstra Law. For more information, please contact lawcls@hofstra.edu.

LEGAL DEVELOPMENTS

JUDICIAL CONTROL OF EVIDENCE OF CANCER CAUSATION: A COMPARATIVE ANALYSIS OF THE DIVERGENT MOTION PRACTICES IN NEW JERSEY AND NEW YORK

Vern R. Walker
Christine Beggs Hickey
Erica M. Bernhardt*

INTRODUCTION

There is currently considerable concern over "junk science,"¹ and how to control its flow into the courts, especially the way in which such evidence is presented to juries in "toxic tort" cases.² Two broad approaches to the problem of junk science are being developed in the federal courts. This process entails judicial review of scientific evidence to determine first, whether it is admissible under the Federal Rules of Evidence,³ and second, if deemed admissible, whether the evidence provides a sufficient basis for a jury to reasonably find causation.⁴ This two-step approach is being systematically explored by

* Vern R. Walker, Associate Professor of Law, Hofstra University School of Law; Ph.D. 1975, University of Notre Dame; J.D. 1980, Yale University. Christine Beggs Hickey, J.D. 1993, Hofstra University. Erica M. Bernhardt, J.D. 1993, Hofstra University. We wish to thank William R. Ginsberg and Lawrence W. Kessler for their helpful comments on an earlier draft.

¹ "Junk Science" in the judicial context refers to proffered evidence that purports to be scientific but which is neither reliable nor accepted by the scientific community. See *infra* notes 26-44 and accompanying text.

² See, e.g., *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 951 F.2d 1128, 1131 (9th Cir. 1991), *vacated*, 113 S. Ct. 2786 (1993); *Rubanick v. Witco Chem. Corp.*, 593 A.2d 733, 749-50 (N.J. 1991); PETER W. HUBER, *GALILEO'S REVENGE: JUNK SCIENCE IN THE COURTROOM* (1991).

³ E.g., *Richardson ex rel. Richardson v. Richardson-Merrell, Inc.*, 857 F.2d 823, 829-33 (D.C. Cir. 1988), *cert. denied*, 493 U.S. 882 (1989) (expert opinion had insufficient foundation under FED. R. EVID. 703); *DeLuca ex rel. DeLuca v. Merrell Dow Pharmaceuticals, Inc.*, 791 F. Supp. 1042, 1055-58 (D.N.J. 1992), *aff'd*, No. 92-5287 (3d Cir. 1993) (expert opinion excluded from evidence under FED. R. EVID. 702); *In re Agent Orange Prod. Liab. Litig.*, 611 F. Supp. 1223, 1243-56 (E.D.N.Y. 1985), *aff'd*, 818 F.2d 187 (2d Cir. 1987), *cert. denied*, *Lombardi v. Dow Chem. Co.*, 487 U.S. 1234 (1988) (expert opinions excluded under FED. R. EVID. 703, 403).

⁴ E.g., *Brock v. Merrell Dow Pharmaceuticals, Inc.*, 874 F.2d 307 (5th Cir. 1989), *modified*, 884 F.2d 166, *cert. denied*, 494 U.S. 1046 (1990).

the federal courts in the Bendectin cases,⁵ and in cases in which causation of cancer is at issue in determining liability.⁶

Some aspects of this emerging approach to admissibility were recently reviewed by the United States Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*⁷ Even after this decision has been taken into account, numerous questions remain about the admissibility of expert evidence in general, and the proof of causation in particular.⁸ Moreover, resolving these questions in the federal system will not directly decide the many similar questions faced by the state courts. Undoubtedly, states will continue to establish their own evidentiary and procedural doctrines in the tort arena—a substantive area in which state law has traditionally been paramount.

This Article surveys the cases relating to proof of cancer causation in two neighboring states: New Jersey and New York. In particular, we looked at motions in those cases to see how courts in New York and New Jersey were deciding challenges to the admissibility and legal sufficiency of scientific evidence of causation. Our major empirical conclusion is that toxic tort motion practices in the two states are dramatically different. In New Jersey, we found substantial litigation and an evolving body of law concerning the admissibility and legal sufficiency of expert testimony rivaling the developments occurring in federal courts. However, in New York there appears to be almost no counterpart to this movement. The major portion of this Article documents these findings.

The second portion of this Article explores several hypotheses about what might account for this difference between New York and

⁵ The Bendectin litigation concerns birth defects alleged to have been caused through the use of the anti-nausea pregnancy drug Bendectin. The plaintiffs in these cases are primarily suing the manufacturer of the drug. *E.g.*, *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 113 S. Ct. 2786 (1993); *Turpin v. Merrell Dow Pharmaceuticals, Inc.*, 959 F.2d 1349 (6th Cir. 1992), *cert. denied*, 113 S. Ct. 84 (1992); *DeLuca v. Merrell Dow Pharmaceuticals, Inc.*, 911 F.2d 941 (3d Cir. 1990); *Brock*, 874 F.2d 307; *Richardson*, 857 F.2d 823; *Lynch v. Merrell-National Labs., Div. of Richardson-Merrell, Inc.*, 830 F.2d 1190 (1st Cir. 1987); *see* Michael Martin, *Admissibility After Daubert*, N.Y. L.J., Aug. 13, 1993, at 3.

⁶ *E.g.*, *Christophersen v. Allied-Signal Corp.*, 939 F.2d 1106 (5th Cir. 1991) (*per curiam*), *cert. denied*, 112 S.Ct. 1280 (1992); *In re Paoli R.R. Yard PCB Litig.*, 916 F.2d 829 (3rd Cir. 1990), *cert. denied*, General Elec. Co. v. Knight, 111 S. Ct. 1584 (1991); *In re Agent Orange*, 611 F. Supp. 1223.

⁷ 113 S. Ct. 2786. The Supreme Court decided that the Federal Rules of Evidence do not make "general acceptance in the relevant scientific community" a necessary precondition to the admissibility of scientific evidence, and that the admitting trial court must find that "the reasoning or methodology underlying the testimony is scientifically valid" and that the "reasoning or methodology properly can be applied to the facts in issue." *Id.* at 2794-99.

⁸ Questions peculiar to evidence of causation include the legal sufficiency of various types of animal data, the necessity of having epidemiologic evidence, and the need for statistically significant results.

New Jersey. We hypothesize that this difference might be due to one or a combination of the following:

- The statute of limitations in effect in New York during the first half of the study period most likely restricted the total number of cancer cases that were litigated through the trial stage;⁹
- There is a difference in the availability of pretrial discovery of expert opinions between the two states, which makes the development of this type of pre-trial motion practice extremely difficult in New York;¹⁰
- New Jersey might facilitate the development of evidentiary doctrine by having codified evidence rules, which New York does not have;¹¹
- There is a difference in the definitions of legal causation used in tort cases in the two states, which might reduce the incentive for defendants to bring dispositive motions in New York;¹²
- There may be a difference between the two states in judicial attitudes about the extent of the right to a jury trial.¹³

We do not at the present time have an empirical basis for concluding which of these hypotheses (or others) best explain the differences we have observed between New York and New Jersey practice. Future inquiry might lead to such an answer.

Finally, in conclusion we suggest that in a state like New York, with limited opportunity for discovery of expert opinions, no comprehensive codification of evidence rules, and perhaps little incentive for defendants' counsel to try to develop doctrines for judicial control of "junk science," this area of law might have little chance to develop at all, even on a case-by-case basis.

I. A COMPARISON OF MOTION PRACTICES

Although cancer injuries form an extremely important category of tort action,¹⁴ proving that a particular instance of cancer was caused by exposure to a particular physical or chemical agent can be one of the most difficult areas for expert testimony. We believe that this issue provides a natural test area for court control of expert testimony. Evidentiary difficulties in this area are created by the following facts: cancers of all sorts are extremely common diseases in the

⁹ See *infra* notes 82-84 and accompanying text.

¹⁰ See *infra* notes 85-90 and accompanying text.

¹¹ See *infra* notes 91-97 and accompanying text.

¹² See *infra* notes 98-106 and accompanying text.

¹³ See *infra* note 107 and accompanying text.

¹⁴ See, e.g., cases cited *supra* note 6.

population generally (perhaps one in three Americans will die of cancer);¹⁵ cancers are rarely specifically traceable to any particular toxic agent;¹⁶ cancers can have a long latency period during which multiple exposures to other carcinogenic agents may confound efforts to determine the contribution of a particular agent;¹⁷ past exposures to possible cancer causing agents may be hard to quantify and document;¹⁸ animal test data of the sort typically available to show carcinogenicity are difficult to interpret;¹⁹ available epidemiologic studies may be methodologically flawed;²⁰ and finally, the mechanisms by which various cancers are caused are often not well understood.²¹ Given these difficulties, it is not surprising that cancer injuries present very difficult problems for proving causation.

A. Motion Practice in New Jersey

In recent years New Jersey courts have developed the state's evidentiary law in such a way that expert opinions on cancer causation

¹⁵ K.S. SHRADER-FRECHETTE, RISK AND RATIONALITY 27 (1991) (providing National Cancer Institute estimates from 1982).

¹⁶ Exceptions, like mesotheliomas from asbestos exposure, appear to be rare. *E.g.*, *Christophersen v. Allied-Signal Corp.*, 939 F.2d 1106, 1134 n.46 (5th Cir. 1991) (per curiam), *cert. denied*, 112 S. Ct. 1280 (1992); *see Landrigan v. Celotex Corp.*, 605 A.2d 1079 (N.J. 1992); INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, WORLD HEALTH ORGANIZATION, CANCER: CAUSES, OCCURRENCE AND CONTROL 64-65, 131 (L. Tomatis ed. 1990).

¹⁷ *E.g.*, *In re Agent Orange Prod. Liab. Litig.*, 611 F. Supp. 1223, 1248, 1260 (E.D.N.Y. 1985), *aff'd*, 818 F.2d 187 (2d Cir. 1987), *cert. denied*, *Lombardi v. Dow Chem. Co.*, 487 U.S. 1234 (1988) ("How much a plaintiff smokes and whether he has been exposed to other harmful substances are crucial to the issue of causation.").

¹⁸ *See, e.g.*, *In re Paoli R.R. Yard PCB Litig.*, 706 F. Supp. 358, 364-65, 371-72 (E.D. Pa. 1988), *rev'd*, 916 F.2d 829, 860-61 (3rd Cir. 1990); *In re Agent Orange*, 611 F. Supp. at 1247-48, 1253.

¹⁹ For example, animal bioassays are usually conducted at high doses of exposure, creating the problem of extrapolation to low doses. *See, e.g.*, U.S. EPA, Guidelines for Carcinogen Risk Assessment, 51 Fed. Reg. 33,992, 33,997-98 (1986) (asserting that since cancer "risks at low exposure levels cannot be measured directly" and "mechanisms of the carcinogenesis process are largely unknown and data are generally limited," the use of mathematical models to extrapolate risk at low doses from data at high doses "does not necessarily give a realistic prediction of the [low-dose] risk," which "may be as low as zero"). Moreover, extrapolating from animal data to human data is itself controversial. *See, e.g.*, *In re Agent Orange*, 611 F. Supp. at 1234, 1238, 1241; U.S. COUNCIL ON ENVIRONMENTAL QUALITY, RISK ANALYSIS: A GUIDE TO PRINCIPLES AND METHODS FOR ANALYZING HEALTH AND ENVIRONMENTAL RISKS 40-43, 105-07 (John J. Cofrancesco & Vincent T. Covello eds. 1989).

²⁰ *See, e.g.*, 51 Fed. Reg. 33,995-96 ("epidemiologic studies are inherently capable of detecting only comparatively large increases in the relative risk of cancer"); U.S. COUNCIL ON ENVIRONMENTAL QUALITY, *supra* note 19, at 27-38 ("epidemiological studies used in risk analysis have important limitations that constrain their usefulness").

²¹ *E.g.*, *Rubanick v. Witco Chem. Corp.*, 593 A.2d 733, 740-41 (N.J. 1991); 51 Fed. Reg. 33,997.

can be judicially scrutinized before being admitted into evidence.²² This evolving evidentiary doctrine has sometimes favored increased admissibility of expert opinions.²³ However, since the doctrine enlarges judicial ability to screen proffered expert opinions for quality, expert testimony can also be excluded from evidence.²⁴ One result that might be expected is that expert witnesses in New Jersey would tend to formulate careful and structured expert opinions, anticipating close examination by judges upon motions by defendants.

1. Theoretical Bases for Expert Opinions

A threshold issue being developed concerns whether an expert's opinion lacks a minimally acceptable theoretical basis. New Jersey evidence law allows an expert witness to testify to "matters requiring scientific, technical or other specialized knowledge if such testimony will assist the trier of fact to understand the evidence or determine a fact in issue."²⁵

In *Landrigan v. Celotex Corp.*,²⁶ plaintiff's decedent died of a common type of colon cancer.²⁷ One of the plaintiff's experts testified that the cancer had been caused by exposure to asbestos.²⁸ The expert based his conclusion on various epidemiologic, animal, and *in vitro* studies on asbestos, on a review of the decedent's history of exposure to asbestos, and on a determination that other risk factors (such as a high-fat diet or excessive alcohol consumption) were not present.²⁹ The trial judge directed a verdict for defendants at the close of the plaintiff's case, holding that the expert's conclusion lacked a proper basis because the epidemiologic evidence only supported an inference that there was an increased risk, not that asbestos in fact caused the cancer.³⁰ The appellate division affirmed.³¹

²² See, e.g., *Vuocolo v. Diamond Shamrock Chems. Co.*, 573 A.2d 196 (N.J. Super. Ct. App. Div.), *cert. denied*, 585 A.2d 349 (N.J. 1990) (affirming summary judgment for defendant where plaintiff's proffered expert testimony was speculative).

²³ See *Rubanick*, 593 A.2d at 747-48 (holding as potentially admissible a scientific theory of causation which had not yet reached general acceptance in the scientific community).

²⁴ E.g., *Vuocolo*, 573 A.2d at 201-03 (rejecting an expert's "net opinion" on causation as lacking a proper factual foundation because it was based on mere speculation or possibility).

²⁵ N.J. R. Evid. 56(2). This language parallels that of the Federal Rules of Evidence: "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise." FED. R. EVID. 702.

²⁶ 605 A.2d 1079 (N.J. 1992).

²⁷ *Id.* at 1082.

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.* at 1083.

The New Jersey Supreme Court, in reversing the appellate division, ruled that while the trial court "should not substitute its judgment for that of the relevant scientific community,"³² it must examine the validity of the expert's reasoning and methodology, and "distinguish scientifically sound reasoning from that of the self-validating expert, who uses scientific terminology to present unsubstantiated personal beliefs."³³ The New Jersey high court directed the trial court to determine through a preliminary hearing "whether the expert's opinion is derived from a sound and well-founded methodology that is supported by some expert consensus in the appropriate field."³⁴ Such a consensus creates a presumption that reliance on the methodology is reasonable.³⁵ After establishing this rule, the New Jersey Supreme Court went on to examine various aspects of epidemiologic studies and information, suggesting an open-ended list of questions concerning the expert's reasoning, and remanding the case so the trial court could "examine each step" in the expert's reasoning.³⁶

The year before *Landrigan*, in *Rubanick v. Witco Chemical Corp.*,³⁷ the New Jersey Supreme Court ruled that in toxic tort litigation an expert witness's methodology need not meet the stringent standard of "general acceptance in the relevant scientific community."³⁸ Plaintiffs in *Rubanick* claimed that the decedents' fatal colon cancers had been caused by exposure to polychlorinated biphenyls ("PCBs").³⁹ After finding that the plaintiffs' expert testimony had failed to meet the "conventional" standard of general acceptance, the trial court granted summary judgment for

³¹ *Id.* at 1080.

³² *Id.* at 1084.

³³ *Id.*

³⁴ *Id.* at 1086.

³⁵ *Id.* at 1087.

³⁶ *Id.* at 1088 (the court suggested consideration on remand of the validity of the studies relied on and their applicability to the decedent's case, the assumptions regarding the absence of other risk factors, and whether the reasoning process relied upon by the expert is accepted by the scientific community).

³⁷ 593 A.2d 733 (N.J. 1991).

³⁸ The "general acceptance" test, derived from *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), is routinely used in criminal cases in many states, including New Jersey. See *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 113 S. Ct. 2786, 2792 (1993); see also *Rubanick*, 593 A.2d at 738 (noting that the New Jersey courts have followed *Frye* for determining the reliability of expert testimony in a variety of contexts).

In *Daubert*, the United States Supreme Court recently held that the Federal Rules of Evidence, enacted in 1975, do not incorporate the *Frye* Test as a rule of admissibility and that the "austere" *Frye* Test "should not be applied in federal trials." *Daubert*, 113 S. Ct. at 2794.

³⁹ *Rubanick*, 593 A.2d at 734-45.

defendants.⁴⁰ In rejecting the continued use of the general acceptance standard in toxic tort cases, the New Jersey Supreme Court noted the scientific uncertainty about the mechanism of carcinogenesis and the differing objectives of science and tort law.⁴¹ While the court abandoned the "general acceptance" standard, it did not endorse letting all purportedly "scientific" testimony into evidence.⁴² Rather, the court held that there must be "some expert consensus that the methodology and the underlying data are generally followed by experts in the field."⁴³ Recognizing that determining if an expert's "scientific methodology is sound and well-founded" will be complicated and difficult, the court set a course by which New Jersey would carefully develop new legal standards of admissibility on a case-by-case and methodology-by-methodology basis.⁴⁴

2. Factual Bases for Expert Opinions

In addition to addressing the question of an adequate theoretical basis for expert testimony, New Jersey courts are also developing an evidentiary doctrine on what constitutes a minimally adequate factual basis for an opinion. New Jersey law has developed an evidentiary rule that an expert opinion, to be admissible, may be based on "facts or data in the particular case . . . perceived by or made known to him at or before the hearing," and that the facts or data need not be themselves admissible in evidence if they are "of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject."⁴⁵ Despite the possibility of overlap between the "facts or data" relied upon and the "reasoning or methodology" used in drawing inferences from that data,⁴⁶ a logical

⁴⁰ *Id.* at 737-38.

⁴¹ *Id.* at 740-49.

⁴² *Id.* at 748.

⁴³ *Id.*

⁴⁴ *Id.* at 748, 750 (remanding for a determination of admissibility under the proper standard); see *Landrigan*, 605 A.2d 1079.

⁴⁵ N.J. R. EVID. 56(2). This language parallels the language of the corresponding Federal Rule of Evidence, which states:

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing.

If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.

FED. R. EVID. 703.

⁴⁶ For example, published reports of scientific studies hardly ever report "raw data." At most, these studies report descriptive statistics that summarize data, such as percentages or arithmetic means. In addition, much of what is reported in these studies is not so much descriptive as inferential, offering conclusions about the general population, confidence intervals, or mathematical models that "smooth" or extrapolate data. Many courts, however,

distinction can be drawn between the factual basis and the reasoning. A practical justification also exists for holding an expert more accountable for her own reasoning based, for example, on a published study's results, as compared to requiring the expert to explain and defend in detail how the study was performed. Usually an expert has no first-hand knowledge of how a study was performed and no knowledge at all of the study's other aspects beyond what its investigators chose to publish.

In the *Landrigan* case,⁴⁷ the plaintiff's expert wished to use epidemiologic research as a factual basis for his reasoning regarding the probable cause of the decedent's cancer. The court held that if epidemiologic studies are to provide the factual basis for an expert's opinion, they must have been "soundly and reliably generated," and must be "of a type reasonably relied on by comparable experts in the particular field."⁴⁸ The court then connected these two considerations: "A finding that experts in the field rely on certain data raises a presumption that such reliance is reasonable."⁴⁹

Lying just beneath the surface of this formulation is the question of whether the trial court, in determining admissibility, should examine the "soundness" of the *particular* studies or information relied upon in the case being litigated or whether the court should only be concerned with the generic *type* of study, leaving all consideration of the particular studies as a matter of weight for the trier of fact.⁵⁰

are probably inclined to consider any published study as "data" relative to the expert witness, and the expert's own reasoning from the study's "results" (descriptive and inferential) as the expert's "methodology."

Such issues at the boundary between the legal (as opposed to scientific) concepts of "data" and "methodology" remain to be resolved. They will not be squarely faced, however, until courts evolve two different standards for evaluating the theoretical and factual bases for expert opinions, so that the line between theory and fact can have practical importance in litigation. Some courts, at least, seem to be developing such differing standards. See *DeLuca v. Merrell Dow Pharmaceuticals, Inc.*, 911 F.2d 941, 952-57 (3d Cir. 1990) ("Rule 703 [concerning facts or data] is satisfied once there is a showing that an expert's testimony is based on the type of data a reasonable expert in the field would use in rendering an opinion on the subject at issue; it does not address the reliability or general acceptance of an expert's methodology."); cf. *Rubanick v. Witco Chem. Corp.*, 593 A.2d 733, 745-47 (N.J. 1991) (approving the approach used by the Third Circuit in distinguishing data from methodology, while noting that a "rigid dichotomy" is unnecessary).

⁴⁷ *Landrigan v. Celotex Corp.*, 605 A.2d 1079 (N.J. 1992).

⁴⁸ *Id.* at 1087.

⁴⁹ *Id.*; see *Grassis v. Johns-Manville Corp.*, 591 A.2d 671, 676 (N.J. Super. Ct. App. Div. 1991) (explaining that courts should be loathe to determine whether a medical expert, relying on epidemiologic evidence to determine specific causation in colon cancer case, has properly relied upon data upon which experts in the field generally rely).

⁵⁰ See, e.g., *Christophersen v. Allied-Signal Corp.*, 939 F.2d 1106, 1113-15, 1118-20 (5th Cir. 1991) (per curiam), *cert. denied*, 112 S. Ct. 1280 (1992) (majority and judge concurring in

This issue remains to be resolved by further developments in New Jersey evidentiary law.⁵¹

3. Legal Sufficiency of Expert Evidence

In addition to scrutinizing expert opinions for admissibility, once testimony has been entered New Jersey courts will determine whether the evidence of causation is sufficient for a reasonable jury to conclude that causation probably occurred, without allowing the jury to speculate or be swayed by such inappropriate considerations as sympathy for the plaintiff.

In *DeLuca v. Merrell Dow Pharmaceuticals, Inc.*,⁵² the federal courts were required to apply New Jersey law in a case in which the plaintiff claimed that *in utero* exposure to Bendectin caused Amy DeLuca to be born with limb reduction abnormalities. The Third Circuit held that, given the preponderance of the evidence standard of proof, if plaintiffs' expert wished to rely solely on epidemiologic evidence to infer that Amy DeLuca's injuries were *probably* caused by Bendectin rather than by some other cause, the empirically determined risk from Bendectin would have to be greater than the "baseline risk" posed by all other causes.⁵³ In other words, if the increased risk of cancer caused by exposure to Bendectin as determined by well-conducted epidemiologic studies was less than the baseline risk, the expert's opinion of increased risk would be insufficient to allow the inference that Amy's injuries were probably due to Bendectin.

This same issue arose in *Landrigan*,⁵⁴ in which the epidemiologic study relied upon "indicated a relative risk of colon cancer from the exposure to asbestos of 1.55," which, without additional evidence, arguably would allow only the conclusion "that thirty-five percent of the cases of colon cancer in the population exposed to asbestos can be

result differed on whether FED. R. EVID. 703 requires or allows trial judge to evaluate reliability of particular facts or data relied upon); *Grassis*, 591 A.2d 671.

⁵¹ The more common instance of this principle is the exclusion of expert testimony because it is a "net opinion"—an opinion that ignores the particular facts present in the given case in such a way that the entire opinion is speculative or without foundation. See, e.g., *Vuocolo v. Diamond Shamrock Chems. Co.*, 573 A.2d 196 (N.J. Super. Ct. App. Div. 1990) (expert opinion on causation of cancer by dioxin not admissible because expert pathologist never examined decedent and never conducted dioxin tests in area where plaintiff was allegedly exposed).

⁵² 911 F.2d 941 (3d Cir. 1990).

⁵³ *Id.* at 958-59. "Baseline risk" is a concept Walker has proposed to clarify the traditional tort concept of non-compensable normal risk. Part of the purpose in defining baseline risk is to help determine what scientific evidence is relevant for proving risk at trial. See Vern R. Walker, *The Concept of Baseline Risk in Tort Litigation*, 80 Ky. L.J. 631 (1991-92).

⁵⁴ *Landrigan v. Celotex Corp.*, 605 A.2d 1079 (N.J. 1992).

attributed to that [asbestos] exposure."⁵⁵ The court did not expressly reject the reasoning of *DeLuca*, but pointed out that additional non-statistical, particular evidence ("for example, individual clinical data, such as asbestos in or near the tumor or a documented history of extensive asbestos exposure") might allow a reasonable inference of causation under the preponderance standard even though the incremental risk shown in epidemiologic studies is less than the baseline risk.⁵⁶ Without explaining its reasoning further, the court left for future cases a refining of the question of what constitutes legally sufficient evidence of cancer causation.⁵⁷

B. Motion Practice in New York

A survey of New York cancer cases decided since 1980 presents a story dramatically different from that developing in New Jersey.⁵⁸ There are *no* counterparts among the New York cases to the New Jersey cases discussed above. Of the New York cases surveyed many were not relevant to the issue of cancer causation.⁵⁹ A significant number of other cases were administrative (primarily workers' compensation cases), involving neither tort law nor civil evidentiary

⁵⁵ *Id.* at 1086.

⁵⁶ *Id.* at 1087; see also *Caterinicchio v. Pittsburgh Corning Corp.*, 605 A.2d 1092, 1094-95 (N.J. 1992) (following *Landrigan* in holding that relative risk of 2.0 is not necessary, and that trial court must examine bases for and reasoning behind conclusion of specific causation); *Grassis v. Johns-Manville Corp.*, 591 A.2d 671, 674-76 (N.J. App. Div. 1991) (holding that medical expert's opinion was admissible and was not a "net" opinion, where the expert relied upon epidemiologic studies generally showing a relative risk below 2.0, but also examined patient medical history for other causal factors, in reaching a conclusion that occupational exposure to asbestos was a significant factor in causing plaintiff's cancer).

⁵⁷ An issue closely related to primary causation is the question of apportionment of damages and what constitutes legally sufficient evidence to present the issue of apportionment to the jury. See *Dafler v. Raymark Indus., Inc.*, 611 A.2d 136 (N.J. Super. Ct. App. Div. 1992), *aff'd*, 622 A.2d 1305 (N.J. 1993) (holding that expert testimony quantifying the relative risks of lung cancer from exposure to asbestos and from smoking cigarettes constituted sufficient evidence on issue of apportionment).

⁵⁸ The basis for this conclusion is an electronic search of New York cases using Lexis^(R). A search closed on May 13, 1993, of all New York courts for opinions handed down after 1980 containing the terms "caus! and cancer or carcin!" retrieved a total of 219 cases. Cases resulting in multiple judgments (usually due to appeals) were counted as single cases.

⁵⁹ Of the 219 New York cases retrieved in the search described in note 58, 93 cases were clearly irrelevant to proving the issue of cancer causation. Examples of clearly irrelevant cases include *Henschke v. State Div. of Hous. and Community Renewal*, 571 N.Y.S.2d 940 (App. Div. 1991) (eviction proceeding brought by landlord, a radiologist specializing in cancer); *Cambridge Assoc. v. Inland Vale Farm Co.*, 497 N.Y.S.2d 751 (App. Div. 1986) (libel action brought over statement about cancer-causing materials); *Breckinridge v. Breckinridge*, 478 N.Y.S.2d 136 (App. Div. 1984) (divorce action, referring incidentally to death from cancer of plaintiff's sister).

motions but rather judicial review of an administrative agency's determinations or authority.⁶⁰

Over half of the remaining cases were medical malpractice cases.⁶¹ While these cases might be expected to produce a dispositive motion practice similar to that found in New Jersey, most of the medical malpractice cases litigated procedural issues, or only addressed issues other than causation.⁶² Those medical malpractice cases that did raise issues of law concerning causation did not address the kinds of admissibility and sufficiency issues found in the New Jersey cases. The cases that squarely addressed causation usually alleged negligent failure to diagnose or properly treat a pre-existing cancer.⁶³ Consequently, these cases sometimes raised what has come to

⁶⁰ Of the cases that were not clearly irrelevant, 21 cases were administrative law cases, in 10 of which litigants sought judicial review of the substantive findings of the Workers' Compensation Board, and addressed the question of what constitutes "substantial evidence" in the record. *E.g.*, *Zivitz v. J & S Meat Corp.*, 492 N.E.2d 791 (N.Y. 1986) (claim that pre-existing heart condition caused or contributed to cancer or subsequent death not supported by substantial evidence); *Smith v. Bell Aerospace*, 512 N.Y.S.2d 549 (App. Div. 1987) (discharge of Special Fund from liability unwarranted, given undisputed evidence that decedent developed asbestosis as a result of employment and that the asbestosis precipitated the development of decedent's cancer); *Ham v. Rumsey Sheet Metal*, 510 N.Y.S.2d 28 (App. Div. 1986) (doctor's testimony that cancer was caused or aggravated by trauma, based upon statistical data and medical literature, was substantial evidence); *Flannery v. New York News*, 445 N.Y.S.2d 627 (App. Div. 1981) (finding of causal relationship between decedent's employment by newspaper as a pressman and death from lung cancer was supported by substantial evidence).

The remainder of the administrative law cases, other than the 10 workers' compensation cases raising the issue of "substantial evidence," litigated issues of administrative law of even less relevance to tort law. *E.g.*, *Boreali v. Axelrod*, 517 N.E.2d 1350 (N.Y. 1987) (Public Health Council exceeded its statutory authority when it promulgated comprehensive code to govern tobacco smoking in areas open to the public); *Denué v. Native Textiles*, 512 N.Y.S.2d 923 (App. Div. 1987) (where the Workers' Compensation Board determined that medical malpractice related solely to investigation for suspected cancer and not work-related pain, settlement of malpractice action without workers' compensation carrier's consent did not bar workers' compensation claim); *Mylroie v. GAF Corp.*, 440 N.Y.S.2d 67 (App. Div. 1981), *aff'd*, 433 N.E.2d 1269 (N.Y. 1982) (tort claim that employer intentionally, fraudulently and carelessly subjected plaintiff to carcinogens in the course of her employment dismissed, where remedy lay in workers' compensation law).

⁶¹ After excluding the 93 clearly irrelevant cases, *see supra* note 59, and the 21 administrative law cases, *see supra* note 60, 64 of the remaining 105 cases were medical malpractice cases.

⁶² There were 54 such cases. *E.g.*, *Nykorchuck v. Henriques*, 577 N.E.2d 1026 (N.Y. 1991) (suit for failure to diagnose and monitor cancerous lump in plaintiff's breast was barred by statute of limitations); *Davis v. Caldwell*, 429 N.E.2d 741 (N.Y. 1981) (reversing judgment for plaintiff and ordering new trial where only a general verdict was returned but two of five theories submitted to jury lacked sufficient evidence); *Tiernan v. Heinzen*, 480 N.Y.S.2d 24 (App. Div. 1984) (*prima facie* case made out on issue of negligence).

⁶³ Of the 64 medical malpractice cases retrieved in the search, 54 did not address dispositive motions concerning causation, *supra* note 62, and the remaining 10 addressed proof of causation. *E.g.*, *Ferrara v. South Shore Orthopedic Assoc.*, 577 N.Y.S.2d 813 (App.

be known as the "lost chance" problem. The "lost chance" problem concerns what evidence is sufficient to allow the jury to decide whether a misdiagnosis (for example) was a legal cause of subsequent injury or death, or whether the subsequent injuries were the normal consequences of the underlying cancer.⁶⁴ Although these cases address causation, they are not relevant to the topic of this Article because the causation at issue is the causal link between the misdiagnosis and subsequent injury or death, not the causal link between exposure to a toxic agent and a subsequent cancer.

The next major category of cancer cases identified in our survey of New York cases consisted of products liability cases.⁶⁵ Of these, a large number involved exposure to DES⁶⁶ and asbestos,⁶⁷ with the remainder involving miscellaneous products.⁶⁸ None of these cases

Div. 1991) (plaintiff failed to offer any proof in admissible form that alleged misinterpretation of x-rays adversely affected course of decedent's illness); *Windisch v. Weiman*, 555 N.Y.S.2d 731 (App. Div. 1990) (when jury deadlocked on issue of whether defendant's negligence in examination and follow-up was a proximate cause of plaintiff's injuries from cancer, new trial should have been ordered since plaintiff presented legally sufficient evidence of causation); *Kennedy v. Peninsula Hosp. Ctr.*, 522 N.Y.S.2d 671 (App. Div. 1987) (although plaintiff rested presentation of evidence without producing expert medical testimony necessary to support his claim that the defendant's negligence was a substantial factor in producing the resultant injury, trial court erred in not permitting plaintiff to reopen his case and resubmit one or more of his expert witnesses in order to present curative proof).

⁶⁴ See, e.g., *Scafidi v. Seiler*, 574 A.2d 398, 405-06 (N.J. 1990) (citing *Evers v. Dollinger*, 471 A.2d 405, 415 (N.J. 1984)) (establishing a two-pronged jury instruction in "lost chance" cases, by which the jury is asked to determine first whether a defendant's medical malpractice increased the risk of harm from a preexisting condition, and, if it did so, then to determine whether that increased risk was a substantial factor in producing the ultimate harm to the plaintiff); *Herskovits v. Group Health Coop.*, 664 P.2d 474 (Wash. 1983).

⁶⁵ A total of 33 cases fell in this category.

⁶⁶ There were 13 DES cases. A large number of these cases litigated issues dealing with the statute of limitations and identification of the proper defendant (and the "market share" approach). See, e.g., *Hymowitz v. Eli Lilly & Co.*, 539 N.E.2d 1069 (N.Y.), *cert. denied*, 110 S. Ct. 350 (1989).

⁶⁷ There were 10 asbestos cases. E.g., *Continental Casualty Co. v. Rapid-American Corp.*, 609 N.E.2d 506 (N.Y. 1993) (action to declare rights of insured under comprehensive general liability insurance policy); *Conway v. Brooklyn Union Gas Co.*, 592 N.Y.S.2d 782 (App. Div. 1993) (summary judgment for defendant due to insufficiency of plaintiff's evidence of emotional distress).

⁶⁸ The remaining 10 products cases litigated issues dealing primarily with the statute of limitations. E.g., *Davis v. A.H. Robins Co.*, 473 N.Y.S.2d 182 (App. Div. 1984) (Dalkon Shield intrauterine device). An interesting but somewhat procedural case involving insufficiency of evidence of causation and summary judgment is *Cusano v. General Elec. Co.*, 489 N.E.2d 252 (N.Y. 1985) (after defendant supports its motion for summary judgment with the affidavit of a medical expert affirming that plaintiff's exposure to radioactive material could not have caused type of cancer of which plaintiff complained, plaintiffs were required either to demonstrate by admissible evidence the existence of a factual issue requiring trial or to give excuse for failing to do so; but evidence merely casting doubt on credibility of defendant's expert would not suffice).

litigated the types of dispositive evidentiary motions that we discussed above for New Jersey cases.

Of the cases we found, very few did not fall into the above categories.⁶⁹ Moreover, few of these "other tort" cases were toxic tort cases. Most involved injuries unrelated—or only marginally related—to cancer.⁷⁰ Of the two cases involving toxic torts allegedly due to landfills, one dealt primarily with class certification⁷¹ and the other with discovery.⁷² The only case providing a ruling somewhat paralleling developments in New Jersey courts rejected as "wholly conclusory and devoid of evidentiary value" an affirmation by an expert in support of the defendant's motion for summary judgment. The court's ruling was itself summary in nature, however, and provided little rationale for its holding.⁷³

Based upon this survey of New York opinions, our first and primary conclusion must be that, for the most part, the energetic evidentiary motion practice found in New Jersey is simply not duplicated in New York cancer cases for whatever reason. While we will now discuss briefly the New York evidentiary doctrines that somewhat parallel those in New Jersey, and that *in theory* could support a parallel motion practice, this discussion must be viewed in the context of that primary conclusion.

In New York, as in New Jersey, expert opinion is properly admitted into evidence when it would help to clarify an issue calling for specialized knowledge beyond the ordinary knowledge of the typical juror.⁷⁴ But an expert's opinion may be held to be "wholly conclusory and devoid of evidentiary value" if there is no factual basis for the opinion or if there is an obvious absence of a satisfactory explanation linking the asserted factual basis to the expert's conclusion.⁷⁵ More-

⁶⁹ There were eight such cases.

⁷⁰ *E.g.*, *Vera v. Knolls Ambulance Serv. Inc.*, 554 N.Y.S.2d 158 (App. Div. 1990) (involving fall from wheelchair of patient whose bones were severely weakened by metastatic breast cancer).

⁷¹ *Askey v. Occidental Chem. Corp.*, 477 N.Y.S.2d 242 (App. Div. 1984).

⁷² *In re Love Canal Actions*, 460 N.Y.S.2d 850 (App. Div. 1983); *In re Love Canal Actions*, 547 N.Y.S.2d 174 (Sup. Ct. 1989), *modified*, 555 N.Y.S.2d 519 (App. Div. 1990).

⁷³ *Carrington v. International Paper Co.*, 591 N.Y.S.2d 600, 603 (App. Div. 1992); *see infra* note 75.

⁷⁴ *E.g.*, *De Long v. County of Erie*, 457 N.E.2d 717, 722 (N.Y. 1983) (citing *People v. Allweiss*, 396 N.E.2d 735, 740 (N.Y. 1979)).

⁷⁵ *See, e.g.*, *Carrington*, 591 N.Y.S.2d at 603 (in context of motion for summary judgment, medical expert's opinion that plaintiff's basal cell carcinoma was not caused by blow from falling crane cable was "wholly conclusory and devoid of evidentiary value . . . [i]n the absence of any attempt to articulate the factual basis for this opinion or to explain the coincidental occurrence of the cancerous growth at the very site of the trauma within a short time thereafter"); *cf.* *Caton v. Doug Urban Constr. Co.*, 483 N.E.2d 128 (N.Y. 1985) (citing *Cooke v.*

over, New York courts have at times concluded that in tort cases an expert opinion, in order to be admissible, must be based on facts in the record, facts personally known to the witness, or out-of-court material if "it is of a kind accepted in the profession as reliable in forming a professional opinion" and evidence is produced to establish the material's reliability.⁷⁶ Therefore, at least in principle New York courts have the conceptual and legal basis for developing evidentiary law on the admissibility of expert opinions in the context of cancer causation. However, this does not appear to be happening.⁷⁷

A similar conclusion can be reached concerning the legal sufficiency of evidence of cancer causation. A defendant in a New York court is entitled to judgment as a matter of law on causation if there is insufficient evidence, provided "there is simply no valid line of reasoning and permissible inferences which could possibly lead" rational people to find causation.⁷⁸ Thus, New York courts could be asked by litigating parties to develop standards for determining the legal sufficiency and minimal rationality of evidence of cancer causation, but this development has not occurred in the way that it has in New Jersey courts.⁷⁹

II. ACCOUNTING FOR THE DIFFERENCES IN MOTION PRACTICES

In this section we will briefly present several hypotheses that might account, singly or together, for the striking difference in dis-

Bernstein, 359 N.Y.S.2d 793, 796 (App. Div. 1974)) (expert's opinion not based on facts is worthless); *Aetna Casualty & Sur. v. Barile*, 450 N.Y.S.2d 10, 12 (App. Div. 1982) (expert's opinion on how automobile accident occurred was "wholly speculative" because the facts upon which the opinion was based were neither established nor "fairly inferable" from the evidence).

⁷⁶ *Hamsch v. New York City Transit Auth.*, 469 N.E.2d 516, 518 (N.Y. 1984) (quoting *People v. Sugden*, 323 N.E.2d 169, 173 (N.Y. 1974)) (holding inadmissible a physician's opinion based on a discussion two days before trial with a radiologist who in turn had relied on an unknown study, where plaintiff had presented no evidence to establish the reliability of the out-of-court material).

⁷⁷ Most of the development of doctrine concerning the use of scientific evidence in New York is occurring in areas like criminal law. See, e.g., *People v. Castro*, 545 N.Y.S.2d 985 (Sup. Ct. 1989); *People v. Wesley*, 533 N.Y.S.2d 643 (County Ct. 1988), *aff'd sub nom. People v. Bailey*, 549 N.Y.S.2d 846 (App. Div. 1989), *judgment aff'd sub nom. People v. Wesley*, 589 N.Y.S.2d 197 (App. Div. 1992), *appeal granted*, 615 N.E.2d 236 (N.Y.), and *appeal dismissed*, 619 N.E.2d 665 (N.Y.), and *dismissal vacated*, 82 N.Y.2d 746 (1993). In these cases concerning use of DNA tests, as in other areas where the admissibility of scientific evidence is at issue, New York follows the test laid out in *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923). See *People v. Middleton*, 429 N.E.2d 100 (N.Y. 1981).

⁷⁸ *Cohen v. Hallmark Cards, Inc.*, 382 N.E.2d 1145, 1148 (N.Y. 1978); see N.Y. CIV. PRAC. L. & R. 4401 (McKinney 1992); *Windisch v. Weiman*, 555 N.Y.S.2d 731 (App. Div. 1990); *Cusano v. General Elec. Co.*, 489 N.Y.S.2d 622, 624 (App. Div.), *aff'd*, 489 N.E.2d 252 (N.Y. 1985).

⁷⁹ See, e.g., *Theer v. Philip Carey Co.*, 628 A.2d 724 (N.J. 1993); *Landrigan v. Celotex Corp.*, 605 A.2d 1079 (N.J. 1992); *Rubanick v. Witco Chem. Corp.*, 593 A.2d 733 (N.J. 1991).

positive motion practice between New Jersey and New York on the evidence of cancer causation in toxic tort cases. Because attorneys in New Jersey are filing and contesting motions dealing with the admissibility and sufficiency of evidence, the New Jersey appellate courts (including the state's supreme court) are developing a coherent body of law in this difficult area.⁸⁰ In New York, however, if such motions are being filed at all, no opinions are being written about the judicial rulings on them. Therefore, no appellate doctrine is evolving concerning the law of cancer causation.⁸¹ This presents the question: Why is the practicing bar in New York not engaging in the type of motion practice occurring in New Jersey? We will briefly discuss several possible reasons for this difference in motion practice, starting with the most plausible explanations and proceeding to what are perhaps the least likely.

A. *Effect of the Statute of Limitations*

One factor that probably restrained the bringing of cancer cases in New York during the first half of the study period was the judicial interpretation of the statute of limitations. The New York Court of Appeals had long held that the limitation period began to run at the time a foreign substance was introduced into the human body.⁸² This traditional "time of injury" rule was not changed until the legislature enacted a "discovery" rule, effective July 30, 1986, for "latent effects" of toxic chemicals.⁸³ The application of the traditional rule

⁸⁰ See *supra* part I.A.

⁸¹ The plaintiffs' bar in New York might not bring cancer tort cases to court, or the defendants' bar might settle or take to trial the cases that are brought without challenging on motion the testimony on cancer causation. We did not undertake a study of the extent to which each of these possibilities is the case. We do suggest, however, that the hypotheses discussed here, to the extent that they explain a lack of evidentiary motion practice, may also help to influence whether cancer cases are brought, settled, or taken to trial.

⁸² See, e.g., *Steinhardt v. Johns-Manville Corp.*, 430 N.E.2d 1297 (N.Y. 1981), *cert. denied*, 456 U.S. 967 (1982) (reaffirming that statutory period of limitations began to run when plaintiff inhaled asbestos during employment); *Schmidt v. Merchants Despatch Transp. Co.*, 200 N.E. 824, 827-28, (N.Y. 1936); Joseph M. McLaughlin, *Practice Commentaries*, in N.Y. CIV. PRAC. L. & R. 214-c (McKinney 1990); DAVID D. SIEGEL, *NEW YORK PRACTICE* § 40 (2d ed. 1991).

⁸³ See N.Y. CIV. PRAC. L. & R. 214-c(1)-(2), (4) (McKinney 1990); Joseph M. McLaughlin, *Practice Commentaries*, in N.Y. CIV. PRAC. L. & R. 214-c (McKinney 1990); SIEGEL, *supra* note 82, § 40. In addition to revising the CPLR, the legislature also adopted a "revival" statute for personal injury claims resulting from exposure to DES, tungsten-carbide, asbestos, chlordane, or polyvinyl-chloride. Under the revival statute, claimants were allowed a one year period to bring claims which had previously been barred by the traditional "time of injury rule." See 1986 N.Y. Laws, 682, § 4. The passage of the revised "discovery" rule and the revival statute were expected to facilitate the bringing of toxic tort cases in New York. See Andrew L. Marquis, Note, *Discovering Justice in Toxic Tort Litigation: CPLR 214-c*, 61 ST. JOHN'S L.

to cases prior to August 1986, and perhaps delay and confusion in fully implementing the new statutory rule even after that time, probably limited to some extent the number of cancer cases brought to the trial stage in New York courts.⁸⁴ While this limitation may have reduced the number of cancer cases filed or brought to trial in the first half of the study period, we would still expect to see a significant number of cases litigated in the second half of that period (1987-1993).

B. Lack of Discovery

As a general matter, discovery of an expert's opinion prior to trial occurs under tight limitations in New York. While the 1985 amendment to CPLR 3101(d) was intended to expand discovery of expert opinions⁸⁵ by requiring the disclosure of the identity of expert witnesses, and the substance of the facts and opinions on which the expert is expected to testify,⁸⁶ the revised version still retains notable

REV. 262, 276 (1987); Leonard L. Finz & Herbert L. Waichman, *1986 Legislative Changes in New York Tort Law: An Analysis*, N.Y. ST. BAR J., Apr. 1987, at 18, 18-20. Our survey of published opinions involving cancer causation does not indicate the extent to which such facilitation has occurred.

⁸⁴ By comparison, New Jersey courts operated throughout the study period with a "discovery" interpretation of the New Jersey statute of limitations. While the New Jersey statute of limitations in personal injury actions provides a two-year period in which to commence a law suit, N.J. STAT. ANN. § 2A:14-2 (West 1987), the New Jersey courts have long interpreted this provision as incorporating a "discovery rule." See, *Vispiano v. Ashland Chem. Co.*, 527 A.2d 66 (N.J. 1987) (per curiam); *Lopez v. Swyer*, 300 A.2d 563 (N.J. 1973). In the New Jersey courts, the accrual of the cause of action is delayed "until the injured party discovers, or by the exercise of reasonable diligence and intelligence should have discovered[,] that he may have a basis for an actionable claim." *Vispiano*, 527 A.2d at 67 (citations omitted).

⁸⁵ David D. Siegel, *Practice Commentary C3101:29*, in N.Y. CIV. PRAC. L. & R. 3101 (McKinney 1991). Prior to the 1985 revision, the text of 3101(d) read:

The following shall not be obtainable unless the court finds that the material can no longer be duplicated because of a change in conditions and that withholding it will result in injustice or undue hardship:

1. any opinion of an expert prepared for litigation; and
2. any writing or anything created by or for a party or his agent in preparation for litigation.

N.Y. CIV. PRAC. L. & R. 3101, note (McKinney 1991) (Historical and Statutory Notes).

⁸⁶ While N.Y. CIV. PRAC. L. & R. 3101(d)(1)(i) (McKinney 1991) requires the same disclosure concerning expert opinions in medical malpractice cases, the rule includes an important exception that allows the identity of a medical expert to be withheld. See SIEGEL, *supra* note 82, § 348A. There has been a substantial amount of litigation over whether questions concerning the expert's employment history and education background violate this exception if they are so detailed that the expert's identity becomes obvious. See, e.g., *Pizzi v. Muccia*, 515 N.Y.S.2d 341 (App. Div. 1987); *Renucci v. Mercy Hosp.*, 508 N.Y.S.2d 518 (App. Div. 1986). One way the courts have limited disclosure of the substance of the expert's opinion is to issue a protective order against a notice of discovery if the request for information is excessively

limitations on discovery. One particularly problematic feature is that, while a party is required to disclose some information upon request from an opposing party, the court often lacks an enforcement mechanism if a party chooses not to comply.⁸⁷ Another important aspect is that any right to depose a given expert witness remains very limited.⁸⁸ The result of these various restrictions on discovery is that cases in New York can, and do, come to trial without the possibility of developing a record of the expected expert evidence on causation.⁸⁹

Without the aid of extensive discovery, it would be nearly impossible for New York to develop the level of motion practice found in New Jersey. Often, the types of motion being made in New Jersey are too complicated to be raised for the first time at trial. The legal issues

detailed or overbroad. See *McGoldrick v. Whitney M. Young, Jr. Health Ctr., Inc.*, 514 N.Y.S.2d 872 (Sup. Ct. 1987).

⁸⁷ The statute provides that a party shall not be precluded from using his expert at trial solely because the party failed to comply with the request, if "for good cause shown" the expert is retained "an insufficient period of time before the commencement of trial" to allow such notice. See N.Y. CIV. PRAC. L. & R. 3101(d)(1)(i) (McKinney 1991 & Supp. 1993). See SEIGEL, *supra* note 82, § 348A. Moreover, since the statute sets no time limit on disclosure, "many parties have apparently delayed retaining an expert, often just to keep the other side off balance for as long as possible." David D. Siegel, *Supplementary Practice Commentaries* C3101:29A, in N.Y. CIV. PRAC. L. & R. 3101 (McKinney 1991 & Supp. 1993).

⁸⁸ Under the current version of N.Y. CIV. PRAC. L. & R. 3101(d), parties generally do not get the opportunity to depose the expert witness of the adverse party. The expert of the adverse party may be deposed in only two circumstances. The first instance, under 3101(d)(1)(iii), allows the deposition of any type of expert, but only upon a court order pursuant to a showing of "special circumstances." One example would be a case in which material physical evidence examined by the expert is lost or destroyed before the other party's expert has had an opportunity to examine it. See, e.g., *Rosario v. General Motors Corp.*, 543 N.Y.S.2d 974 (App. Div. 1989); SEIGEL, *supra* note 82, § 348A. The second, under 3101(d)(1)(ii), applies only in medical malpractice cases. If in such a case one party offers to disclose the identity of its experts and also offers to allow them to be deposed, and if all parties accept the offer, then the expert witnesses of *all* parties may be deposed. See 1 PATRICIA A. GROBLE, EXAMINATION BEFORE TRIAL AND OTHER DISCLOSURE DEVICES § 4:19 (rev. ed. 1990). N.Y. CIV. PRAC. L. & R. 3101(a)(3) concerns deposing a party's own medical expert. See David D. Siegel, *Practice Commentaries* C3101:29A, in N.Y. CIV. PRAC. L. & R. 3101 (McKinney 1991).

Contrast the practice in New Jersey of preventing surprise on the details of an expert's opinion. E.g., *Mauro v. Owens-Corning Fiberglas Corp.*, 542 A.2d 16, 21-22 (N.J. Super. Ct. App. Div. 1988), *aff'd sub nom.* *Mauro v. Raymark Indus., Inc.*, 561 A.2d 257 (N.J. 1989) (affirming exclusion from evidence of reference to statistics drawn from epidemiologic studies, because the data had not been furnished to defendants as part of plaintiff's expert's written report or in other discovery); RALPH N. DEL DEO & JOHN H. KLOCK, NEW JERSEY PRACTICE, COURT RULES ANNOTATED § 4:10-2(d) (4th ed. 1989).

⁸⁹ Practitioners in New York sometimes remark that the element of surprise should not be overstated, because the attorneys on each side basically know what the other side's experts are going to say. This statement can only be true, however, in the most general sense about the ultimate conclusions reached by the expert. Indeed, such an attitude is in itself evidence that many New York lawyers may not perceive the nuanced issues concerning the *basis* for expert opinions that are being litigated in New Jersey and in federal court.

raised are too complex to be explained orally and the verbal maneuverings of many experts in giving testimony may be subtle and confusing.⁹⁰ Furthermore, the factual and theoretical bases for these motions are too voluminous and difficult to comprehend without extensive briefs. Such motions can only be raised in a procedural context that allows the taking of testimony and production of evidence out of the hearing of the jury, extensive briefing of factual and legal issues by the parties, and careful consideration by the judge. None of this is possible, in any practical sense, unless adequate discovery of the content and basis of the expert's opinion is available well before trial.

C. *Lack of Codification of Evidence Rules*

The legal rules in New Jersey and in the federal courts governing admissibility and legal sufficiency of expert opinions are relatively complex and have many nuances. Moreover, the competing policy considerations which lie behind the rules require a balancing that resists easy resolution.⁹¹ It may be difficult to identify, formulate, and debate such rules and policy determinations, and their proper application to new factual settings, when the discussion is initiated for the first time in isolated, scattered cases. On the other hand, codification of evidence rules can provide a common focal point and an initial, uniform formulation of principle, to which each court can refer as a starting point. Such a codification also serves as a means of informing the bench and bar about the basic issues.⁹²

⁹⁰ See, e.g., *Turpin v. Merrell Dow Pharmaceuticals, Inc.*, 959 F.2d 1349, 1358-61 (6th Cir.), cert. denied, 113 S.Ct. 84 (1992) (discussing opinion language about "possibility," "consistent with," and "capable of causing"); *In re Agent Orange Prod. Liab. Litig.*, 611 F. Supp. 1223, 1234-39 (E.D.N.Y. 1985), aff'd, 818 F.2d 187 (2d Cir. 1987), cert. denied, *Lombardi v. Dow Chem. Co.*, 487 U.S. 1234 (1988) (discussing language about "possibility," "consistent with," "compatible with," and "association").

⁹¹ Indirect evidence of this point is provided by the amicus briefs filed with the United States Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 113 S. Ct. 2786 (1993). Amicus briefs aligned on the side of the petitioner (attacking the adoption in civil cases of the conservative *Frye* Test for admitting novel scientific evidence) included briefs by numerous scientists and historians of science, as well as the American Society of Law, Medicine and Ethics. Amicus briefs on the side of the respondent included briefs by the American Medical Association and other scientific professional organizations, the American Association for the Advancement of Science, and the National Academy of Sciences. Amicus briefs not aligned with either side were filed by the Carnegie Commission on Science, Technology, and Government, and a group of American law professors. See *id.* at 2795.

⁹² See Letter from New York State Law Revision Commission to Governor Cuomo 1-2 (March 21, 1991) (on file with author) (recommending codification of evidence rules in order to best serve the interests of justice "by placing the common law and various statutory rules of evidence in a readily-accessible, easily-understandable, comprehensive and authoritative volume thereby enabling litigants and judges to start from the same point, guided by the same

New Jersey has adopted a set of evidentiary rules modeled on the Uniform Rules of Evidence.⁹³ New York still operates with a common law of evidence, and has no comprehensive codification of evidence rules.⁹⁴ An evidence code was proposed to the New York legislature in 1981, revised periodically, and reintroduced in 1991-92, but it was not enacted into law.⁹⁵ While the earlier proposal was based on the Uniform Rules of Evidence,⁹⁶ the more recent proposal was intended to follow New York common law.⁹⁷ New York's lack of a formulation of basic evidentiary principles may have inhibited the development of a dispositive motion practice on cancer causation in New York, especially in conjunction with the lack of discovery devices discussed above.

D. Use of "Substantial Factor" Causation

It is also possible that the New York bar has had less incentive to develop a motion practice concerning cancer causation because of the prevalent use of a "substantial factor" definition of causation in New York tort law. New Jersey courts follow the traditional American approach to causation: in the general situation, juries are instructed that the plaintiff must establish by a preponderance of the evidence that the defendant's negligent act (or defective product) was a "prox-

set of rules"); see also 29B CAL. EVID. CODE, Recommendation of Cal. L. Revision Comm'n, at XXIV (West 1966) (codification provides practitioners with a "systematic, comprehensive, and authoritative statement of the law"). But see Phylis S. Bamberger, *Let's Think Before We Leap: Why Should the Law of Evidence Be Codified?*, N.Y. L.J., May 13, 1992, at 1 (stating that codification would be "a retardant to development of the law and to fairness in the day-to-day work of the trial courts").

⁹³ New Jersey started codifying its evidence rules in 1960, working from the Uniform Rules of Evidence, promulgated in 1953. New Jersey's code paralleled the Uniform Rules for the most part, although some modifications were made so that the new rules would be more aligned with already developed evidence common law. The New Jersey Rules are also similar to the Federal Rules of Evidence, promulgated in 1975. The federal rules, in turn, were also modeled on the Uniform Rules of Evidence. See DEL DEO & KLOCK, *supra* note 88, at v-vi.

⁹⁴ The general evidence statute for New York is Article 45 of the CPLR. When the CPLR was adopted in 1963, the Advisory Committee decided that compiling a uniform code of evidence for New York was beyond the scope of its authority since such a code would be applicable in both criminal and civil cases. However, the committee recommended appointing a further committee to consider enacting an integrated code of evidence for New York. N.Y. CIV. PRAC. L. & R. Art. 45 (Consol. 1978). The state legislature formed such a committee in 1976. See 57 N.Y. JUR. 2D *Evidence and Witnesses* § 5 (1993).

⁹⁵ 57 N.Y. JUR. 2D *Evidence and Witnesses* § 5 (1993); LEGISLATIVE BILL DRAFTING COMMITTEE, 1991 New York LEGISLATIVE DIGEST A613 (noting A8080 referred to Assembly Committee on Codes).

⁹⁶ See 57 N.Y. JUR.2d *Evidence and Witnesses* § 5 (1993).

⁹⁷ See New York State Law Revision Commission, *supra* note 92, at 2, 4; N.Y. PROPOSED CODE OF EVIDENCE § 102 & Official Comment (1991). But see Bamberger, *supra* note 92 (discussing possible inconsistencies between proposed code and settled New York law).

imate cause" of the plaintiff's injuries. In order for the plaintiff to prevail, the jury must find that "but for" the negligent act, the plaintiff's injuries would not have occurred.⁹⁸ The "but for" formulation is not used, however, when the defendant's negligence was allegedly only one of two or more independently sufficient causes. In such a case, it seems unfair to allow the defendant to escape liability simply because the other cause *happened* to be present and would have brought about the plaintiff's injury even without the defendant's negligence.⁹⁹ When confronted with this particular situation, New Jersey courts tend to follow the traditional doctrine of substituting a "substantial factor" instruction in place of the "but for" instruction. The jury is told that the plaintiff is entitled to recover if she establishes that the defendant's negligent act was a "substantial factor" in bringing about the plaintiff's injury.¹⁰⁰

In at least the general situation, therefore, a plaintiff in a New Jersey court may have to establish that the defendant's negligence was a necessary condition in bringing about the plaintiff's cancer. The defendant will prevail if the plaintiff's evidence fails to show that the negligence was necessary for producing the outcome.¹⁰¹ In order to get the issue of causation before the jury, the plaintiff is required to produce evidence sufficient for the jury to reasonably find that if the defendant had not been negligent the plaintiff probably would not have developed cancer.¹⁰² At least with respect to ge-

⁹⁸ See, e.g., *Vuocolo v. Diamond Shamrock Chems. Co.*, 573 A.2d 196, 199 (N.J. Super. Ct. App. Div. 1990) (defendant's act or omission not regarded as proximate cause of plaintiff's being injured if injury would have occurred without such act or omission); RESTATEMENT (SECOND) OF TORTS § 432 (1965) (with one exception, negligent conduct is not a legal cause of harm to another "if the harm would have been sustained even if the actor had not been negligent"); W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS § 41, at 264-66 (5th ed. 1984).

⁹⁹ E.g., *Vuocolo*, 573 A.2d at 199; RESTATEMENT (SECOND) OF TORTS §§ 431-432 (1965); KEETON, *supra* note 98, § 41, at 266-68. The classic depiction of the type of situation in which a "substantial factor" instruction is warranted is the "two fires" situation, in which two separately started fires coalesce before setting fire to the plaintiff's house, but the normal spread of either fire would have been sufficient to burn the house. See RESTATEMENT (SECOND) OF TORTS § 432 illus. 3 & 4 (1965).

¹⁰⁰ See, e.g., *Evers v. Dollinger*, 471 A.2d 405, 409 (N.J. 1984) (in medical malpractice "lost chance" case, plaintiff should be permitted to demonstrate that delay in making accurate diagnosis and providing proper treatment increased the risk of recurrence or spread of plaintiff's cancer, and that such increased risk was a substantial factor in producing plaintiff's later condition).

¹⁰¹ E.g., *Vuocolo*, 573 A.2d at 199-202 (although New Jersey courts have employed substantial factor instructions in "lost chance" cases, case in which defendant released dioxin in chemical plant explosion was not such a case, and plaintiff's cause of action for pancreatic cancer was "more akin to a traditional personal injury tort case").

¹⁰² New Jersey courts may be uncertain as to whether or when to use substantial factor instructions in cases that are not "lost chance" cases. Compare *Vuocolo*, 573 A.2d at 199-202

neric cancers—those whose etiology is difficult to determine or for which there may be several possible causes—this is a relatively high standard of causation. Because it is at least conceivable that a court could find the evidence of “but for” causation insufficient as a matter of law, this standard tends to favor defendants.

The “substantial factor” standard, by comparison, is an easier standard for the plaintiff to meet. The plaintiff will probably produce sufficient evidence to get the causation issue to the jury if the plaintiff’s expert can testify, based on risk statistics, that the risk created by the defendant was a “substantial” contribution to the total risk of cancer incurred by the plaintiff.¹⁰³ The “substantial factor” test also tends to defy “refinement” by judges as a matter of general law; the balancing needed to decide what causal contributions are “substantial” requires weighing factual issues peculiar to each case. Defendants facing a “substantial factor” standard may have, from the outset, less hope of convincing the court to keep the causation issue away from the jury. Therefore defendants will have less incentive to expend litigation resources on motions that will ultimately prove ineffective. Even in cases where some of the expert opinion might be successfully challenged, or even excluded, if the remaining testimony will still be sufficient to create a jury issue on causation, the meager benefits to be gained from the initial challenge motions may be outweighed by the costs.

Unlike New Jersey,¹⁰⁴ New York courts appear to use the “substantial factor” approach in most, if not all, cases.¹⁰⁵ If the above reasoning has any validity, then the New York defendants’ bar might generally perceive little to be gained in pursuing a motion practice on causation in cancer cases because, in the end, such motions would seldom dispose of the issue of causation. In New Jersey,

(discussed *supra* note 98), with *Grassis v. Johns-Manville Corp.*, 591 A.2d 671, 676-77 (N.J. Super. Ct. App. Div. 1991) (in occupational exposure case brought against manufacturers of asbestos sheets and rolls, court directed use of substantial factor instruction without characterizing case as “lost chance” case), and *Dafler v. Raymark Indus., Inc.*, 611 A.2d 136, 138 (Super Ct. App. Div. 1992), *aff’d*, 622 A.2d 1305 (N.J. 1993) (jury found asbestos exposure a “substantial contributing cause” of plaintiff’s lung cancer, but apportioned 70% of damages to plaintiff’s cigarette smoking).

¹⁰³ See, e.g., *Grassis*, 591 A.2d at 677 (assuming, for example, that a jury finds a 30% risk factor significant, plaintiff must then show that it was more likely than not that this 30% factor was present in his case).

¹⁰⁴ We were not able to determine the quantitative extent to which “but for” instructions or “substantial factor” instructions are given in cancer cases in New Jersey.

¹⁰⁵ See, e.g., *Derdarian v. Felix Contracting Corp.*, 414 N.E.2d 666, 670 (N.Y. 1980) (defendant’s negligence must be “a substantial cause” of the injury); *Mack v. Altmans Stagelighting Co.*, 470 N.Y.S.2d 664, 666-67 (App. Div. 1984) (discussing showing of “substantial factor” as part of plaintiff’s *prima facie* case on causation).

on the other hand, incentive for counsel to pursue dispositive motions might depend, to some extent, upon the type of causation instruction—"but for" or "substantial factor"—to be given in the particular case.¹⁰⁶

E. Judicial Attitude Toward Jury Trials

New York judges, in contrast with the judiciary in New Jersey, may have a greater predisposition to send the causation question to the jury. Knowing such a tendency, defendants' bar might then avoid wasting resources in fruitless battles trying to keep causation from the jury with motions. This hypothesis may help explain the difference in motion practices between the two states.

We note, however, that this hypothesis has difficulties. First, it could be difficult to measure judicial attitudes toward juries deciding the issue of causation in toxic tort cases—especially in a state like New York, where defendants apparently do not bring challenging motions, and fail to generate trial court or appellate opinions documenting challenges. Second, New Jersey cancer cases have not established rules that are always pro-defendant. The *Rubanick* case, for example, established an admissibility rule in toxic tort cases for novel scientific testimony that expressly rejected the conservative *Frye* test of "general acceptance in the relevant scientific community," in favor of a less stringent test more favorable to plaintiffs.¹⁰⁷

III. CONCLUSION

Whatever the causal factors may be, it seems clear that New York—unlike New Jersey or the federal courts—is not developing a motion practice on the admissibility or sufficiency of scientific evidence on cancer causation in toxic tort cases. We do not argue that current New York law in this area is either good or bad, but rather that there is not much New York law at all. With little or no appellate guidance, and little likelihood for such guidance in the near future (if any of our explanatory hypotheses are correct), there is no mechanism by which any significant case-by-case doctrine on admissibility or sufficiency can develop. In a state like New York, with

¹⁰⁶ If this hypothesis is true and New Jersey courts begin to adopt substantial factor instructions in virtually all cancer cases, reasoning that the current understanding of cancer causation tends toward a multiple-factor etiology in most or all cases, then this shift in instructions may bring about fewer evidentiary motions in cancer cases and less judicial control of evidence of cancer causation.

¹⁰⁷ *Rubanick v. Witco Chem. Corp.*, 593 A.2d 733, 747-48 (N.J. 1991); see *supra* text accompanying notes 37-44.

little opportunity for discovery, no codification of evidence rules, and little incentive for defendants' counsel to even try to develop a motions practice, this area of law may have little likelihood of developing at all, even on a case-by-case basis.¹⁰⁸

¹⁰⁸ It is interesting to note that of the many dozens of reported opinions in the federal courts on Bendectin in which the evolution of federal evidentiary law has been strenuous, *see supra* note 5, no opinion has come from a district court in New York since *Alexander v. Richardson-Merrell, Inc.*, 541 F. Supp. 93 (S.D.N.Y. 1982) (dismissing a case brought by plaintiffs from the United Kingdom challenged by defendants on the basis of *forum non conveniens*). Remarkably, the term "Bendectin" appears to have occurred (as of October 16, 1993) in exactly two reported New York opinions: *Monteleone v. Gestetner Corp.*, 531 N.Y.S.2d 857 (App. Div. 1988), a case citing a federal Bendectin case as support for the proposition that an infant plaintiff suffering from visible and serious birth defects could be excluded from the liability portion of a bifurcated trial, *id.* at 860-61; and in *St. Amand v. Merrell Dow Pharmaceuticals*, 530 N.Y.S.2d 428 (Sup. Ct. 1988), where an infant plaintiff alleged "products liability as to the side effect of the drug Bendectin manufactured by" the defendant, *id.* at 429. The *St. Amand* opinion dealt with discovery, and did not involve the admissibility of expert testimony. As a result of the apparent lack of Bendectin litigation, or at least motion practice, in New York courts, we probably will not see how New York courts would rule on the admissibility and sufficiency of the Bendectin causation evidence. One might think in retrospect, however, that in view of how many plaintiffs have lost on that evidence in federal courts, Bendectin plaintiffs might have fared better had they brought suit in New York.

