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Tort law, specifically recovery for negligence or medical malpractice, seeks to make a plaintiff whole or, in other words, restore the plaintiff to the position he would be in but for the defendant’s negligence.1 In a medical malpractice suit, a plaintiff must prove the five elements of negligence to recover monetary damages: 1) the physician owed a duty of care to the patient; 2) the physician breached this duty; 3) the breach actually caused the patient’s injury; 4) the breach proximately caused the patient’s injury; and 5) the patient suffered damages from the breach.2 Tort law has long recognized the plaintiff’s required “all-or-nothing approach” in proving causation in negligent suits.3

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1 See *RESTATEMENT (SECOND) OF TORTS* § 901 (1979). The Restatement sets out four purposes of tort law: “(a) to give compensation, indemnity or restitution for harms; (b) to determine rights; (c) to punish wrongdoers and deter wrongful conduct; and (d) to vindicate parties and deter retaliation or violent and unlawful self help.” Id; see also Zaven T. Saroyan, *The Current Injustice of the Loss of Chance Doctrine: An Argument for a New Approach to Damages*, 33 CUMB. L. REV. 15, 17 (2002) (maintaining purpose of damages to make plaintiff whole or deter future harm).


This approach unjustly prevents recovery for plaintiffs whose chances of survival were less than fifty-one percent prior to the defendant's negligence. Over the past twenty years, courts have utilized the loss of chance doctrine to correct the unfair results stemming from the law's all-or-nothing approach. Courts utilize different methods in applying loss of chance, but generally the theory rests on allowing an individual to recover even though his chances of survival were less than fifty-one percent prior to the defendant's negligence. In *Matsuyama v. Birnbaum*, the Massachusetts Supreme Judicial Court considered whether Massachusetts should adopt the doctrine of loss of chance and determined that it should.

From July 1995 until October 1999, Dr. Neil S. Birnbaum, the defendant, was Kimiyoshi Matsuyama's primary care physician. Matsuyama visited Dr. Birnbaum five

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*Proportional Approach*, 34 CATH. U. L. REV. 747, 748 (1985). In a medical malpractice claim, this means that if a patient had less than a fifty-one percent chance of survival prior to the defendant's negligence, he cannot recover because he cannot prove by a preponderance of evidence that the defendant's actions caused his/her injuries. See *Zilich*, supra at 680-81.

4 See sources cited supra note 3. The all-or-nothing approach has further been criticized for ignoring the fundamental goals of tort law, deterrence and compensation, and instead forcing the parties to focus on manipulating the rules. See *McMackin* v. Johnson County Healthcare Ctr., 73 P.3d 1094, 1099 (Wyo. 2003) (cautioning all-or-nothing approach allows doctors to escape liability); *Thompson* v. Sun City Cmty. Hosp., 688 P.2d 605, 615 (Ariz. 1984) (en banc) (reasoning rule defeats one primary function of tort law, deterrence); *Vertentes* v. Barletta Co., Inc., 466 N.E.2d 500, 504 (Mass. 1984) (Abrams, J., concurring) (recognizing the approach does not meet objectives of fairly allocating costs and risks of human injury).


6 See sources cited infra note 30.

7 890 N.E.2d 819 (Mass. 2008).

8 See *Id.* at 823-24 (adopting loss of chance to promote tort law's goals and principles).

9 *Id.* at 824-25. At the time of his first visit, Matsuyama was a forty-two year old Asian male who spent the first twenty-four years of his life in Korea and Japan, smoked cigarettes, and had a history of gastric distress. *Id.* at 824. His prior medical records indicated that he had complained of gastric distress since 1988 and that his previous doctor commented that he might need "an upper gastrointestinal series or small bowel follow-through to evaluate further his symptoms." *Id.* Per Dr. Birnbaum's trial testimony, Matsuyama's risk of gastric cancer was ten to twenty times higher due to his smoking habit and his time in Japan and Korea. *Id.* at 824 n.9. At trial, Dr. Birnbaum stated that he knew of Matsuyama's descent, smoking habit, and past residences, but that he did not recall reviewing Matsuyama's previous medical records, even though he had access to them. *Matsuyama*, 890 N.E.2d at 824 & 824 n.8.
times approximately once a year from 1995 until 1999. Matsuyama exhibited symptoms and risk factors for gastric cancer at each visit, however, Dr. Birnbaum neglected to perform appropriate diagnostic exams and tests and failed to diagnose Matsuyama. Finally, on May 3, 1999, due to Matsuyama’s complaints of epigastric pain, vomiting, sudden weight loss, and premature feelings of fullness after eating, Dr. Birnbaum ordered a gastrointestinal series and an abdominal ultrasound. These tests revealed gastric cancer. Matsuyama immediately began treatment, but succumbed to his disease in October 1999.

In June 2000, Robin K. Matsuyama, executrix of Kimiyoshi Matsuyama’s estate, filed suit against Dr. Birnbaum and Medical Associates alleging wrongful death, breach of contract, and negligence against both defendants. The plaintiff’s expert witness, gastroenterologist Dr. Stuart Ira Finkel, testified that Dr. Birnbaum breached the standard of care in treating Matsuyama and by failing to diagnose Matsuyama’s cancer sooner. Dr. Finkel also testified that Dr. Birnbaum’s failure to appropriately diagnose Matsuyama’s cancer ultimately led to Matsuyama’s advanced stage of cancer and death. Dr. Finkel further testified that Matsuyama lost the opportunity of having his cancer timely diagnosed and treated while it was still curable. Finally, the plaintiff presented

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10 Id. at 824-25 (reviewing history of Matsuyama’s visits).
11 Id. at 824. Matsuyama complained of “heartburn and difficult breathing associating with eating and lifting,” that intensified over time. Id. Matsuyama also reported that moles had recently appeared on his body. Id. at 824-25. At trial, plaintiff’s counsel presented evidence linking these symptoms with gastric cancer. Id. at 825 n.11.
12 See Matsuyama, 890 N.E.2d at 825.
13 Id.
14 Id.
16 See Matsuyama, 890 N.E.2d at 825-26.
17 Id. at 825-27. Dr. Finkel determined that given Matsuyama’s complaints and symptoms, coupled with his Japanese descent, history of smoking, and time in Japan and Korea, “an internist exercising the expected standard of care would have ordered an upper gastrointestinal series X-ray or an endoscopy, or referred Matsuyama to a specialist for endoscopy, beginning in 1995.” Id. at 826. If the tests had been ordered in 1995, Dr. Finkel testified that the cancer “would have been diagnosed” and “treated in a timely fashion when it might still have been curable.” Id.
18 Id. at 826-27. Dr. Fuchs, Matsuyama’s oncologist, added that due to Matsuyama’s known risk factors for gastric cancer, an endoscopy with a biopsy was the best way to identify stomach cancer. Id. at 826 n.14. Dr. Smith, another physician who treated Matsuyama, added that endoscopies are the “gold standard” for diagnosing stomach cancer. Matsuyama, 890 N.E.2d at 826 n.14. Defense counsel’s expert, Dr. Peppercorn, a gastroenterologist, asserted that Matsuyama’s specific type of cancer was different from the “garden variety” cancer and that symptoms do not appear until the cancer advances in stage. Id. at 827. See generally id. at 826
forensic economist Dr. Dana Hewins who testified that had Matsuyama lived, considering his estimated life expectancy, he would have contributed $623,460 to his family in income and household services.  

After a six-day trial, the judge asked the jury to deliberate and answer special questions. The jury found that Dr. Birnbaum was negligent, but not grossly negligent, and that this negligence was a substantial contributing factor to Matsuyama’s death. Additionally, the jury found the defendants jointly and severally liable for Matsuyama’s pain and suffering and loss of chance and awarded his estate $160,000 and $328,125. Both defendants appealed and argued against the loss of chance doctrine in Massachusetts claiming that the doctrine contradicted Massachusetts’s Wrongful Death Statute. The Supreme Judicial Court disagreed and held that Massachusetts should adopt the loss of chance doctrine in the limited arena of medical negligence and that it does not contradict the state’s Wrongful Death Statute.

(noting five stages of gastric cancer).

19 Id. at 827 (utilizing standard statistical measures to determine Matsuyama’s contribution had he not died prematurely).
20 Id. & 827 n.19 (noting plaintiff moved to add a count for gross negligence, which was allowed). Special questions five and six pertained to loss of chance. Id. at 827-28, 843 nn.51-52. The judge, in question five, instructed the jury to determine whether Dr. Birnbaum’s negligence was a substantial contributing factor to Matsuyama’s death explaining that substantial “doesn’t mean that Mr. Matsuyama’s chance of survival was [50]% or greater, only that there was a fair chance of survival or cure had Dr. Birnbaum not been negligent and had he conformed to the applicable standard of care.” Matsuyama, 890 N.E.2d at 827 n.20. Question six continued that if the jury answered yes to question five, then they must determine the amount of damages necessary to “fully and fairly compensate” Matsuyama’s wife and son. Id. at 843 n.51. To determine this amount, the judge instructed the jury to multiply their “damage figure” by Matsuyama’s probability of survival corresponding to the stage of cancer they determine Matsuyama to be suffering from at the time of Dr. Birnbaum’s initial negligence. Id. at 827-28, 843 n.51. For instance, if the jury found Matsuyama to have been suffering from Stage 1 cancer, the jury was instructed to “multiply your damage figure by a percentage figure by or between .6 (60%) and .9 (90%) in your sole discretion.” Id. at 844 n.51.

21 Id. at 827.
22 Id. at 827-28 (finding prior to negligence Matsuyama suffered from Stage 2 cancer with 37.5% chance of survival). The jury determined that $875,000 was the full wrongful death damages and multiplied that by .375 to reach loss of chance damages of $328,125. Matsuyama, 890 N.E.2d at 828.
23 Id. at 823.
24 Id. at 823-24 (adopting loss of chance and continuing with numerous other decisions). First, the court determined that a plaintiff in Massachusetts can recover in a medical malpractice suit for loss of chance when the physician’s actions cause the patient’s injury, which is the loss or lessening of the patient’s chance of survival. See id. at 826-32. Second, to satisfy loss of chance, “the plaintiff must prove by a preponderance of the evidence that the physician’s negligence
The loss of chance doctrine developed in medical malpractice cases out of dissatisfaction with the all-or-nothing rule and its failure to advance the fundamental aims of tort law, compensate victims, and promote strong medical care. Lawyers differ on the origins of loss of chance, but most agree that the doctrine arose in contract and rescue-type cases as opposed to the medical malpractice arena. Regardless of its origins, many lawyers and courts view *Hicks v. United States* as the seminal case for loss

caused the plaintiff's injury . . . .” *Id.* at 832. Third, the court determined that Massachusetts’s Wrongful Death Statute did not preclude the court from embracing the doctrine of loss of chance. *See id.* at 835-38. Fourth, the court laid out a five-step proportional damages approach to calculating damages in a loss of chance claim. *See Matsuyama*, 890 N.E.2d at 838-41. Fifth, the court held that the plaintiff's evidence was sufficient to allow the jury to find that there was a breach of standard of care and that this breach was a substantial contributing factor to Matsuyama’s chance of survival. *See id.* Sixth, it decided that while the correct test in proving loss of chance requires the plaintiff to prove that the defendant was the “but for” cause of the loss of chance, the fact that the lower court used the substantial contributing factor test did not prejudice the defendant and thus the case did not need to be remanded. *Id.* at 842. Finally, the court determined that while the lower court judge’s instructions “were less than ideal,” he did not err. *See id.* at 843.

25 *See, e.g.*, *Hicks v. United States*, 368 F.2d 626, 632 (4th Cir. 1966) (refuting doctor’s chance to expound all-or-nothing rule when its his negligence causing harm); *McMackin*, 73 P.3d at 1099 (reasoning all-or-nothing fails to deter negligent practices); O’Brien v. Christensen, 662 N.E.2d 205, 209 (Mass. 1996) (rebuffing all-or-nothing rule because it fails to promote fundamentals of tort law); Delaney v. Cade, 873 P.2d 175, 187 (Kan. 1994); Brune v. Belinkoff, 235 N.E.2d 793, 798 (Mass. 1968). Instead, courts have replaced the all-or-nothing rule with loss of chance to allow for a fair means to compensate the plaintiff. *See, e.g.*, *Roberts v. Ohio Permanente Med. Group*, 668 N.E.2d 480, 484 (Ohio 1996) (replacing all-or-nothing rule to allow plaintiff to be compensated); *Delaney*, 873 P.2d at 182 (expounding loss of chance fairly compensates plaintiff for doctor’s negligence); Darrell L. Keith, *Loss of Chance: A Modern Proportional Approach to Damages in Texas*, 44 BAYLOR L. REV. 759, 760 (1992).

26 *See generally* Zilich, *supra* note 3, at 679 (tracing loss of chance back to at least 1925). In *Zinnel*, the decedent drowned after an ineffectual effort to rescue him. *See Zinnel v. U.S. Shipping Bd. Emergency Fleet Corp.*, 10 F.2d 47, 49 (2nd Cir. 1925). Judge Learned Hand held that the court could not be certain whether the rescue would have been effective, but since there was a chance that the rescue could have saved the victim, the jury could find causation. *See id.* at 49. Others contend that contract law was responsible for the birth of loss of chance citing the 1911 case of *Chaplin*, where the court of appeals held that the plaintiff’s lost chance was an injury that could be compensated even though her chances were not more than twenty-five percent. *See David A. Fisher, Tort Recovery for Loss of Chance*, 36 WAKE FOREST L. REV. 605, 608-09 (2001); Howard Ross Feldman, *Comment, Chances as Protected Interests: Recovery for the Loss of a Chance and Increased Risk*, 17 U. BALTIMORE L. REV. 139, 140-41. *See generally* Saroyan, *supra* note 1 (crediting Gardner v. Nat'l Bulk Carriers, Inc., 310 F.2d 284 (4th Cir. 1962) as first American loss of chance case).

27 368 F.2d 626 (4th Cir. 1966).
of chance in the medical malpractice arena. In *Hicks*, the court reasoned that when there is a substantial possibility of survival and the defendant's negligence destroys this chance, recovery is possible. Post-*Hicks*, courts adopted a variety of loss of chance approaches (e.g. relaxed standard of causation and viewing chance as the injury suffered) to ensure plaintiffs' ability to recover. However, other courts continue to criticize loss of chance and instead adhere to the all-or-nothing rule.

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29 See *Hicks*, 368 F.2d at 632. In *Hicks*, the Fourth Circuit stated: “[w]hen a defendant's negligent action or inaction has effectively terminated a person's chance of survival, it does not lie in the defendant's mouth to raise conjectures as to the measure of the chances that he has put beyond the possibility of realization. If there was any substantial possibility of survival and the defendant has destroyed it, he is answerable.” *Id.*

30 See generally John D. Hodson, Annotation, *Medical Malpractice: "Loss of Chance" Causality*, 54 A.L.R. 4th 4th 10 (1987). Some courts have followed *Hamil*, which relaxes the standards of causation and allows recovery for the overall harm done as opposed to the lost change. See *Hamil* v. Bashline, 392 A.2d 1280, 1286 (Pa. 1978). The Restatement articulates that if a person undertakes to render services for another and his failure to exercise reasonable care results in harm to the victim, he is liable if “his failure to exercise such care increases the risk of such harm . . . .” *See* RESTATEMENT (SECOND) OF TORTS § 323(a) (1965). In interpreting § 323(a), the court in *Hamil* reasoned that the Restatement relaxed the standards of causation so that once a plaintiff provided evidence that a defendant's negligence increased the risk of harm and that harm occurred, the issue could go to the jury. *See* *Hamil*, 392 A.2d at 1286. The jury would then decide if the defendant's negligence was a substantial factor in causing the plaintiff's injury. *See* *id.* at 1288. Proponents of the *Hamil* approach argue that it is a more procedurally oriented approach that allows the court to uphold the traditional rules of causation. *See* Truckor, supra note 2, at 356-57. But see RESTATEMENT (THIRD) OF TORTS § 26 cmt. n (Proposed Final Draft No. 1, 2005) (clarifying reliance on § 323(a) in loss of chance is misplaced). Another approach, sometimes called “the pure loss of chance approach,” adheres to the fundamental standards of causation, but views the injury as the lost chance of survival and allows recovery for that lost chance. *See*, e.g., Alexander v. Scheid, 726 N.E.2d 272, 279 (Ind. 2000); Jorgenson v. Vener, 616 N.W.2d 366, 370 (S.D. 2000); James v. United States, 483 F. Supp. at 581, 586-87 (N. D. Cal. 1980). Proponents argue that pure loss of chance maintains the traditional rules of causation, values the victim's lost change, and holds physicians liable for negligent actions. *See* James, 483 F. Supp. at 587. Opponents argue that pure loss of chance can be confusing and inaccurate because it relies so heavily on statistics and expert testimony. *See* Truckor, supra note 2, at 364. But see Cusher v. Turner, 495 N.E.2d 311, 315 (Mass. App. Ct. 1986) (reasoning scientific knowledge and experts now available to give accurate statistical testimony and proof); Glicklich v. Spievack, 452 N.E.2d 287, 291 n.4 (Mass. App. Ct. 1983) (accepting statistical clinical methods as appropriate guidelines for assessing chance); Jorgenson, 616 N.W.2d at 371 (quoting King's rationale that statistics needed in traditional causation as well).

31 See, e.g., Fabio v. Bellomo, 504 N.W.2d 758, 762-63 (Minn. 1993) (refusing to recognize loss of
In adopting the loss of chance doctrine, courts struggled with the question of whether wrongful death statutes preclude loss of chance. Wrongful death statutes allow recovery for damages when the defendant's negligence causes the decedent's death and the decedent would have been able to recover from the defendant but for his death. It primarily seeks to compensate survivors for their loss. Today, Massachusetts recognizes a common law right to wrongful death claims and has enacted a wrongful death statute that identifies the procedural requirements necessary to exercise this right. Proponents of the loss of chance doctrine argue that wrongful death statutes do not preclude it. However, opponents contend that such statutes are at odds with loss of chance and prevent recovery. They argue that the statute allows for...
recovery when the defendant caused the death of the decedent and compensates survivors for their loss whereas loss of chance allows recovery when the defendant caused the lost chance and does not purposefully compensate the survivors for their loss. To rectify this situation, proponents suggest a compromise of amending legislation or utilizing survival statutes.

To calculate damages in loss of chance cases, courts must first determine how to measure the chance lost. Courts must then decide how damages will be calculated. The proportional damages approach is the most widely accepted method to calculating damages. Proponents of the proportional damages approach argue that it is a clear “fundamentally inconsistent” with loss of chance; see also United States v. Cumberbatch, 647 A.2d 1098, 1102-03 (Del. 1994) (holding loss of chance not a viable claim under wrongful death statute); Dowling v. Lopez, 440 S.E.2d 205, 207-08 (Ga. Ct. App. 1993) (rejecting claim for loss of chance within wrongful death as defendant did not cause death).

See Weigand, supra note 28, at 16-17. Brennwald argues that changes to the statute will be minor and stress a right to recover for “the negligent deprivation of a chance of survival.” See id. Truckor suggests a different approach utilizing a survivorship action. See Truckor, supra note 2, at 373. She suggests that in a loss of chance case, a survivorship action should be brought and that wrongful death claims should be left for those specific instances where a survivor is recovering for their own and not the decedent’s loss. See id. A final method would be to interpret wrongful death statutes to fit within loss of chance. See Herskovits v. Group Health Coop. of Puget Sound, 664 P.2d 474, 487 (Wash. 1983) (Pearson, J., concurring). Judge Pearson, in his concurring opinion in Herskovits, interpreted the pertinent wrongful death statute as encompassing loss of chance claims and allowing recovery when a defendant caused the death of another meaning “whenever he causes a substantial reduction in that person’s chance of survival.” See id.

See, e.g., Renzi v. Paredes, 890 N.E.2d 806, 810, 811 (Mass. 2008) (utilizing ten year survival rate in breast cancer to measure chance lost). See generally McMackin, 73 P.3d at 1100 (realizing “no clear-cut rule” on damages and will depend on case at hand).

See Truckor, supra note 2, at 365-67 (discussing methods for calculating damages).

See Saroyan, supra note 1, at 35. Using the proportional damage approach, damages can be calculated in two different ways. See Brennwald, supra note 3, at 782-83. The “simple probability” calculation allows the jury to assess what the full damages would be under a normal wrongful death claim and then multiply that figure by the percentage of chance lost, considering factors such as a patient’s age, health, and earning potential. See id. Under this method, a physician is only responsible for the percentage of lost chance that he caused the victim to suffer. See Saroyan, supra 1, at 35. In order to do this calculation, it is necessary to have expert testimony regarding the victim’s statistical chance of survival. See Keith, supra note 25, at 798. More specifically, courts calculate the lost chance by determining the victim’s overall chance prior to and after the doctor’s negligence and subtracting the latter from the former. See McKellips v. Saint Francis Hosp., Inc., 741 P.2d 467, 476-77 (Okla. 1987). This amount is then multiplied by the amount of total damages meaning the amount the plaintiff would have been awarded in a regular medical malpractice case. See id. A second approach called the “expected value”
method that allows damages to be awarded in direct proportion to the harm caused while preserving the traditional principles of causation. Opponents find the proportional damages approach inadequate and instead promote other methods such as allowing the jury to determine damages without strict guidelines. In Matsuyama, the court considered whether loss of chance is a cognizable doctrine in the state of Massachusetts. The court surveyed other jurisdictions and their application of the loss of chance doctrine. The court determined that a plaintiff could recover damages when a defendant's negligence caused the victim to lose an opportunity of surviving, even if that chance was less than fifty-one percent. This survey of jurisdictions further allowed the court to decide that a plaintiff can recover under the theory of lost chance as an injury. In addressing the issue of whether Massachusetts's Wrongful Death Statute approach calculates a weighted average of all possible outcomes. See Reisig, supra note 2, at 1184. See Boody v. United States, 706 F. Supp. 1458, 1465-66 (D. Kan. 1989) (recognizing method apportions damages in direct relation to harm caused and does not under- or overcompensate plaintiff nor place an unfair burden on defendant); see also Caboon, 734 N.E.2d at 541 (contending proportional damage approach is better approach); Delaney, 873 P.2d at 187 (rejecting other approaches finding proportional approach to be more logical); McKelligs, 741 P.2d at 475-76 (limiting damages to preserve traditional principles of causation). See Fisher, supra note 26, at 631 (opposing approach because it results in either defendant over or under paying). An alternative method, which five courts employ, awards full compensation to the plaintiff. See Saroyan, supra note 1, at 35. Yet another method is the "jury valuation of loss chance;" under this method a jury can award the plaintiff not only for the lost chance, but for other losses such as mental or physical pain or medical costs. See Keith, supra note 25, at 799. A final approach allows the jury to make damage determinations without any guidelines on valuations. See Reisig, supra note 2, at 1183. Matsuyama, 890 N.E.2d at 829. See sources cited infra note 47 (looking to what other courts have done to decide this case). Matsuyama, 890 N.E.2d at 828-32. In order to determine whether to adopt loss of chance, the court looked to over twenty jurisdictions that have adopted the doctrine. See id. at 829 n.23. It simultaneously acknowledged that ten courts have refused to adopt loss of chance. See id. The court further outlined the history of loss of chance realizing that many courts are dissatisfied with the all-or-nothing rule because of its failure to hold doctors liable. See id. at 829. Citing King, the court described the unjust results that occur in the all-or-nothing rule: if a patient has a fifty-one percent chance of survival prior to the doctor's negligence, then he can recover full damages, but if the chance was forty-nine percent, he cannot recover. See id. at 829 (citing King, supra note 3, at 1365-66). The court also relied on various cases, including O'Brien, McMackin, Brune, and Delaney, that noted further inadequacies of the all-or-nothing rule. See id. at 830. Matsuyama, 890 N.E.2d at 829-33. Before determining which approach to adopt, the court took up the opponents' arguments determining that some of their contentions were justified. Id. at 829-33. This caused the court to reject some of the approaches to loss of chance. Id. The court, then, determined that the pure loss of chance method was the appropriate method and that viewing the lost chance as the injury maintains traditional standards of causation and values the harm the victim suffered. See id. at 831-33. The court then dealt with the defendants'
precludes loss of chance, the court reasoned that the statute only sets forth procedural requirements on recovery while the common law wrongful death doctrine provides the actual right to recover and can and has evolved to encompass loss of chance. The court next looked at the various methods for calculating damages and determined that the proportional damages approach is the preferable method.

The court reasoned that "[the proportional damages approach] is an easily applied calculation that fairly ensures that a defendant is not assessed damages for harm that he did not cause." Applying arguments that pure loss of chance relies on statistical evidence that is speculative and complex. See id. at 833. The court rejected these arguments reasoning that many medical malpractice cases rely on such statistical proof and that statistical analysis has advanced to a point where it is reliable, objective, and accepted by the medical community. See id. at 833; see also supra note 30 (considering and disposing of potential problems of relying on statistical evidence). The court finally emphasized that this doctrine is limited to cases of medical liability and will not, as the defendant worried, have ramifications over "all areas of tort law." See Matsuyama, 890 N.E.2d at 834-35.

49 See id. at 835-38. The court considered the history of the Wrongful Death Statute in Massachusetts and credited Gaudette as the landmark case which revived the common law doctrine of wrongful death to establish an overall right to recover when one's negligence causes the death of another. See id. But see id. at 835 (pointing to defendant's argument that statute precludes recovery because party must cause death of another).

50 See id. at 839. Before considering which method to employ, the court considered what is being valued in a loss of chance case and recognized that it would depend on a case-by-case situation and the available medical evidence. See id. at 838-39. In this instance, the court held that "the patient's prospects for achieving a more favorable outcome were measured in terms of the patient's likelihood of surviving for a number of years specified by the relevant medical standard: for gastric cancer, the five-year survival rate." Matsuyama, 890 N.E.2d at 833. The court next looked to the potential methods to calculate loss of chance crediting the proportional damages approach as the most widely adopted method. See id. at 839. The court relied on the cases of Cahoon, Delaney, and McKelliips that all argue in favor of proportional damages. See id.; see also supra notes 42-43 and accompanying text (discussing proportional damages approach and its advantages). The court explained that under this approach, a judge would instruct the jury on a five-step method for calculation: 1) calculate total amount of damages allowable under the Wrongful Death Statute; 2) calculate the patient's chance of survival/cure prior to the doctor's negligence; 3) calculate the chance of survival/cure that the patient had after the doctor's negligence; 4) subtract the amount in step three from the amount in step two; and 5) multiply the amount in step one by the percentage calculated in step four to determine the proportional damages allotted in the case at hand. See Matsuyama, 890 N.E.2d at 840.

51 Id. The court recognized the limitations of this method (e.g. under- or overcompensating plaintiffs, failing to promote deterrence), but concluded that it was the best approach in obtaining a favorable outcome with fairly easy methods of calculation. See id. at 840, 840 n.43. The defendants argued that this approach requires the use of statistical evidence and expert testimony that could lead to imprecise and skewed evidence. See id. at 841. The court rejected their arguments reasoning that not only is such evidence used throughout tort law, but that any issues of statistical bias or unreliability are matters to deal with in a pretrial motion. See id. In the
these doctrines to Matsuyama's case, the court held that, under a pure loss of chance rule, Matsuyama's widow and son should be awarded the sum determined by the proportional damages approach and that Massachusetts's Wrongful Death Statute did not preclude this award.52

In Matsuyama, the Supreme Judicial Court of Massachusetts took the necessary step of departing from existing rules governing medical malpractice and adopted loss of chance.53 A decision that potentially moves away from the traditional all-or-nothing rule is a bold and dangerous step because it allows recovery when negligence is not proven to a preponderance of the evidence.54 Thus, the court correctly weighed its options carefully by surveying other jurisdictions and addressing the defendants' arguments.55 While jurisdictions apply loss of chance differently, the court waded through these extensive, complex theories and adopted the most desirable choice.56 Viewing chance as the injury allows the traditional all-or-nothing rule to remain intact while enabling a plaintiff to recover for a lost chance.57

It is questionable, however, whether pure loss of chance truly maintains the all-

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52 See id. at 843-44. The court reasoned that "[w]hile two instructions in particular were less than ideal, reversal [was] not required" because the instructions included the survival rates for each stage of cancer, "[d]id not force] the jury to find a loss of chance and [did not preclude] the defense from arguing that there was no loss of a substantial chance of survival based on the evidence." Id. at 843. However, the court did recognize that the trial judge incorrectly allowed the jury to determine the victim's survival rate. See id. at 843-44. Regardless, taking the instructions as a whole the court concluded that the trial judge did not over step his discretion. See id.

53 See id. at 823-24; see also supra note 25 and accompanying text (explaining reasons for departure from all-or-nothing to loss of chance).

54 See Cooper, 272 N.E.2d at 102-04 (reasoning loss of chance rejects traditional all-or-nothing rule); see also supra note 31 and accompanying text (criticizing loss of chance for relaxing causation standards).

55 See Matsuyama, 890 N.E.2d at 828-35 (looking to other jurisdictions and dealing with defendants' contentions).

56 See id. at 832 (recognizing loss of chance to mean injury is the lost chance); see also supra notes 30-31, 47 and accompanying text (noting different jurisdictions standpoint on loss of chance).

57 See supra notes 30, 48 and accompanying text (supporting pure loss of chance and its benefits).
or-nothing rule. Pure loss of chance does not require the plaintiff to prove to a preponderance of the evidence that the doctor's negligence caused the victim's death. From this standpoint, the standards appear negated. However, pure loss of chance allows for recovery when the plaintiff proves to a preponderance of the evidence that the doctor caused the lost chance. In this light, when the recovery is for the lost chance, the standard is upheld. Pure loss of chance involves complex statistical analysis and expert testimony that may be confusing for the jury and result in inappropriate decisions. The court attempted to dismiss this problem by stating that such evidence is imbedded into all areas of tort law. While this may be true, the court failed to take this opportunity to more adequately deal with the complexities of statistical analysis. Instead, it continued with the traditional reliance on statistics and further complicated the matter by requiring the jury to utilize a difficult calculation method. Finally, the court's use of Massachusetts's Wrongful Death Statute is misguided because loss of chance contradicts the meaning and purpose of the statute.

Although the court misused Massachusetts's Wrongful Death Statute and failed to remedy the problems of complex statistical analysis, it did take an eventful and

58 See supra note 31 (arguing loss of chance departs from all-or-nothing rule).
59 See supra note 31 (discussing reduced standard under loss of chance).
60 See supra note 31 (realizing loss of traditional standards of proof).
61 See supra note 30 (explaining pure loss of chance).
62 See Matsuyama, 890 N.E.2d at 832 (recognizing pure loss of chance as consistent with traditional causation standards).
63 See id. at 827 (utilizing complex statistical analysis and expert testimony in case at hand); see also supra note 30 (discussing potential problems with statistics).
64 See Matsuyama, 890 N.E.2d at 841 (considering and dismissing defendants' contentions of inadequacies of statistics and experts).
65 See id. (arguing only reliance on statistics historically and reliability of experts in this case).
66 See id. at 840 (setting forth detailed but in-depth calculation requirements for the jury); see also supra note 44 and accompanying text (setting forth shortcomings of proportional damage approach). But see supra note 43 and accompanying text (favoring proportional damage approach).
67 See Matsuyama, 890 N.E.2d at 837-38 (reasoning loss of chance is consistent with Wrongful Death Statute). But see supra note 37 and accompanying text (arguing doctrine is at odds with Wrongful Death Statute). See also supra note 39 (offering other options to allow loss of chance to exist). When a plaintiff looks to recover for a loss of chance claim, they are seeking a different recovery than that which wrongful death claims provide. See Brenwald, supra note 3, at 786. Thus to encompass a loss of chance claim into the Wrongful Death Statute could result in an incorrect award of damages. See id. Additionally, a plaintiff may be left with no reward at all under the Wrongful Death Statute because the statute requires the defendant to have caused the decedent's death and not just the lost chance. See id.
important step in adopting loss of chance. This doctrine not only allows a new means of recovery, but may also improve medical care as a whole. Loss of chance heightens the necessary standard of care doctors must provide by holding them liable for cases where they caused a loss of chance. It may be argued that this creates a relaxed standard that will open the floodgates of litigation and subject doctors to unwarranted liability. However, by utilizing pure loss of chance and maintaining the preponderance of evidence standard, it is unlikely that such an event will occur.

In Matsuyama, the court addressed whether loss of chance should be adopted in Massachusetts. The court rightly joined the majority of other states that have embraced loss of chance. This decision recognizes the real injury of a lost chance, provides for a new mode of recovery, and creates the opportunity to reduce medical malpractice as a whole.

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68 See supra notes 5, 25, 30 (offering value of loss of chance).
69 See supra notes 5, 25, 30 (citing benefits of loss of chance); see also supra note 25 (explaining how all-or-nothing rule did not promote higher levels of care); infra note 70 (reasoning how loss of chance allows for higher standards of care).
70 See Feldman, supra note 26, at 150 (examining public policy benefits of loss of chance). Without loss of chance, plaintiffs who did not have a fifty-one percent or higher chance of survival cannot recover, and in turn doctors cannot be held liable. See id. This ultimately results “in a blanket release of doctors treating such patients, leaving many instances of negligent conduct unchecked.” Id. By adopting loss of chance, we increase the deterrence of medical malpractice and cause doctors to practice at an improved level of care. See id.
71 See Truckor, supra note 2, at 363-64 (arguing loss of chance creates an “open season” on physicians). Truckor contends that with a lower standard of proof, the floodgates of litigation will be open and many unwarranted malpractice claims will be filed. See id.
72 See Truckor, supra note 2, at 363-64. Loss of chance may actually reduce the amount of litigation because doctors will be deterred from negligence and practice a higher standard of care. See id. This will result in less malpractice and in turn less malpractice litigation. See id.
73 See Matsuyama, 890 N.E.2d at 823 (deciding whether to adopt loss of chance).
74 See id. (adopting loss of chance).
75 See id. at 832-35 (recognizing a lost chance as an injury); see also supra notes 25, 30 and accompanying text (discussing how loss of chance provides for opportunity of fair recovery); supra note 70 and accompanying text (reasoning how loss of chance will heighten medical care and reduce malpractice and malpractice suits).