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# Loss of chance: the uncertainty of the event or the uncertainty of the conduct? Case Series and Medicolegal Considerations

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**Abstract**

*Background.* The concept of damages for loss of chance originated in France in 1877 and was adapted to healthcare in 1962. In Italy, it was first introduced in healthcare liability in 2004, with Civil Court of Cassation decision No. 4400. Italian jurisprudence recognizes the loss of chance as an independent, legally and economically assessable damage, distinct from the actual outcome lost. The landmark St. Martin Judgments of 2019 further established that such damages can be claimed if they involve appreciable, serious, and consistent values. This requires proving a causal link between the conduct and the lost chance, based on established civil law criteria.

*Case report.* 1) a 71-year-old man whose lung carcinoma was not diagnosed in time, leading to a significant reduction in survival chances. 2) a woman whose breast cancer diagnosis was delayed, resulting in a more advanced stage and decreased survival prospects.

*Discussion.* In medical professional liability, the Supreme Court requires a high probability or certainty of causation for recognizing the causal link between wrongful conduct and damage. The assessment involves proving both the causal link and the reasonable probability of a lost opportunity's realization. Hypothetical damage is insufficient for compensation.

*Conclusions.* the compensability of loss of chance relies on proving the causal link between the negligent act and the uncertain event, where the impact on the patient's non-pecuniary sphere is significant. Medicolegal practice faces challenges in distinguishing between causality and damage, which can lead to confusion between biological damage and damage from loss of opportunity. ***Clin Ter 2024; 175 Suppl. 1(4):56-58 doi: 10.7417/CT.2024.5086***

**Keywords:** *biological damage, forensic medicine, loss of chance, risk management*

## Introduction

The term "chance" derives from the Latin "cadentia" and evokes the rolling of dice; for this reason, it takes on the meaning of "a good possibility of success"(1). So, "loss of chance" should be understood as the loss of opportunities, occasions, the possibility of achieving a result. In particular, "chance" recurs in legal usage with the meaning of "the probability of gaining profit or avoiding loss" (2). From this perspective, the loss of chance takes on an economic value. Therefore, its financial content is highlighted (3).

For chance to be considered legally relevant, it must not merely consist of a possibility of achieving a favorable outcome, but it must be characterized by a substantial probability of success.

The concept of damages for loss of chance was first introduced in France in 1877, stemming from the analysis of various legal issues and adapted to healthcare in 1962, regarding a case in which the Grenoble Court of Appeal cited "perte d'une chance de guérison" (loss of a chance of recovery)(4).

The French have identified the "garde-fous" necessary to select the important criteria that allow for the consideration of compensable damage from loss of chances (5).

The first requirement concerns the proof of damage from loss of chances and/or the causal relationship. Courts, to grant or deny the requested compensation for the prejudice, consider the existence or absence of sufficient evidence of the alleged damage and/or the causal link between the conduct and the damage from loss of chances. The second requirement concerns the lost chance, which must pertain to the plaintiff; otherwise, the damage cannot be compensated (6).

In Italy, the concept of damages for loss of chance was first introduced in the labor law context in 1983 by the Labor Section of the Court of Cassation when some workers were prevented from participating in preliminary competitive examinations for employment (7).

Starting from the Supreme Court of Cassation, Joint Sections, ruling of July 22nd, 1999, No. 500, the damage from loss of chance is considered as an injury to a legitimate expectation protected by the Italian legal system and therefore, compensable.

In 2004, with Civil Court of Cassation decision n. 4400, damages for loss of chance were discussed in the context of healthcare liability, defining chance as a separate asset, legally and economically susceptible to autonomous assessment of damage, not to be measured by the loss of the outcome but rather by the mere possibility of achieving it (8).

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In the notable St. Martin Judgments, No. 28993/2019, the idea of an uncertain damage event as a separate compensable incident was introduced, setting the threshold for causal relevance: a loss of chance is acknowledged only when it meets criteria of significance, gravity, and consistency.

For the purposes of attributing liability in civil matters, what is attributed to the responsible party is not the unlawful act itself, but the damage; however, it is always necessary for an unlawful conduct to occur for liability to exist, establishing a material causation link (9).

#### Case presentation

The most common scenario where damages for loss of chance are invoked in medical liability is the diagnostic omission of a neoplastic pathology. We present 2 cases of patients with diagnostic omission of a neoplastic pathology, analyzing the clinical story and the medicolegal implications.

Case 1.We present a case of 71 years-old white male, which during a chest X-ray performed in prehospitalization for another medical reason, was noted to have parenchymal opacities, never before investigated. Despite the presence of these pathological changes, no doctor prescribed or advised the patient to carry out further diagnostic examinations to better characterize a lesion that could already represent a "red flag" for a neoplastic pathology.

Indeed, seven months later, a subsequent CT scan revealed a formation with malignant characteristics, for which, the patient underwent a left upper lobectomy with tangential resection of the pulmonary artery and mediastinal lymphadenectomy, which resulted in a histological diagnosis of "squamous cell carcinoma non-keratinizing carcinoma WHO 2015, poorly differentiated (G3), extensively necrotic, with infiltration of the visceral pleura and embolization figures neoplastic lymphatic vessels". Although this destructive operation was promptly performed and the patient subsequently underwent several rounds of immunotherapy and radiotherapy treatment, both of which were unsuccessful, the disease continued to progress to death. The diagnostic delay that occurred due to the failure to perform the necessary examinations to effectively investigate the neoplastic pathology under investigation inevitably led to a worsening of the picture at the time of the actual diagnosis. As a result of this omissive conduct, the patient suffered a loss in survival chances of more than 25%, in view of the fact that if the carcinoma had been diagnosed at the beginning, when it was in a localized phase, it would certainly have allowed for a more decisive treatment.

Case 2. We present the case of a 38-year-old white woman with an undiagnosed 1 cm ductal carcinoma of the breast. In fact, the patient had attended a routine preventive examination at the gynecological clinics of a hospital in Rome. She underwent a mammogram. Upon detecting an anomaly, a fine-needle aspiration biopsy was performed, and she was sent home without any diagnosis or further investigative procedures. The following year, solely on her own initiative, she went to another clinic for a follow-up breast examination. The mammogram revealed that the lesion had expanded to 3 cm. She underwent another fine-needle biopsy, which confirmed the tumor, and a diagnosis of "ductal carcinoma" was made. A total body CT scan with contrast medium was then performed, showing uptake in some mediastinal lymph nodes. At this point, the patient presented the diagnostic tests performed at the Roman hospital, and the healthcare professionals revealed to her that she had already had a 1 cm ductal carcinoma at that time, which had expanded in the following year, progressing from stage T1N0M0 to stage T2N1M0. Consequently, the woman had suffered a reduction in her survival chances, calculated at 23%. Indeed, in this case, there was a progression from stage I, with a 15-year mortality of 11%, to stage II, with a 15-year mortality of 34%, and consequently a marked reduction in life expectancy.

#### Discussion

On the basis of what has been seen with the cases presented, although the damage of loss of chance is still configured as an entity of doubtful representation, it appears to be characterised by elements that characterise it in the Italian legal landscape.

In reference to medical professional liability (10), the jurisprudence of the Supreme Court has deemed the causation link to exist whenever the medical intervention would have had serious and appreciable chances of success.

In the past, the determination of causation in the medical field is a probabilistic judgment; however, it is necessary to identify the degree of probability required for the recognition of the causal link.

In other words, originally, jurisprudence had adopted the criterion of probability to determining the causal link between wrongful conduct and damage (from loss of chance). So, it was sufficient to identify a degree of probability adequate to recognize the effects of harmful conduct and its ability to produce them (11). Over the years, "probability" has given way to "certainty" in order to obtain clear proof of the causal link (12).

In other words, like in other cases of biological damage assessment, whether due to medical malpractice or different etiology (physical or psychological injuries) (13), according to modern jurisprudence, it is necessary first to ascertain, beyond any doubt or with "high logical probability," that the event was caused by wrongful conduct, whether characterized by fault or intent, and only then quantify, for compensatory purposes, the pecuniary and non-pecuniary damage based on the lost opportunity, relying this time on a presumptive and prognostic evaluation founded on the calculation of probabilities, given the lack of certainty of prejudice in the context of loss of chance.

The assessment of the damage must be based on a probability judgment made "ex ante", considering the circumstances present at the time of the conduct, or placing oneself in the historical moment when the event occurred, and their capacity to cause the alleged damage. For compensation purposes, it is necessary to provide two proofs in a progressive order, where each depends on the previous one, and the absence of one of them prevents the recognition of the damage:

- there must be an absolute causal link between the

injury and the loss of the favorable opportunity;
- there must be a reasonable probability that the opportunity would have been realized.

This opportunity cannot be random but must be concrete and effective, supported by objective elements allowing a reasonable prediction of its realization. A merely hypothetical or potential damage is not sufficient to obtain compensation.

Indeed, for proving the existence of prejudice, jurisprudence admits, unlike for the determination of the link, the criterion of "probability," namely an uncertain but highly presumable prognostic evaluation, as there is no way to prove the prejudice itself with absolute certainty (14).

The production of damage from loss of chance is therefore a judgment of prediction as a probable consequence of breach based on common experience and statistically valid scientific laws, adapting them to the historical moment when the wrongful act occurred (15).

In the rational effort of determining the causal link, it is necessary to verify whether, in the absence of that wrongful act, a favorable outcome would have been obtained, or whether by replacing the act with appropriate conduct called chance, it would have been concretely realized.

Thus, the lost chance of achieving a useful result must be proven in an unimpeachable etiological viewpoint but admits a probabilistic criterion in the identification of the damage, which inherently carries the presumption of a concrete possibility of achievement (lost), provided it is the immediate and direct consequence of wrongful conduct (16).

This does not exclude the determination of the existence of a proven causal link according to well-known civil law criteria between the agent's conduct and the concrete possibility lost (in terms of uncertainty) of achieving a better result.

Finally, it is worth mentioning the role of artificial intelligence, which in recent decades has been inexorably changing the role and medico-legal implications of physician responsibility (17). Artificial intelligence, in fact, could support the physician in facilitating clinical diagnosis, especially in the oncology field. In this case, the medico-legal implications could be entirely different.

## Conclusions

In conclusion, this event uncertainty (the only one that legitimately allows for discussion of lost chance) will be compensable equitably, considering all circumstances of the case, as a lost opportunity, if the causal link is proven, according to the ordinary civil law criteria between the conduct and the uncertain event (the lost opportunity), where detrimental consequences (impacts on the patient's non-pecuniary sphere) are proven to have the necessary dimensions of appreciation, seriousness, and consistency. The difficulty in medicolegal practice lies in the erroneous overlap of causality with damage, rendering the causal link "probable" rather than the damage, thus leading to confusion between the concept of biological damage and that of damage from loss of opportunity. The introduction of the concept of loss of chance damage, while protecting the rights of citizens and patients on one hand, could on the other hand lead to an increase in unjustified lawsuits and a rise in healthcare professionals requesting unnecessary diagnostic procedures. This, in turn, could expand the phenomenon of defensive medicine, with associated costs for public expenditure (18).

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