

# Causal Links Between Psychological Imbalances and the Appearance of Diseases



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By

Lucia Bubulac

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*I dedicate this book to my children, Daria and Raris. They were given to me, or maybe they chose me, but they helped me understand my mission.*

*I want to thank my mother, Venera, from whom I learned that in life, you must fight if you want to win.*

*I would also like to thank all who have opened the door of knowledge for me, knowingly or unknowingly. I have “stolen” something from each of them, and I have admiration and respect for each of them.*



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## FOREWORD

PROF. DUMITRU CONSTANTIN DULCAN,  
M.D., PH.D.

Lucia Bubulac, M.D., Ph.D., launched a much-needed book about neoplastic disease at a time when this condition still poses major therapeutic problems, being the second most frequent after cardiovascular diseases.

The author's intention is particularly meritorious because it considers the functional, structural complexity of the human being, analyzed in the context of current existence, which is equally complex and complicated from all life angles—spiritual, psychological, cultural, economic, and social.

The emphasis on the psychological side of our being seems to be essential in our colleague's book.

An avalanche of information, restrictions, laws, and changes in our lives, some of them strange, contrary to a logic that seemed normal until yesterday, assaults us day after day, with the effect of chronic, continuous stress. Chronic stress is, as the author emphasizes, the background on which an entire pathology, including the neoplastic disease, is grafted. No one can predict what tomorrow will bring.

The world has become a “global village”, as Marshall McLuhan called it, and what is happening in Washington echoes in Afghanistan and the world because everything is interconnected and interdependent.

Being part of our lives, all these events negatively affect our health.

Involuntarily, it comes to mind that geoclimatic events also have the same form, the same instability, and dramatic evolution as our lives because we must underline that according to modern physics, we form a single unity with the Universe, we feed on its energy and the good or evil that we do reflects on ourselves and the environment and the cosmos. We are what we think, and with or without our will, we influence everything around us.

Negative emotions, which Daniel Goleman, a Harvard-educated psychologist and journalist, called destructive (anxiety, depression, rumination, hatred, anger, rage, violence, aggressively expressed intolerance of others, slander, etc.), are to blame for the pathology of today's world.

The topic chosen for her Ph.D. thesis results from more than 30 years of medical activity, allowing her to study her patients theoretically and by direct observation.

The holistic, multi-dimensional approach to the causes of the study—mind, body, soul, and spirit—offers the manuscript an undeniable value. Today, it is not only a psychosomatic view of the human organism but was already mentioned by the great philosophers of antiquity, Plato and Aristotle, in their philosophical work and medical practice, by Hippocrates, the first great visionary, to whom the development of scientific medicine owes a huge debt.

Hippocrates takes medicine out of the appanage of the gods and explains it through natural causes, as understood in the modern world.

Many causes, including hereditary, are now attributed to the neoplastic disease, although at a reduced rate compared to other determinants.

From a pragmatic point of view, it should be mentioned that even if a person inherits an oncogenic gene, it will not be expressed unless an epigenetic factor intervenes to activate it. In other words, knowing the causes of this disease as much as possible can prevent it from manifesting. All the etiological factors mentioned can lead to the damage of NK cells, which we can call “hunters” of oncogenic mutant cells, which are believed to be continuously forming in our body during cell division.

Cancer is also known as the disease of “unhappiness”, or depression because of its harmful effect on the immune system.

What is also worth mentioning is the pertinent analysis in this book on the involvement of psychoneuroimmunology and psychoneuroendocrine systems in the development of neoplastic disease. The book meticulously deciphers and renders the biochemical, humoral, neurophysiologic, and pathophysiologic elements of the pathogenesis of this disease.

The book can also be useful as a textbook, as the author provides state-of-the-art definitions and information on the concepts used in pathogenesis.

The discussion on the psychological profile of individuals with vulnerability to oncogenic pathology intends to complete the scientific discourse. Here, we reach the comment on the **spiritual** dimension.

Harmony in behavior towards others, esteem, respect, compassion, generosity, forgiveness, and tolerance are moral values necessary to achieve what is today called **quantum coherence**. It defines a physiological state necessary for the preservation of health.

We do not represent just a physical body with needs reduced to nourishment and instincts. Still, we are the work of an intelligence, a consciousness, or a spirit that manages the coordinated, synchronized functionality of the billions of cells in our body.

We are an **explicit** consciousness expressed through reason and an **implicit** consciousness, functional at the level of subconscious structures, capable of organizing and coordinating the entire cellular assembly to sustain life at the quantum, biochemical, molecular, and biological levels. In my opinion, we reason through spirit and through what we metaphysically call the soul; I believe we should understand the intelligence involved in the physiology of the vegetative nervous system.

While insisting on being materialistic at all costs, science excludes the idea of spirit and meaning in the existence of life, even though we still have many enigmas about its explanation. Death is subject to an ineluctable law, and the constants that condition life and the fundamental laws of the functioning of the Universe are independent of our will, both in origin and manifestation.

French philosopher Jean-François Revel considers the moral crisis of today's world to be a failure of Western philosophy, which excludes the idea of the meaning of life. He quotes Erwin Schrödinger, who states that science is not about human happiness. Therefore, we wonder: does it only aim at unhappiness by inventing the most redoubtable weapons and even killer viruses? That would be absurd. Louis Pasteur and Albert Einstein had views that were contrary to Schrödinger's.

I have also discussed these points of view to understand that, without judgment, man can become his enemy, and the efforts of medicine become useless. It is absurd for society to support indefinitely two opposing tendencies—one science of saving man's health and another of the means of exterminating it.

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In conclusion, by reading Lucia Bubulac, M.D., Ph.D. book, we benefit from many notions and information that are very useful in maintaining mental and physical health.

We believe that in health management, cooperation between medicine and social offer is needed. This cooperation must have as its essential motivation the satisfaction of all the aspects that define the complexity of the human being.

This is the constructive message of the book by Lucia Bubulac, M.D., Ph.D.

## FOREWORD

PROF. ADRIAN RESTIAN, PH.D.,

FULL MEMBER OF THE ACADEMY OF MEDICAL SCIENCES

A book on cancer is more than welcome, especially if it highlights some subtler risk factors, such as psychological stress, negative emotions, anxiety, and depression, which are much less subtle than poor nutrition, smoking, excessive alcohol consumption, and sedentary lifestyles, frequently invoked in the onset and progression of cancer, which is the second leading cause of death in the contemporary man. Thus, the book proposed by Lucia Bubulac, M.D., Ph.D., provides an integrative approach to cancer, a very complicated disease involving many causes, risk factors, and pathogenic mechanisms, making each type of cancer a very specific disease.

Lucia Bubulac, M.D., PH.D. starts her book with her approach to the concept of health, which is not limited to physical health, as we are used to, but also extends to emotional, intellectual, spiritual, and social health, thus approaching the WHO (World Health Organization) definition, according to which health is a state of physical, mental and social well-being. This seems to me, at least from a psychological point of view, almost impossible to achieve in a crazy, crazy, crazy world, as director Stanley Kramer showed in the movie that won five Oscars. However, our lifestyle will depend on the concept of health. All the chronic diseases that affect more than half of humankind will depend on our lifestyle, which is, in my opinion, the most important pathogenic factor of contemporary man.

After discussing the concept of health, the author discusses the concept of illness, which is also very difficult to define since most chronic diseases evolve for a very long time and are completely asymptomatic, which makes sick individuals consider themselves very healthy. However, their disease progresses silently, producing effects that are usually irreversible. For example, atherosclerosis, which is the cause of ischemic heart disease, begins to develop in childhood and will develop asymptotically until the age of 40-50, when it begins to manifest itself clinically. The same applies to cancer, which takes more than 10 years from the mutation of the first cell

to the appearance of a palpable tumor. We now have many biomarkers that can detect cancer in time, long before it manifests clinically.

In the case of the actress Angelina Jolie, who, although clinically healthy, was found to have inherited mutant BrCA1 and BrCA2 genes from her mother, who had died of breast cancer, which increased the risk of breast cancer up to 85%. Indeed, current medicine could not offer her more than a prophylactic bilateral mastectomy. But prophylactic mastectomy has probably been able to prevent breast cancer since things have evolved, and a prophylactic bilateral salpingo-oophorectomy was also necessary because the mutant BrCA1 and BrCA2 genes are also involved in ovarian cancer. However, perhaps medicine will soon discover fewer heroic ways to prevent the clinical development of cancer in such cases.

Obviously, after the concept of health and disease, which often overlap, Lucia Bubulac, M.D., Ph.D., tackles the causality of diseases and reaches the psychological stress very present in our daily lives. Because stress is a defense mechanism. Therefore, Hans Selye called stress a general coping syndrome. Because stress mobilizes the body's resources to cope with stressors. And it usually manages to do so. But often, it is exceeded by far too many and far too great life challenges and fails to contribute to keeping the body healthy. In addition, stress is involved in so many chronic diseases, such as cardiovascular diseases and mental illnesses, but also cancer, as we will see in this book.

After health, disease, and stress, the author discusses emotions, positive and negative emotions, psychoimmunology, the integrated approach to cancer, and cancer as a psychosomatic, or rather multifactorial, disease. Negative emotions can play just as important a role in the development of cancer as somatic factors. In that case, we should avoid them, just as we avoid smoking, for example.

But, I am very much afraid that, just as we do not protect ourselves sufficiently, not to say hardly at all, neither from somatic factors nor from smoking and unhealthy nutrition, we will not protect ourselves from psychic stress nor negative emotions, anxiety, and psychic depression, as we should. It was this ignorance, not to say the cultivation of risk factors, that led Seneca, as long ago as 2000 years ago when he saw the Romans eating, to say that man does not die but kills himself. Which he still does today. And not by eating the wrong kind of food, which causes over 30% of cancers, but by not quitting smoking, which causes another 30% of cancers. Not to mention excessive alcohol consumption, sedentary lifestyles, and ionizing radiation, which also cause 5% of cancers that could easily be avoided.

But, as many authors state, man is a suicidal being. He prefers to seize the day, or rather the pleasure of present time, at the expense of future

health. The Romans used to say *Carpe diem*, seize the day. A demon who never leaves people whispers in their ears: drink, eat, and be merry. But in this way, people became slaves to harmful addictions. These addictions include not only drugs, smoking, and alcohol but also sugar, which gives us nothing but empty calories but manages to inhibit leptin, which is supposed to reduce appetite and prevent obesity and metabolic diseases. Not to mention TV, internet, Facebook, and cell phone addiction, which have become elements that the contemporary man cannot manage without. Therefore, these addictions are very difficult to fight because they spring from the Self, which is very difficult to control. It would be enough to show that over 99% of the information we receive from outside is processed automatically and unconsciously. More precisely, of the one million bits the brain receives in any given second, only 10-15 bits reach our consciousness every second. And B. Libet showed our brain's ability to make decisions 0.5 seconds before we know them. But because God has given man the most powerful brain in the universe, we can evaluate these decisions with the help of the frontal lobe, where the battle with thoughts is fought, according to the Holy Fathers. This would make it possible to control our lifestyle, but this does not happen very often since so many people eat incorrectly, smoke, drink alcohol, envy, seek revenge, and fight each other very often.

But at the risk of being boring, doctors continue to insist on adopting the healthiest lifestyle possible, i.e., avoiding these well-known risk factors and, as we will see in this book, more subtle risk factors such as negative emotions, anxiety, and mental depression, hoping that they will still manage to save some lives.

So does Lucia Bubulac, M.D., Ph.D., who draws attention to aspects almost ignored by patients, such as negative emotions, fear, anger, anxiety, depression, and, above all, a completely inappropriate lifestyle, which, as you will see, play just as important a role in the onset and progression of cancer as smoking, alcohol consumption, and a sedentary lifestyle, which are rightly emphasized in today's medicine. On closer examination, both smoking and alcohol consumption are the result of a completely inappropriate lifestyle, as they are ultimately the cause of all chronic diseases such as high blood pressure, ischemic heart disease, diabetes mellitus, Alzheimer's disease, and cancer, which affect more than half of all humankind. And they are growing.

Of course, our great-grandparents' lifestyles were not risk-free either because they smoked, drank alcohol, and exposed themselves to UV rays. We have added to our lifestyles a lot of food additives, many of which are carcinogenic, pollution, sedentarism and the information explosion, which has transformed industrial society into an information society characterized

by the rapid growth of information production and mass media, which invade us from all sides with negative information. And so, the brain has become the most stressed organ of modern people. This results in mental stress, which is information stress, mental illnesses, and, finally, many other chronic diseases, which are continuously increasing. That is why, despite all the progress that has been made, which is undisputable, cancer continues to affect more people, with one in two people expected to develop some form of cancer in their lifetime.

Cancer is a very old disease. It has been known as far back as 4000 years since the ancient Egyptians. People have been trying since ancient times to discover the cause, the mechanism, and the prevention and treatment of cancer. Hippocrates said 2500 years ago that cancer is caused by excess black bile (melancholy). According to Hippocrates, black bile was also the cause of mental depression, which we still consider today as a risk factor for cancer. This belief persisted until 1775 when Percival Pott found that soot could cause scrotal cancer in chimney sweeps. Then, it was discovered that tobacco can also cause cancer. However, the first breakthrough in the etiopathogenesis of cancer was in 1858 by Rudolf Virchow, who showed that the cancerous tumor is a hyperplasia or cellular metastasis, i.e., an uncontrolled increase in cell division. In 1910, Theodor Boveri, going more deeply into the important aspect, showed that cancer could be caused by chromosomal changes, which was not confirmed until 1960 when the Philadelphia chromosome of chronic myeloid leukemia was discovered. In 1910, Peyton Rous discovered that a virus could cause chicken sarcoma. Then, other viruses that can be carcinogenic were discovered, such as papillomavirus and hepatitis C virus, and even some bacteria, such as *H. pylori*, which lives very well in highly acidic stomachs.

But, seeking to go even further down in the etiopathogenesis of cancer, in 1927, Herman Muller showed that cancer can result from genetic mutations, thus moving from cellular pathogenesis to molecular pathogenesis, with which medicine has made some extraordinary advances. Many physical, chemical, and biological factors, such as ionizing radiation, aromatic hydrocarbons, and some viruses, could cause genetic mutations. So, for example, ultraviolet radiation can change the nucleotide thymine, which is part of DNA, into a dinucleotide, thymine-thymine, which radically alters the genetic information in DNA. However, it was not until 1986 that Stephan Friend discovered that mutation of the *rB* gene can cause retinoblastoma. In the growing search for genes that might cause cancer, in 1990, Mary-Claire King discovered that the *BrCA1* gene, which plays a role in the development of breast cancer, is located on chromosome 17. In 1994, Mark Skolnick described the sequence of the *BrCA1* gene. Then, many

mutant genes that sometimes determine or do not determine cancer were discovered. For example, in breast cancer, in addition to the BrCA1 and BrCA2 genes, which are suppressor genes, there are also TP53, PTEN, CHEK2, PALB2, and many others. Moreover, there are many possible mutations in these genes. For example, in the case of the BrCA1 gene, which consists of 2500 nucleotides, more than 800 possible mutations have been discovered, which can cause many types of breast cancer, but also ovarian and pancreatic cancer. This means that cancer has a very complicated etiopathogenesis.

In addition, many factors can cause genetic mutations, and one gene can undergo many possible mutations. Hence, not all breast, pancreas, or prostate cancers will have the same molecular structure. Or rather, each cancer could have a very specific molecular structure, so each patient would need a very specific treatment.

However, it has been found that, in addition to genetic mutations, a whole series of other factors play a role in cancer development, the most important of which are immune factors. As is well known, our body has a range of immune mechanisms, cells such as macrophages, lymphocytes, and NK cells, and molecules such as interferons and cytokines, with which it usually manages to recognize and eliminate all foreign substances and bacteria. Moreover, it recognizes and eliminates all the cells that have undergone certain alterations, such as cancer cells. This means that although many carcinogenic factors can lead to the development of cancer cells, they are usually detected and eliminated by our immune mechanisms in time. And cancer will only occur when the immune mechanisms no longer function normally.

This means that cancer is, in fact, an immunogenetic pathogenesis, which can be influenced by many internal and external factors, including psychological factors, which can act on both immune and genetic mechanisms. More specifically, they act on gene function via epigenetic mechanisms, the interface between the genome and the environment. But as if this were not enough, it was observed that in addition to genetic and immune factors, many hormones, such as estrogen hormones, as well as many growth factors, such as epidermal growth factor, endothelial growth factor, and platelet growth factor, are involved in the etiopathogenesis of cancer.

But things have become so complicated that it is very difficult to state which factors are the cause and which factors are the necessary conditions for cancer. It was once thought that genetic mutation was the main cause of cancer. However, after deciphering the human genome and the increased possibilities of genetic analysis, it was found that we may have mutated



genes in our genome that do not manifest clinically. Therefore, even if mutant BrCA1 and BrCA2 genes are inherited, they only cause cancer in 85% of cases. In 15% of cases, although present, mutant BrCA1 and BrCA2 genes do not cause cancer. This led Craig Venter, the leader of one of the two teams that deciphered the human genome, to state, when he saw his genome, that there must be something else besides genetics. And that something turned out to be epigenetics, which had long been waiting in the shadow of genetics. Because it has long been recognized that certain substances and biochemical reactions can influence the activity of genes without changing their structure. The cytosine methylation mechanism, which is part of the DNA structure, has been the most studied. For example, in 1975, A. D. Riggs found that DNA methylation can inhibit DNA demethylation, stimulating gene activity without changing the DNA structure.

This is very important because not all 20 thousand genes need to function simultaneously, but only those needed to cope with environmental demands. So, for example, our genome does not need to secrete lactase unless we drink milk. This coordination of gene function is achieved by epigenetic mechanisms, which regulate gene activity according to the needs or challenges of the organism at a certain moment in time.

But things are even more complicated because methylcytosine, which arises from cytosine methylation, is more closely related to thymine and, for this reason, will bind to adenine and not to guanine, which is complementary to cytosine in the parallel chain. This prompted F. Kerpes and R. Holiday to discuss an epimutation, an epigenetic mutation. This means that in human pathology, we are dealing not only with genetic mutations, which are very difficult to influence but also epigenetic mutations, which can be transmitted from one generation to the next. This makes it possible to pass on the epigenetic mutation that occurred in a grandmother who smoked to her grandchildren and great-grandchildren who do not smoke.

But, to better understand how the epigenome works, I compared the epigenetic mechanisms that can stimulate or inhibit our genes to a pianist playing the piano with 20 thousand keys, represented by the 20 thousand genes we inherited from our parents. In other words, the genetic piano represents the hardware, and the epigenetic pianist is the software. This is very important not only because we have different genes in our genome that must synthesize a lot of enzymes, hormones, or anti-bodies at the right time but also because these genes can be divided into good genes, such as the TP53 gene, which promotes apoptosis (apoptosis is a genetically programmed physiological cell death) of cancer cells and prevents cancer, and in bad genes, or rather risky genes, such as proto-oncogene genes, which intervene in cell division and whose stimulation by epigenetic mechanisms

may cause oncogenes. The same can be stated of anti-inflammatory genes, such as IL10, and proinflammatory genes, such as IL6, which are necessary but whose excessive stimulation can lead to chronic inflammation and even hypercytokinemia, exacerbating the progression of certain diseases. The fact that we also have certain bad or risky genes in our genome led Harold Varnus and Michael Bishop to state that the enemy is often within ourselves.

In this case, the cancer disease is caused by a disturbance in the balance between oncogenes and antioncogenes, which can happen by blocking antioncogenes or by stimulating proto-oncogenes or, as already known, by increasing the expression of proto-oncogenes. This ultimately depends on factors that act on epigenetic mechanisms, i.e. the epigenetic pianist, which is the interface between the genome and the environment. There are many factors, from carcinogens in the diet to drugs, physical exercise, and psychological factors, which are discussed in this book. That is, psychological factors can also influence gene activity.

Our mechanistic conceptions make understanding how thoughts can influence gene activity hard. But if this did not happen, our wishes could never come true. And yet it is obvious that when faced with imminent danger, the sensation of fear, triggered by the nucleus of the amygdala, will reach the adrenal medulla, where it will act on epigenetic mechanisms that stimulate genes that synthesize adrenaline.

But how can a subjective sensation lead to the stimulation of adrenaline synthesis? Probably via the autonomic nervous system or, more precisely, the sympathetic nerve. The stressor, which may be a dog or a car, which has a material nature, produces a sensation of fear, which is a strictly subjective emotion. This means that the phenomena that usually occur in our organism move from material to emotional, more precisely, fear. They move from emotional to material, represented by nervous stimuli, which will influence epigenetic mechanisms that stimulate the genes that synthesize adrenaline. But the way it changes from a material stimulus into a subjective sensation and then back again into a material stimulus represented by adrenaline goes beyond the molecular conception in which we got caught. This phenomenon is explained by quantum physics.

If in molecular pathology, we are talking about the interaction between molecules that can be observed, such as the molecule of a hormone and the molecule of the receptor capable of receiving that hormone, in quantum physics, we are talking about waves that cannot be observed. Even more, in quantum physics, which revolutionized twentieth-century science, we are talking about transforming material bodies, such as a photon, which are subject to certain laws, into waves subject to other laws.

As is well known, Isaac Newton, who studied light extensively, claimed that light is corpuscular. Sometime later, Thomas Young showed experimentally that light is a wave. Studying the photoelectric effect, Albert Einstein showed that light falling on a photosensitive plate is transformed into electrons, which means that light is corpuscular. This determined Niels Bohr, winner of the Nobel Prize in quantum physics, to state that the photon carrying the light can be either wave or corpuscular. In this situation, the Romanian scientist Ștefan Lupașcu, a professor at Sorbonne, replaced the logic of the excluded third party with the logic of the included third party. In other words, a quantum object cannot be one or the other but can be both simultaneously. Even if it deals with the most complicated system in the universe, it is still very hard to understand for medicine.

However, as man's search for truth led him to discover more important things, Michael Faraday discovered the electromagnetic field in the 1850s, through which invisible forces flow. As researchers have shown, the brain emits an electromagnetic field, and the heart emits an electromagnetic field even larger than the brain. Thus, in the 1920s, Alexander Gurewisch discovered that cells emit electromagnetic radiation during cell division, adding forces that cannot be observed. In 1970, Fritz Albert Popp showed that all living cells can emit and receive photons with a wavelength between 200-800 nm, which he called biophotons. Then, it was found that stimulation of neuronal activity influences the emission of biophotons, which can be conducted through nerve pathways, meaning that they play some role in communication between cells. Moreover, mathematician R. Penrose and anesthesiologist T. Hameroff argue that the brain is a quantum system.

But more importantly, unlike healthy cells, cancer cells emit more biophotons. Some biophotons cannot be observed beyond the molecules that can be observed. In addition, there may be biophotons of different wavelengths beyond the molecules we are caught in, which could explain how pathological phenomena unfold much better. Looking deeper and deeper into the structure of matter beyond the atoms and atomic particles, physicists have found nothing but strings, meaning vibrating strings. Therefore, after Albert Einstein stated that matter is nothing but a condensation of energy, Erwin Schrodinger, winner of the Nobel Prize for Quantum Physics, said that our organism is nothing but a condensation of waves, which interfere with each other in an unknown way.

We cannot observe the sensation of fear. Still, we can observe adrenaline, which, in addition to its positive effects of mobilizing the body's organisms to cope with stressors, also has some negative effects, such as inhibiting the immune system and stimulating cancer cell division.

According to E. V. Yang, S. J. Kim, and E. L. Donovan, the anxiety produced by adrenaline increases the rate of cancer cell multiplication threefold.

But not only anxiety, which is more related to adrenaline but also depression, which is more related to serotonin, can influence the onset and progression of cancer. In 1926, A. Evans showed that the development of cancer is linked to excessive sadness. Other authors have also talked about hopelessness, repression of emotions, isolation, and despair. In other words, numerous observations have been made which show that not only genetic factors, dietary factors, smoking, radiation, hormones, and growth factors but also psychological factors play a very important role in the development and progression of cancer.

Therefore, Lucia Bubulac, M.D., Ph.D., rightly talks about an integrative approach to cancer. However, by bringing psychological factors into the equation, there is no longer a horizontal integration between cortisone or adrenaline and the immune system but a vertical integration between the sensation of fear and adrenaline secretion, between waves and corpuscles. This integrative view can help prevent cancer by avoiding negative emotions and cultivating positive ones. As is well known, by cultivating love, which is at the base of the Christian faith, oxytocin is secreted, which blocks the activity of the amygdala that causes the sensation of fear, stimulates the immune system, regulates carbohydrate metabolism, and increases the number of branches of the coronary arteries, contributing to better vascularization of the heart. Therefore, patients who enjoy love and live in a quantum field of love heal faster than those who do not enjoy love and who live in a quantum field of a different wavelength. However, the brain has many more possibilities to influence the functioning and structure of the body. In 2005, Alvaro Pascual Leone, from Harvard University, found that as a pianist plays the piano more, the surface area of the representation of his fingers on the sensory homunculus on the cortex increases. This seems normal to us. However, he also found that not only physical, concrete playing but also the pianist's imagination of playing the piano leads to an increase in the surface area of the representation of his/her fingers on the sensory homunculus. This demonstrates the power of the mind over functions and the structure of the brain and other organs. In the 1970s, surgeon Bernie Siegel showed that social support and mental image representation led to the recurrence and sometimes even disappearance of cancerous tumors. If the patient imagined that his lymphocytes were eating his tumor, the tumor shrank in size. It sounds unimaginable, but it happens very often. The patients who used mental image representation lived twice as long as the others. This can only be explained by quantum physics, which

signals the collapse of the wave function, meaning the transition of a quantum corpuscle from the wave phase to the corpuscular phase, which only occurs when an observer senses it.

John Neumann states that it must be a conscious observer. Moreover, other physicists state that this conscious observer, meaning ourselves, can intervene in this transformation. This is also the case with mental image representation, according to which we can imagine a better unfolding of phenomena. This often happens depending on our beliefs and conceptions about life, disease, and health. If we are dominated by feelings of fear, helplessness, depression, hatred, anger, and abandonment, things will go on as we usually observe. But, if we avoid negative emotions and cultivate positive emotions, using the brain's healing abilities, things can go surprisingly well. As we know, medicine is not a very exact science. We cannot know precisely how a patient will react to a certain drug because quantum physics leaves many possibilities open, which will depend not only on the quality of the drug but also on the patient's beliefs, conceptions, and unconscious will.

C. Tomasetti and B. Vogelstein, from John Hopkins University, published a paper in the journal *Science* claiming that over 50% of cancers result from bad luck. This is because cancer is caused by genetic mutations that can occur by chance during cell division. However, it is a very long way from random genetic mutations to cancer. First, our body has mechanisms to repair mutations that occur by chance. Second, if the DNA repair mechanisms have not functioned normally, the body also has some good genes, such as the PT53 gene, which will facilitate the apoptosis of cancer cells. Third, immune mechanisms detect and eliminate cancer cells. Fourth, the onset and progression of cancer depend on many psychological factors. A lot of bad luck must happen to get cancer. And yet this happens very often because, through a completely inappropriate lifestyle, people cultivate a lot of risk factors, including mental stress and negative emotions, because of unnecessary and harmful desires and competition.

For a long time, it was thought that all that was missing was money and drugs to solve the cancer problem. That is why, in 1971, President Nixon issued an executive order to organize and fund the fight against cancer. On this occasion, the cancer problem was thought to be solved in a few years. But, although 50 years have passed and the decree has led to extraordinary results, cancer continually rises. As Harold Varnus and Michael Bishop, Nobel Prize laureates in medicine, stated, the evil is in us. In our completely inappropriate lifestyles, which, through epigenetic mechanisms, inhibit antioncogenes and stimulate proto-oncogenes. There is no point in discovering new and very good medicines if we do not give up our unhealthy

diets, sedentary lifestyles, and smoking, but above all, our misconceptions about the world, life, and health to unnecessary stress, thoughts of hatred, envy, and revenge. Herein lies the key to the problem of multifactorial disease, in which the brain plays a special role.

That is why I recommend you to read the book of Lucia Bubulac, M.D., Ph.D., which shows that the problem of cancer is a very complicated problem, from which the human brain should not be excluded, which has become the most stressed organ of contemporary man, with all kinds of stresses and negative emotions. And so, it often turns into chronic stress, depression, anxiety, and ultimately, cancer. And yet, as the book of Lucia Bubulac, M.D., Ph.D., shows, there are many ways to avoid psychological stress and negative emotions and to promote positive emotions so that we can enjoy the best life God has given us.

## FOREWORD

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This book very successfully meets the requirements of a modern scientific vision. Within this vision, the emphasis shifts from basic, theoretical knowledge to applied knowledge that the reader, whether a person with a thirst for knowledge and no special training or a learned scientist, can transpose into an immediate application with benefits for personal development. The innovative psychosomatic approach presented in this book results from very serious and rigorous studies in different fields. The physiological, cognitive, axiological, and, finally, bio-psycho-emotional aspects offer us the profound knowledge that, just as man is a cell in a vast Universal system, so is the human organism determined at all levels by our thoughts and emotions. The author's interdisciplinary and highly academic background links fields with a common denominator: MAN.

## FOREWORD

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After decades of research and conclusions, the phenomenon called cancer is unfortunately increasingly present in our lives. The number of cancer patients is increasing considerably every year, and there are over a hundred types of cancer classified according to the cells initially affected. Psychological stress can affect the body in various ways, starting with the immune system, the organism's main defense against infections and diseases.

The book of Lucia Bubulac, M.D., Ph.D., offers a comprehensive perspective on this worrying phenomenon. We are talking about a phenomenon of vast complexity in which we deal with many risk factors and causes, resulting in many individual cases. As the title of the book, *Stress, Emotions, Depression, Cancer*, suggests, the approach chosen by the author is integrative, starting from the concept of health, defining the main dimensions of the concept, and integrating both the physical and psychological aspects of the human psyche. In the book, the author emphasizes the causal relationship between emotional factors and disease onset and that emotional imbalances are at the base of any disease.

Thus, we reach the subject of emotions and their important role in our lives, and we focus on the negative ones, which are important factors in the onset of diseases such as cancer.

Lucia Bubulac, M.D., Ph.D., offers this very welcome book in these difficult times we are all going through. She does it in a specific and multifactorial manner, from which we learn that when faced with a phenomenon as complex as cancer, the approach cannot be other than this, considering all aspects of this disease. It is a time when our daily lives have been turned upside down when the events and information we are bombarded with daily affect all the important areas of our social and psychological lives, as the author states in the chapter on emotional, intellectual, social, spiritual, and physical health.

Through her vast professional experience, but especially her special ability to understand and convey aspects of the psychoneuroendocrinology



field and integrated approaches to conditions, this book is a complex guide for each of us, but also an impulse to understand ourselves better to find our well-being, to listen to both our body and soul.



# INTRODUCTION

We all live in a historical period in which humanity is being shaken to its foundations. The effect of the events we experience produces a chain of consequences, having social, economic, cultural, spiritual, educational, and emotional impacts, all of which can affect our lives. That is why the information you will find on the following pages is more useful than ever for all of us.

Those of you who have the time and interest to read all the pages to the end will agree with me.

We used to lead our lives according to patterns that we knew and respected, and that allowed us to anticipate what tomorrow would be like or what our lives might look like in the near or distant future.

At present, the general instability, uncertainty, and “re-shaping” of our reality are creating confusion and real difficulties for anyone who wants to predict how the situation will be a month or a year from now. Even for the most optimistic among us, the intention to formulate happy life scenarios becomes impossible to realize.

Indeed, life has always been challenging, but now, more than ever, we need to know that we must adapt to overcome the obstacles.

This book aims to emphasize the indestructible link between the individual's psychological profile and the onset of diseases, with a focus on cancer, which continues to end many lives despite remarkable scientific advances. Thousands of studies demonstrate the detrimental impact of negative emotions, depression, and stress on health, and the presence in relatively young people of diseases that were once specific for elders creates a cause for concern.

We have become accustomed to statistically flagging these issues, endangering the entire population's health, and proposing countless therapeutic options without giving much importance to the causes that have led us here. Why?

Most of the information presented in this book comes from my Ph.D. thesis, entitled “The Impact of Negative Emotions and Personality Types on the Onset and Progression of Cancer”. The subject was not random but was the result of observing and analyzing my patients for 30 years. During all this time, I have realized that the approach to the patient must be comprehensive and multilateral because man is not just a physical body but also a mind, soul, spirit, and energy. He is a perfect creation that exists and

functions according to well-established mechanisms, which integrate all these dimensions into a unitary, indestructible whole.

It is thus easy to understand that you cannot treat a patient only by analyzing disturbances in the physical body, neglecting or ignoring the multidirectional relationships between the physical body, mind, and soul. All these concepts are part of holistic medicine and have been noted since ancient times. Anaxagoras (504-428 BC) mentions the mind-body dualism, a term assumed and developed by Plato and Aristotle.

Quoting Plato, we can state that “it is especially the soul that we must take care of if we want the body to be well”. Aristotle’s view that the soul gives form to the body would dominate philosophy until the Middle Ages.

The Hippocratic conception also considered man as a psychosomatic unity. The organism is constructed as a unitary whole, on which the psychosomatic functions are *closely dependent and condition each other*, whether we are talking about health or disease.

Certainly, the psychological profiles of modern people differ from those of individuals who lived in the past eras, and this is undoubtedly related to our evolution as a species and the fact that we live in a different reality where everything has changed.

As individuals, our uniqueness is based not only on the physical criteria that characterize us but also on the infinite diversity of our psychological “configuration”. The different ways we perceive the reality around us and the personal way we interpret the events we experience are a consequence of our cognitive approaches.

Certainly, every one of us desires to be healthy, to have a beautiful life, and to live long and as free as possible from disease and suffering. And those already struggling with one or more illnesses would do anything to get well sooner.

By reading this book, you may discover why you have developed a disease or, on the contrary, why you are perfectly healthy! You will understand the impact of negative emotions and stress on destabilizing the nervous, endocrine, and, inevitably, the immune system. You will learn the psychological profile of the individual vulnerable to disease or those who remain healthy regardless of exposure to destabilizing psychological factors. Moreover, you will learn why cancer is so present in our lives, perhaps in every family, and what we can do to avoid the onset of this disease that scares us.

Cancer is a major public health problem worldwide, being the second leading cause of morbidity and mortality in the world after cardiovascular disease. Worldwide statistical data show a doubling of the number of people diagnosed with cancer in 2017 compared to 1990. It is known that cancer

has a multifactorial etiology, and for this reason, various theories have been formulated (viral, genetic, toxic, hormonal, etc.), with new information emerging daily.

Each researcher brings scientific arguments from the perspective of the field they represent. But despite all the progress that has been made, what is currently known seems to be insufficient since cancer continues to affect the world's population and is still labeled as an incurable disease in most cases. The difficulty derives from the very complexity of the disease and the inability to determine the degree of involvement of each factor.

One thing is certain. Today, we are witnessing an unprecedented increase in the level of water, air, and soil pollution, in addition to electromagnetic radiation. This is a consequence of technological progress and the increase in sources of stress, which is directly impacting the population's mental health.

There is currently an abundance of scientific evidence to support the causal relationship between psychological vulnerability and cancer. It is said that every disease is a wake-up call and that it is time to change something in our lives, whether it is diet, lifestyle, the way we think and behave, or perhaps all of them.

The message of this book is as simple as it is difficult to realize. If you are healthy, you did not “upset” the ancestral mechanisms governing life. But if you are ill, it is time to realize that you need to identify the factors that have contributed to disrupting your body's optimal functioning and make the necessary changes.

Many of you may not see any connection between anger, hatred, envy, and disease. But it does exist! You may not believe that fear lowers your immunity! Maybe you do not understand why people your age do not have diabetes, high blood pressure, ulcers, angina pectoris, or cancer, and you have them all! What do we understand from this? Is that fate punishing us? Are we unlucky and ill? That someone has cursed us or that we inherited some genes from our parents that have passed on the disease? Untrue!

The dividing line between health and disease is quite thin and fluid. It is within our power to find a way to be healthy from being ill. The good news is that it can be done! But only if we accept that we must “fix” many mistakes we make!

It would be useful if we started this change by trying to reconfigure certain concepts about the world and life. This is certainly a laborious but possible process, which would ultimately create a better, kinder, more loving, more tolerant, more flexible, more adaptable, less vulnerable, and less attracted to rumination (rumination = the repetitive thinking to obsessive ideas) of negative events human psychological profile.

*“You are happy because you choose to be happy,  
you are sad because you choose to be sad.  
You feel exactly as you choose”.*

*—Osho*

*“We are what we think. Everything we are is born from our thoughts. With  
our thoughts we build the world”.*

*—Buddha*