INTRODUCTION

Unpacking the Black Box of Medical Miracles

> There are two ways to be fooled. One is to believe what isn't true. The other is to refuse to believe what *is* true.
>
> —*Søren Kierkegaard*

In 2008, the road ahead looked smooth for Claire Haser. At sixty-three, she'd settled into the rhythm of her life, easily weathering its ups and downs. The map she had sketched out for her future was unfolding just the way she'd drawn it: she and her husband were a couple of years away from retirement. Their kids were grown and doing well, and they had a posse of healthy grandchildren. For most of their adult lives, they'd lived in Portland, Oregon, with its soft rain, vibrant green parks, and red brick. And for most of her career, Claire had been a health-care administrator, sitting at a desk all day in a fluorescent-lit room, buried under paperwork.

Claire and her husband adored Portland, but their dream was to retire to Hawaii. They'd been saving and planning for it for years, and now it was just around the corner. And then, the axis on which Claire's contented, ordinary life was spinning started to tilt. Worrisome but vague symptoms—increasingly frequent nausea, a

stabbing pain that ricocheted through her abdomen—sent her to the doctor. Concerned, her doctor recommended a CT scan. Claire lay on the slab of the CT machine, arms over her head, trying to breathe normally, hoping that the powerful magnetic field her body was passing through would find nothing. But the scan revealed a mass on her pancreas, about two centimeters in diameter. A biopsy dashed her last hopes; the mass was malignant, meaning cancerous. Claire was diagnosed with adenocarcinoma of the pancreas, a brutal and incurable form of pancreatic cancer.

Cancer is a loaded word in our culture, a modern bogeyman, associated more than many illnesses with damage and death. However, the truth is that every cancer varies in regard to the possibilities of a cure and the likelihood of remission. Some cancers are not fatal, and in those instances, one dies not *from* the cancer but *with* the cancer, which can live quietly and unobtrusively in the body for many years, until the person passes away from other causes. Some cancers grow slowly but steadily; others wax and wane for a number of years. Many cancers are deadly when left alone but are highly responsive to treatment—whether that be surgery, chemotherapy, or radiation. Certain cancers will even go away by themselves, while others are not responsive to treatment at all, so any treatment the patient receives is palliative and provided only with the hope of slowing down symptoms. And there are many cancers that live between all these categories, in varying degrees of severity.

Here's what we know about Claire's cancer, pancreatic adenocarcinoma: it is the most lethal form of pancreatic cancer that exists. It is rapidly progressive and leads to a brutal death. Approximately forty-five thousand people are diagnosed each year in the United States, and twice as many in Europe. Most are dead by the end of the first year. It is the fourth-leading cause of cancer death in both men and women and is projected to soon be the third.

A diagnosis of pancreatic adenocarcinoma is a death sentence. The question is not *if* you will die from the disease but *when.* Why is pancreatic cancer so deadly? In the early stages of the disease, there are no symptoms. The cancer progresses silently, stealthily. By

the time the first signs emerge—loss of appetite, weight loss, back pain, sometimes mild jaundice, a faint yellowing of the skin and eyes—it's already too late. At that point, the cancer has typically metastasized to other parts of the body. Treatment can prolong a life but not save it—the vast majority of pancreatic cancer patients (96 percent) die from the disease within five years. Most succumb much sooner; the typical post-diagnosis survival estimate is three to six months, with treatment. By that standard, Claire was lucky; her doctors gave her one year.

The future Claire had seen laid out before her—her garden, Hawaii, a quiet retirement with her husband—vanished overnight. Cancer swept through like a hurricane and ripped it all away.

Claire had to wait two weeks after her diagnosis to meet with a surgeon. Her family and friends were aghast when they heard she had to wait that long—she had *aggressive pancreatic cancer!* Didn't she need to get it out as soon as possible? How could she go on like this for weeks, knowing that it was inside of her, possibly getting worse, possibly spreading? But she was glad for the pause. She needed to get her feet under her. Receiving a terminal diagnosis had made everything seem like a bizarre dream; her life suddenly had an end point, train tracks running off a cliff right before her eyes. It was unreal. Adding to that was the way she was treated by her doctors: as a box to be checked, a body to be shuffled along to the next procedure. As a patient in the medical system, Claire had a sense of being trapped in a kind of machine, an assembly line that moved her relentlessly from one station to the next. It felt predetermined, impersonal, routine.

At home, she dove headlong into researching her illness. She devoured books, articles, and websites, searching for a glimmer of hope, something her doctors had left out. But everything she read reinforced what they had told her already: nobody survived this type of cancer. Claire scoured the internet for any story of remission or survival—even just one. She found nothing.

Her one chance for survival was a surgical procedure called "the Whipple." A drastic surgery, it would remove part of her pancreas along with her gallbladder, areas of the small intestine (the duodenum and the jejunum), and possibly parts of the stomach and spleen as well. There were serious side effects and complications; after all, the pancreas has important jobs to do—including blood sugar regulation and the breakdown of food—and they wanted to remove a chunk of it. Pancreatic enzymes are particularly strong, and the leakage of those enzymes—which is common after the Whipple procedure—can cause debilitating pain. After the surgery, she would likely experience pain-inducing enzyme leakage, along with fluid retention, stomach spasms, and excruciating gas. Long term, she risked developing diabetes, anemia, and digestive issues leading to weakness and fatigue, along with vitamin and mineral deficiencies.

Unable to sleep, Claire stayed up late into the night, writing down questions to bring to the meeting with her surgeon.

Is the Whipple my only choice? If I have the Whipple, will I get diabetes or stomach paralysis? Will I ever be able to eat normally again? Will I have pain? If so, for how long? How long will the recovery be? Will this fatigue I read about ever go away? How many times have you done this surgery? What were the outcomes? How often is this surgery done in this hospital? What are the outcomes?

The outcomes, her surgeon said at their meeting, were not great. He was blunt and honest, which she appreciated. She asked him to be straight with her, and he was. He told her that at two centimeters, her adenocarcinoma was resectable, which meant it could be operated on with the Whipple surgery. It was her one chance at a cure. But it was a risky procedure—long, imperfect, and with dubious results. He brought out his surgical atlas and opened it up to the section on Whipple closures: a veritable encyclopedia of various techniques for putting you back together after they've taken you apart.

"See how many different ways there are to close this surgery? You know what that means?" He looked at her steadily. "It means there aren't any good ways to do it."

He told her that the procedure could take up to eight hours. He told her if she was going to have a heart attack or a stroke, she'd have it on the table. Statistics were all over the map—some resources told her she had only a 2 percent chance of dying during the surgery, but others said 15 percent. Her surgeon told her that even if she did have the surgery, her chance of living another five years was only about 5 percent—the vast majority of people with her type of cancer would die from the disease within that time, even with the Whipple. Here, her oncologist interjected that five-year survival rates were closer to 20 percent. Her surgeon insisted on 5 percent, and they argued.

"Look," her surgeon finally said. "Some doctors would try to sell this surgery to you. But I don't have anything to prove anymore. I've done enough of these surgeries. I don't need the money. I have my boat."

He wanted to cure her, she could tell; he was a surgeon, trained to fix things, to perform the magic of precision and science. But he was also giving her, as she had requested, the unvarnished truth.

At home, she watched YouTube videos in which Whipple patients writhed in pain, describing the terrible side effects of the surgery. She searched for stats on survival rates, she cried, she prayed. She asked herself hard questions: *How much pain can I stand? How much pain am I willing to live with for the rest of my life? How many limitations am I willing to live with? Can I live without hiking in the mountains again?*

Claire finally decided to decline the surgery. She didn't want to spend the time she had left chasing an elusive, unlikely cure, sitting in doctors' offices and waiting rooms. "I decided to just let nature take its course," she says. "I decided to live with as much zest and happiness as I could for however long I had left."

In 2013, five years after her diagnosis and dismal prognosis, Claire was hospitalized for an illness unrelated to her cancer and required a CT scan of her abdomen. It was the first time since her diagnosis

that she'd had any kind of imaging done. She'd expected to die and had simply focused on living, and time just went by. Though the doctors weren't looking for it specifically, her pancreas was visualized on the scan, and it was clean. Where there had once been a tumor, there was none.

Baffled, Claire's doctors convened a diagnosis review and ordered her biopsy slides, convinced that a mistake must have been made. But the diagnosis had been correct. Without treatment or surgery, Claire's pancreatic adenocarcinoma had—impossibly—vanished.

How did it happen? Nobody knew exactly, not even Claire herself. Her doctors only knew what she hadn't done: surgery, chemo, radiation. When I spoke with her, Claire had in fact made important changes after her diagnosis, but none of her doctors were interested in hearing about them. They told her that her experience "didn't have any medical value." It was just one of those things, a one-in-a-million fluke that meant nothing.

Plenty of people would call a case like Claire's a miracle. In the medical profession, we refer to these as cases of *spontaneous remission.* Whatever term you use, recoveries like these remain largely unexamined, black boxes that haven't been unpacked by medical science.

Spontaneous means *without cause,* but the truth is that we mostly haven't looked for the cause. In the history of medicine, we have almost never used the tools of a rigorous science to investigate remarkable recoveries from incurable illnesses. Common sense would suggest that these are the cases we would most want to study, that perhaps these people have stumbled upon profound pathways to healing that we would want to understand. And yet the study of spontaneous remission (SR) is almost completely unexplored terrain. We classify people like Claire as "flukes" and "outliers" and simply accept the narrative that they are unexplainable. But I don't see remarkable recoveries in health as flukes or outliers any more

than I see extraordinary performers in other arenas as flukes and outliers. Serena Williams and Michael Jordan are outliers, sure, but they are also luminous examples of human capacities, and by studying their techniques and their methods, we can understand how to improve our own.

In 1968, at the Olympic games in Mexico City, American long jumper Bob Beamon sprinted down the track toward the sandpit and launched himself into the air. In tape from the event, he seems to fly, birdlike, chest-first, before reaching forward with his feet to grab the sand. He broke the existing record by over two feet, shocking the crowd and effectively ending the competition. Observers said the jump was "beyond belief." It was also beyond the limit of the measuring equipment. It became known as "the Leap of the Century."

Athletes and scientists immediately tried to figure out how he did it and how to beat it, even though breaking that new record took almost twenty-three years. Yet when something similar happens in health care—when someone who has been essentially condemned to death by the medical system suddenly gets better—it's as if we're embarrassed. These remarkable cases are seen as threats to the system rather than inspirations, and they are dismissed without examination. *Mystery. Miracle. Fluke. Outlier.* We're heavy on labels, light on explanations.

Throughout human history, we've held a host of ideas about where illness and disease come from. Until fairly recently—within the last couple of hundred years, roughly—most cultures thought of illness as something that came from the spirit world: it was the will of God, perhaps a punishment, or the curse of an evil spirit. If you lived in ancient Egypt, for example, you might carry an amulet to protect yourself from disease and dress your cuts and scrapes with honey (a natural antibiotic). If you were very ill, your doctor might decide to induce vomiting—the theory being that as your body was full of passageways, your illness could indicate a blockage that should be cleared. If you happened to be born in ancient Greece, you would have believed that the human body was made

up of elements that must always be in balance; sickness was an indication that they were out of balance and must be corrected. In that instance, you might visit one of the ancient Greek asclepeions, a healing temple where you would undergo Katharsis (purification), dream therapy, and medical care—a blend of physical and spiritual treatments under the watchful eye of Asclepius, the god of healing.

Though the practice of medicine in many ancient cultures relied heavily on magic, religion, and superstition, there were also some important advances: deep knowledge of anatomy, theories of disease and health developed through observation and trial and error, and repeatable methods of treating injuries and illnesses, often with medicinal plants, which were the precursors of modern pharmaceuticals. However, the origin of disease itself continued to elude us. Where did it come from? Why did it choose this person and not another? While we relied on remedies such as bloodletting and astrology, we increasingly observed that many illnesses sprang from dirty water and sewage, and that keeping our bodies, cities, and water sources clean was important, even though we didn't quite understand why.

In 36 B.C., a Roman scholar Marcus Terrentius Varro published his book *On Agriculture,* a practical guide for farmers. In a section on keeping livestock, he warned against raising animals near swamps, due to his theory that "certain minute animals, invisible to the eye, breed there and, borne by the air, reach inside the body by way of the mouth and nose and cause diseases that are difficult to get rid of." An interesting theory, but one that was impossible to prove at the time.

On Contagion and Contagious Disease, by Italian physician Girolamo Fracastoro, appeared in 1546. It detailed his own theory that tiny, rapidly multiplying, disease-causing creatures—microorganisms—spread from person to person through touch, or were carried on the wind. His theory was well received at the time, but again, without any real evidence to back up the concept,

it eventually fell by the wayside and was mostly forgotten. It was Louis Pasteur, the French chemist who came up with the pathogen-elimination process that still bears his name, *pasteurization,* who definitively proved germ theory in the 1860s. While it was a huge leap forward for medicine, it also locked us into a certain philosophy toward health and disease, one that was based on this ethos: *kill the pathogen.* Is it possible that today, we've become so focused on that mission that we miss out on important avenues to health?

Doctors are taught to ignore the story, the personal life of the person in order to penetrate through to the underlying signs and symptoms of disease that are present in those with that particular illness. We have been limited by a focus on pathology, on what is missing or diseased, instead of seeing and galvanizing all that is right, special, and great within each individual human life—within your life. As a result, we routinely commit deadly errors even as we seek to heal. We treat the disease instead of the person, missing the larger story of the patient's life, which is rife with clues and revelations about how best to guide them toward health. We focus on symptoms instead of root causes, prescribing medications that often simply mask the symptoms instead of attempting the longer, harder work of building immunity and vitality. We insist on sorting illnesses into those rooted in either the mind or the body, instead of understanding and embracing the connection between them, where most of our illnesses reside.

And finally, we push aside stories of remarkable recovery, which don't fit into our paradigm of one cause, one cure. I'm willing to bet, based on experience, that most of us in the medical profession have seen instances of remarkable recovery. We don't know how to think about them, and so, since they don't fit into our frame of reference, we pigeonhole and forget them, perhaps considering them occasionally only late at night while musing with a cup of coffee at the nursing station, or quietly in the space of our own private thoughts. We don't know how to explain them, we shy away from publishing them for fear of professional ridicule, and we don't

repeat them to the patients we see who are suffering from those very same diseases. We don't want to give "false hope."

I first encountered remarkable recoveries seventeen years ago, when I was fresh out of residency and just beginning my career as a psychiatrist. At the time, I'd just accepted a dual appointment to McLean Hospital and Harvard Medical School and had opened a small private practice. The pressure was on. I felt driven to prove myself as both a doctor and a professor.

I met Nikki, an oncology nurse who worked down the road at Mass General, when she came in for a joint session with her adult son. She'd been diagnosed with pancreatic cancer, and she wanted support in breaking the news to him.

Shortly thereafter, she told me she was taking an indefinite leave of absence from Mass General; her health had declined to the point where she could no longer work. She was exhausted, having difficulty eating, losing weight. She planned to travel to Brazil, to a tiny town in the countryside called Abadiânia, to visit a Brazilian healer. She'd tried everything that Western medicine had to offer to fight her disease, and she'd decided she had nothing to lose.

About two weeks after she left, the phone in my office rang. It was Nikki, calling from Brazil.

"You have to come down here," she told me. "I'm getting better. I'm seeing things you wouldn't believe."

She related story after story of people she'd met and healings she'd witnessed, classic tales of the lame beginning to walk and the blind regaining their sight. A woman with breast cancer who felt a "black cloud" go out of her chest when she was touched by the healer, and then saw her tumor shrink. Nikki called and wrote to me from Brazil for months, but I didn't go. The hospital was busy, I had classes to teach, and besides, I was deeply skeptical. I chalked it all up to explainable phenomena. Temporary improvements, misdiagnoses, people who would have gotten better anyway.

When Nikki returned, she did seem revitalized. In fact, her

health had dramatically improved. She was enjoying life, eating steak (one of her favorite foods) and salads. Her time in Brazil had buoyed her. She told me that she felt newly able to both give and receive love. Control issues that had plagued her melted away. She felt energetic and joyful. Her quality of life had skyrocketed compared to her condition before she'd left. But sadly, her story doesn't end like Claire's. To be honest, most stories don't. Nikki did eventually relapse, and she succumbed to her cancer less than a year later. But before she did, she urged me again to investigate what was happening in Brazil.

I'd read in scientific journals that true instances of spontaneous remission are rare, occurring at a rate of about 1 in 100,000 cases. That statistic was repeated over and over in journal articles, always with the patina of absolute truth. So I decided to trace it back, to see where it came from. As it turned out, it had been made up out of the blue and then taken as true, repeated over and over in subsequent articles.

When I dug into the research some more, looking for both current and historical examples of spontaneous healing, I was shocked at what I found. Over the past century, reports of spontaneous remission have slowly increased in both number and frequency, typically with a spike after significant conferences, books, or major media stories. In the early 1990s, the Institute of Noetic Sciences began gathering together all the instances of spontaneous remission that had been described anywhere in medical literature. In the database they published in 1993, *Spontaneous Remission: An Annotated Bibliography*,[1] they documented 3,500 references to spontaneous healing across eight hundred journals. And the cases that actually *were* reported were only the tip of the iceberg. At the first talk I gave where I brought up spontaneous remission and what we, as doctors, might learn from it, I asked the audience of physicians how many of them had witnessed a story of recovery that made no sense from a medical perspective. Hands shot up all around the room. When I asked how many people had written those cases up and published their observations, all hands dropped.

It wasn't that spontaneous remission was rare—it was that a culture of fear and judgment was holding us back from seeing the scope of it. How many cases were out there that never made it into the medical literature for fear of professional ridicule? As a new medical director at McLean, one of the oldest and most venerable psychiatric institutions, I felt it keenly. I was hesitant to publish my observations or seek support in the medical world. And yet each day, I saw how cases of spontaneous remission dovetailed with the problems cropping up with my patients, whether in the medical, psychiatric, or ER setting. Every day, I was seeing patients with the most common yet deadly diseases out there: cancer, diabetes, heart disease, autoimmune illness, and lung disease—the top assassins of the Western world. Many of them are increasingly known to have significant lifestyle components. I was starting to believe that if my patients could try *half* of the strategies that I was seeing people embrace in cases of remarkable recovery, there would be a stark improvement in general health, not only for suffering individuals but also for society. But the pressure to remain within the dogmatic confines of my profession was strong, and I had a difficult time shaking it.

Growing up, I lived on a small family farm in rural Indiana, among the wide, flat corn and soybean fields, under the vast dome of the midwestern sky. I am from an Amish background. My parents left the Amish community when I was two, but we continued to live by its principles. We raised animals and grew much of our own food, including meat and wheat flour. My mother made our clothes by hand. TV, radio, and most modern conveniences and activities were regarded as evil, to be feared and avoided. For me, it was an isolating, difficult world, and I broke out of it as soon as I could, leaving for college at Wheaton in Chicago, followed by seminary at Princeton, medical school at Indiana University School of Medicine, and then residency at Harvard. I still remember how the world seemed to open—a door that had always been closed swung wide to reveal hallways of possibility. I entered seminary full of questions, seeking answers, trying to reconcile the fundamental-

ist beliefs of my childhood with new knowledge and experiences. I didn't get any answers at Princeton—I got more questions. But I also learned from my mentor there that questions are just as important as answers.

"The goal," he told me, "is not necessarily to arrive at an absolute answer. The goal is to improve the quality of your questions. The quality of your question determines the quality of your answer."

The questions we ask are the guiding light that moves us forward. If we're asking good questions, we very well might be moving in a good direction.

When I got to medical school, the philosophy was so different it felt like whiplash. I still remember where I was standing when I realized that the culture of the medical world was not at all what I had hoped or expected. I was at the front of a recently emptied amphitheater classroom, asking the professor a follow-up question to that day's lecture.

"Just memorize the material," the professor told me. "Don't ask questions."

It was a phrase that would be repeated to me over and over throughout medical school: *Don't ask questions. Don't ask questions. Don't ask questions.* Certainly, medical students need to learn the material; it takes an enormous amount of time and effort to establish the base of knowledge necessary to be a physician. But for me, this phrase was an uncomfortable echo of the philosophy I'd been raised on: that dogma should never be questioned.

Memorizing and not having the freedom to ask questions socializes doctors into keeping their heads down and not rocking the boat. We end up complicit in a system that, while it yields some incredible advances in research and technology, is failing patients on a day-to-day basis, missing important opportunities to heal. After two decades of working within the medical system, I've seen my fair share of lost opportunities—moments where we had the chance to change the trajectory of someone's life and missed it—and it's time to rock the boat. I've finally reached the point where I have the courage to ask the questions that need to be asked and to follow

them where they lead, as far as the current science can take us—and then to push a little farther.

There are no clinical trials on spontaneous remissions; no double-blind studies, which are the gold standard by which the medical world operates. It would be impossible to do so, as there currently is no way to control for the conditions under which spontaneous remission might occur, and it would be unethical to test out theories on terminally ill patients. With spontaneous remission, we have to be anthropologists, detectives, and medical investigators, digging through personal accounts, medical records, and the science currently available to put together the pieces of the puzzle. This book is my attempt to do so.

Since 2003, I've been interviewing survivors of incurable illnesses and examining their medical records, and what I've observed is a pattern of principles and behavior. I am no longer surprised about the unexpected disappearance of illness. I've traveled to Brazil, to healing centers where thousands flock with the belief that they can be healed—and more often than makes sense with our existing medical paradigm, they are. I've shadowed a so-called faith healer in the heartland of America, and I've watched my own patients experience unexpected reversals of illness while in my care. I've grappled with my own doubts, and even as I move forward, I still do.

This book is not an argument for patients to stop taking their medicine or turn down medical intervention. The pharmacopoeia and medical technology that we have developed are innovative, necessary, and often lifesaving, and, as the stories featured in this book will show, there are many instances of spontaneous remission that occur in concert with the extraordinary efforts of dedicated physicians working at the tops of their fields. Remarkable recoveries simply tell us that these interventions are not always enough and that they do not hold all the answers to healing.

What I've learned over the course of my investigations, and have put into practice with my own patients, is that we must go

deeper, beyond the long-term medication of symptoms, to the roots of illness. It's important and compassionate to treat symptoms in the short term, but in the long term, you have to treat the cause of disease, which is often more hidden. Spontaneous healing offers us a rare window into those root causes. We have a responsibility to study these cases and learn everything we can from them. We can then fold that knowledge into the way we treat chronic and incurable illnesses, using both the tools of modern medicine and the wisdom of these remarkable recoveries.

This book traces my investigative journey into the phenomenon of spontaneous remission over the course of seventeen years. In part 1, we'll begin where I began: by looking at the very building blocks of health. In cases of spontaneous remission, something changes the expected disease course—and changes it radically. The logical place to start was with the immune system, the body's first and most important line of defense against infection and disease, and the factors that impact it: diet, lifestyle, and stress. Over and over, I'd seen survivors of incurable diseases make seismic changes in these areas (which are often passed over in routine medical care), and I knew I needed to begin with a deeper dive into the specifics of what happened and why. This led me not only to some surprising discoveries about exactly how powerful such changes can be when it comes to healing but further into the intricacies of the mind-body connection and the mysteries of the human heart.

I wasn't surprised to discover that the link between our minds and bodies holds a well of potential when it came to radical healing—even mainstream medicine accepts that our stress levels and thought patterns, for example, can impact our physical health. But what did surprise me was the depth of it, which was more profound than my medical training had ever prepared me for. In part 2, I'll take you along with me as I investigate just how interconnected radical healing is with our thoughts, beliefs, and even our most fundamental, often unexamined sense of self. I found myself asking the question: Can my *identity,* in some way, determine my ability to heal? The answer is both revelatory and complex.

Throughout the book, I'll profile, in depth, survivors of incurable diseases who decided to open both their medical files and their lives to me as I searched for answers. I've tried to capture the richness and uniqueness of each of their stories, because I believe that the secrets of spontaneous healing are illuminated not only in the similarities between them but in the differences as well. As the renowned psychologist Carl Rogers once said, "What is most personal is most universal."

What these cases teach us is that we must create a biological environment in the body and mind that sets the stage for healing. The body wants to heal, after all. And there's a lot more to creating the conditions for that than we are taught. My goal is to share the process with you, to take you with me through the journey of investigating these cases one by one, exploring the groundbreaking new science of the mind and body, and following the pathway to healing that is illuminated by these stories. What it eventually led me to was the foundation of a new model of medicine, one that's based around what I now call "the four pillars" of health: healing your immune system, healing your nutrition, healing your stress response, and healing your identity.

This is still very much a developing field of research, and I certainly don't have all the answers. But I do have some preliminary answers and many important questions, and together, they've taken me a long way down the road to understanding what might be happening with these medical "miracles." So often, we use *miracle* as a catchall word to describe something we can't explain. But even miracles have explanations—we just haven't figured them out yet. I think sometimes we shy away from trying to explain them, believing somehow that finding the real-world mechanism behind a "miracle" will diminish it, make it lesser somehow. But to me, understanding the inner workings of these kinds of surprising events doesn't make them any less amazing. To crack the lid, look inside, and see the mechanism of a previously unexplained phenomenon, intricate as the gears of a clock, seems to me even more miraculous.

Long ago, I made a promise to myself that I wouldn't write unless

I had something that absolutely had to be said. The nineteenth-century philosopher Kierkegaard wrote piercingly about what it meant to live as an individual in the noise and din of modern life. In contrast to other writers, he sought not to be one more voice among others in the public square, or the loudest voice—but instead to take something away so that the reader could find the truth they need and once again begin to live.

It is my hope that this book does the same. I'm adding my voice now because I believe it is urgently necessary to talk about these cases. The stories revealed in this book pull back the curtain and show that there are things we know about what creates a healthy, vital, even miraculous life, but also how we have forgotten what we know. The only way to recover this knowledge is to eliminate the noise and opinions from both within and without and get back to something more basic, raw, and true—that buried but inextinguishable light of knowledge that burns within each of us.

While the science is new and we will learn much more in the decades ahead, the research we have now and the potential it holds for millions is too important not to share more widely. It is my hope that this book will illuminate a clear path to recovery for those who are struggling with chronic or even incurable illnesses, those who love someone who is, or those who simply want to live with as much health and vitality as they can.

Modern medicine typically tells you what the situation is and what you will be living with, but it does not help you understand what's possible or what *could be.* Whether the diagnosis is diabetes, heart disease, depression, cancer, an autoimmune illness, or something else, you may not be receiving the hope or tools of recovery that you need to truly heal. We need to place the extraordinary on the operating table so that we can dissect and learn from it, so that the possibilities for the extraordinary that exist within all of us are illuminated for everyone.

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Claire lives in Hawaii now, just as she'd planned before she got sick.

"After my diagnosis, I didn't think I'd make it," she says. "But we're right on time."

She and her husband live on O'ahu with their daughter and son-in-law, who are musicians. She spends evenings on her lanai—the type of open, covered porch that is found throughout Hawaii—enjoying the view. She can see the lights of Honolulu and the sky changing with the weather. A hurricane went through recently, threatening to do a lot of damage, but it wasn't nearly as bad as everyone had expected. I thought of how cancer had once threatened to destroy her world like a devastating hurricane.

"We're a little windblown, but fine," she tells me now about the recent storm. "We were lucky. It passed us by."

How do we get the hurricane to pass us by? The answer to that isn't simple, and this is not a book for those seeking easy answers. This is a book about a long journey to discovering the secrets of spontaneous remission—and, perhaps locked inside those, the secrets of lasting health and vitality. There were no easy answers for me as I did this work. Each stone I turned over, looking for an answer, seemed to reveal yet another question. I had to remind myself that the goal wasn't to come to a conclusion as soon as I stumbled upon an apparent "answer." The goal was to improve the quality of my questions. And the first question was: *What was really happening in Brazil?*

PART ONE

INCREDIBLE IMMUNITY

1

Into the Impossible

> I believe there is no source of deception in the investigation of nature which can compare with a fixed belief that certain kinds of phenomena are impossible.
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> —*William James*

The very first surgery I ever performed by myself was a leg amputation.

It was 2:00 in the morning, and I'd already been on the floor for hours. They paged me to the operating room (OR) and briefed me on the patient, an elderly diabetic man who had come in with extreme pain in his left leg. When the nurses examined him, they found multiple gangrenous wounds on his lower leg and foot. Advanced, poorly managed diabetes like his can cause serious circulation issues, slowing blood flow to the limbs and extremities. By the time this man arrived in the ER in the middle of the night, he had extensive tissue damage and a dangerous infection. The leg wasn't salvageable.

I scrubbed in for the required five minutes, between every finger and up to my elbows. I held my arms up to let them air-dry and backed my way through the door into the vestibule that opened

onto the OR. The surgical tech draped me in the gown, looped my face mask on, reached up to put the cap on—but couldn't. I'm pretty tall. She went up on tiptoe just as I tried to squat down a bit—we both laughed, and I realized how nervous I was. As an intern just out of medical school, this was my first time in charge in the OR.

My anxiety lifted the moment I made the first cut. As the scalpel slid cleanly around the leg, making a deep, thin line, a sort of meditative calm swept through me, a feeling of utter and complete focus. I'm not sure how many minutes went by as I made cut after cut, cauterizing as I went to stop the bleeding and to keep the surgical site clean and clear. I'll never forget the smell of singed flesh or the sound of the bone saw as I went through the tibia. It reminded me a bit of the chain saws I'd used as a kid on the farm, but that sound had a rough, gritty quality to it, while this one was finer, more delicate, and also more gruesome. There was something surreal to me about this moment—I couldn't really believe that it was me in the surgical gown and face mask. It was so improbable that I would have ended up here.

I was painfully quiet as a teenager. Perhaps my shyness was partly because I grew up in a fundamentalist family, never feeling like I fit in anywhere. In high school, I was voted Most Shy. I always felt out of place in my homemade clothes, getting off the school bus and returning to my family's house, which felt like walking back through time. TV and radio were not allowed, and the world seemed small to me then. The adults I knew worked the farms and occasionally had blue-collar jobs. My mother worked part-time as a nurse at a Lutheran hospital in Fort Wayne, and when I turned seventeen, she suggested I apply for a job there as an orderly. I was tall and strong—used to carrying heavy bales of hay and buckets of water or grain—and so I could easily lift a grown man onto a gurney or transfer a patient into a wheelchair.

In that job, I saw the full spectrum of the human experience. I wheeled mothers out to the curb with their newborns in their arms. I lowered people onto bedpans and carried the waste out. I col-

lected laundry; I cleaned up the blood on the floor after a difficult procedure. I watched a kid with cancer lose his hair; months later, he walked out with his fuzz growing back in, carrying a bouquet of balloons in his little fist. I helped roll patients over for the nurses, holding them in my arms as they were bathed and bandaged. I wheeled people to the morgue, a sheet pulled over their faces.

I got to know the nurses better than the doctors. They were the ones who were always around, ever present at bedsides. They coached me, taught me how to draw blood, how to attach the leads and do EKGs.

"You have a good bedside manner," the nurses told me. "You should become a doctor."

It was a startling idea, and it landed in the fertile soil of my brain like a seed. It germinated and grew. It had never occurred to me that such a future might be possible.

And now I was here, performing surgery in an OR, just like the one I'd once wheeled patients out of after the surgeons were done, tossing their masks and caps onto the floor.

With an amputation, you have to keep enough muscle below the bone edge to shape a stump that will fit nicely, and ideally painlessly, into a prosthetic leg someday. As I put in the stitches with a long, curved needle, I worked to mold a limb that would do just that, even though I doubted that this man would be getting up out of his wheelchair on a prosthesis. The surgery had gone fine, but I worried for this man. He was elderly and ill; the insulin he'd been on for most of his life was failing him, and his body was starting to shut down, limb by limb. I wondered if there was more we could have done for him, long ago, to get him on a different path.

I got into medicine because I thought I could help people. I imagined helping patients have healthier lives—better lives. But so much of what we did as physicians was too little, too late. I watched my fellow doctors working long hours, around the clock, rushing from patient to patient. It wasn't because of a lack of hard work or dedication that we so often struggled to help people get better. But we were always operating with such a narrow slice of the story,

missing the bigger picture, and we were treating the symptoms of disease, rather than the root causes. Every day I was seeing people suffering from real illnesses, who needed real solutions.

Years later, I still thought about this man—my first surgical patient—who'd developed diabetes long before he'd been in my OR, the disease that had sent his health into a tailspin from which he was never able to recover. And I thought about how these unexplored cases of spontaneous remission could hold the clues we needed in order to help people like him before it was too late. So, in 2003, I bought a ticket to Brazil.

DISSECTING A "MIRACLE"

When I stepped off the plane in Brasília, the capital of Brazil, the air was smooth and warm as bathwater. It was March, late summer in the Southern Hemisphere. The sun seemed to sink right into my bones, and the chill of the Boston winter I'd left behind began to fade. *Maybe this trip wasn't such a bad idea after all,* I thought. But I still had my doubts.

When I'd made the decision to check out reports of "miraculous" recoveries at a few healing centers in Brazil, I'd had no idea what I was getting myself into. I figured I'd go down for a week, investigate, and resolve the questions that had been unsettling me about whether or not there was any legitimacy to these claims. I'm embarrassed to admit it now, but I'd pretty much made up my mind that there wasn't. I was sure that as soon as I scratched the surface, the shiny veneer of "miracle healings" would peel off, exposing the fraud underneath. A quick trip, a clear conscience, and then I'd move on with my life and career, not worrying about spontaneous healings and whether or not they represented anything real.

For the previous year, I'd been hearing reports from Brazil and elsewhere of sudden recoveries from incurable diseases. It had started with Nikki and then rapidly expanded. I began getting phone calls from all over the country from people desperate to share their stories of recovery. It turned out that, when I declined to investigate,

Nikki had asked friends she'd made in Brazil to get in touch, and word had spread quickly that I was researching the phenomenon of spontaneous healing. Some of the recoveries I heard seemed unbelievable. But people were incredibly open. They typed out their stories and emailed them to me. They attached x-rays, MRI scans, and medical records with their doctors' scribblings in the corners.

Some cases just didn't have enough evidence to substantiate the claim of spontaneous healing, or the original diagnosis seemed shaky to me. Some looked promising, but the time frame was too short—they might just be temporary remissions, a brief respite in the course of an ultimately terminal trajectory. Others were instances of people so desperate to be healed that they believed they had been, even as their disease progressed. My heart ached for these people; I understood their wanting to be better, yearning for it so much they convinced themselves it had happened. But that didn't mean it had. When people called with and emailed their stories, I listened, but that was all. The weight of my administrative, clinical, and teaching responsibilities had settled on me like a yoke. Now was not the time to go on a wild-goose chase, searching for a difficult-to-define phenomenon that would almost certainly vanish like a mirage, a modern-day Fountain of Youth.

"You have the training, you have the perspective," Nikki kept insisting, referring to my combination of medical training and a degree in theology. She felt I was uniquely positioned to investigate the phenomenon of spontaneous healing with an open mind. And the stories being reported were compelling—tumors melting like ice cubes, the paralyzed standing to walk, the terminally ill alive and thriving years after they were supposed to be gone. But they were just stories—there was no proof, at least not yet—and I worried that I'd take this leap, risking my career and reputation, and find no actual evidence to back up any of these claims.

But could I continue to turn my back on what might be an entire untapped field of groundbreaking research and inquiry? Some of the cases coming in were hard to turn away from. These people had real evidence of diagnosis and remission. Looking at their

medical files, I struggled to explain them. What if something real *was* happening—something that modern medicine refused to see?

Once I realized how incorrect the data was on the frequency of spontaneous healing, I kicked my research into a higher gear. Night after night, once I finished my evening rounds, I found myself at the computer, clicking through journal articles, typing the words *spontaneous remission* into medical databases and following the trail of bread crumbs where it led. I was shocked at the volume of what I found.

Instances of spontaneous remission from incurable diseases were everywhere—it was just hard to see them. Considered "outliers," they were typically not mentioned in discussions of disease progression and treatment options. When data was collected and aggregated, cases of remarkable recoveries, looking like flukes or errors on a graph of data points, vanished into the mass of averages. Medical science is built on averages, on what *normally* happens and on what the *average* person does. But when I searched specifically for cases of spontaneous remission, they seemed to be under every rock I flipped over. This whole time, they'd been hidden in plain sight.

A long time ago, when I decided to give up my cloistered rural life and pursue higher education, I'd vowed that I would follow truth wherever it led me. Science is about going where you don't want to go sometimes, even if it's not politically comfortable. Now the time had come to start asking the questions that weren't being asked in medicine, about why these cases of spontaneous remission were happening. Even if my investigation led to debunking these claims, I had a responsibility to follow the questions. I kept thinking of my mentor at Princeton and his mantra: *The quality of your question determines the quality of your answer.* How were we ever going to arrive at any kind of answers if we never asked the questions to begin with?

The taxi ride from the airport to the first of several "spiritual" healing centers would take an hour and a half. As we slid out of the outskirts of Brasília, the landscape opened up, turning into roll-

ing green hills. I tried to distract myself and enjoy the view, but my mind was spinning with questions and doubts. Would this all turn out to be a mistake? I had to remember to keep an open mind. I was ready to start asking questions, but I needed them to lead somewhere.

The healing centers were tucked away in little towns in rural Brazil. They showed me what a deep spirituality the people of Brazil possess. It is a markedly different culture from my own. They operate with a belief system that accepts a healer could communicate with and channel spirits, or energy, from another plane—an invisible world that is realer and more important than the visible world we can see and touch. The physical world, in their view, is a faint shadow of this deeper, truer world. In this belief system, ineffable qualities like love and the human soul are thought to be extremely powerful forces, especially in regard to illness and healing—illness begins in the soul, and when a healing occurs there, the physical body then "catches up" to this new reality.

People flocked to these centers from all over the country, sometimes selling possessions to afford the trip. The center that was the focus of my trip, however, was the Casa de dom Inácio Loyola, in Abadiânia. This place was a little different from the others because it attracted people from all over the world. More reports of remission were coming from this population, and at least a few of the ones I'd vetted before coming down looked interesting enough to pursue. And this was the place that Nikki had urged me to investigate.

Arriving, I took in the setting of the Casa, a largely open-air villa surrounded by rolling green countryside. There were spaces for meditation and prayer. Outdoor gardens full of winding pathways, with benches shadowed by rosewood trees. Certainly, coming to a place like this, which felt so far from one's normal life and all its stresses and concerns, could help the mind and body *reset,* in a sense—and perhaps find reserves for battling certain illnesses

and conditions, both mental and physical. Even I was beginning to feel my worries lifting, the stress and anxiety I'd carried with me from Boston evaporating under the warm sun and gentle breeze of Abadiânia. But of course, going on vacation doesn't cure the incurable. If the reports I was hearing were true, there had to be more going on.

When I met João Teixeira de Faria, also known as John of God, the healer to whom so many visitors attributed their recoveries, he was sitting in a large chair at one end of a vast sea of meditators. He had dark thinning hair, wore glasses, and was dressed in all white. People waited in a long line to see him, passing briefly before him to receive their diagnosis and prescription in a matter of seconds, before returning to meditation. I shook his hand, aware that some people thought of him as a miracle maker, and others, a con man (later, even worse accusations would surface).

I had reason to be skeptical of Faria. I knew that he claimed to perform "spiritual surgeries," and that although the healing sessions were completely free, as was the daily lunch, his healing center made money off the sale of a proprietary blend of herbs, among other things. And any time people ascribe "miracle" healings to a specific person or a place, a red flag goes up in my mind. Hundreds of years ago, people claimed healings from the holy water at Lourdes, France, but when a panel convened to begin investigating claims, it wasn't able to tie recoveries to the water itself in any statistically significant way. Had I been able to investigate the healings at Lourdes all those years ago, I'd have turned my attention to the people experiencing the recoveries, not the spring of water. Similarly, here in Abadiânia, I was most interested in the community of people—this was a unique population, with a high concentration of reports of remissions.

Privately, I drew my line in the sand: I would deal only with cases that had indisputable medical evidence that something inexplicable had happened.[1]

One of the first people I interviewed was Juan, a vigorous older man in his eighties who went to the Casa each year with his family.

He was a soybean farmer from another part of rural Brazil, and his sun-darkened hands, worn and polished like wood, showed his years of outdoor work. Decades earlier, he'd been diagnosed by biopsy with glioblastoma multiforme, a deadly and fast-moving type of brain cancer. Glioblastoma multiforme is not the type of cancer that people survive—within five years of diagnosis, only 2 to 5 percent of patients are still alive. And that small percentage drops to zero pretty quickly after that. There is no cure for glioblastoma multiforme; treatment is palliative, with the intent to make patients comfortable and, if possible, extend their lives a bit. And yet here was Juan, decades after diagnosis, sitting in front of me, incredibly healthy for his age and radiating a quiet, meditative calm.

I asked him to what he attributed his impossible recovery. He shrugged, opened his palms. Who could know? He told me he started coming to the Casa after his diagnosis. Since then, he'd come every year to sit in the energy room and meditate. He thought of it as an annual tune-up, like an oil change.

"Did you change anything about your life after you were diagnosed?" I asked him.

He thought, then shook his head. He didn't know, he said. He didn't think so.

His wife, who'd been sitting next to him during the interview, listening in, suddenly began to cry. We all turned to her in surprise.

"*Everything* changed," she said. She began to describe how, pre-diagnosis, Juan barely spent any time with her or their children. He was either out working, off drinking, or who knew where. There was a lot of tension, a lot of strife. To her, he felt like a boat drifting farther and farther out to sea, on its own course. When he was diagnosed, and death was suddenly staring him in the face, his life and priorities were completely reordered. He seemed, almost overnight, like a different person.

"He came home to us," she said. "He's so much more connected to us now."

Over and over, from interview to interview, I heard the same