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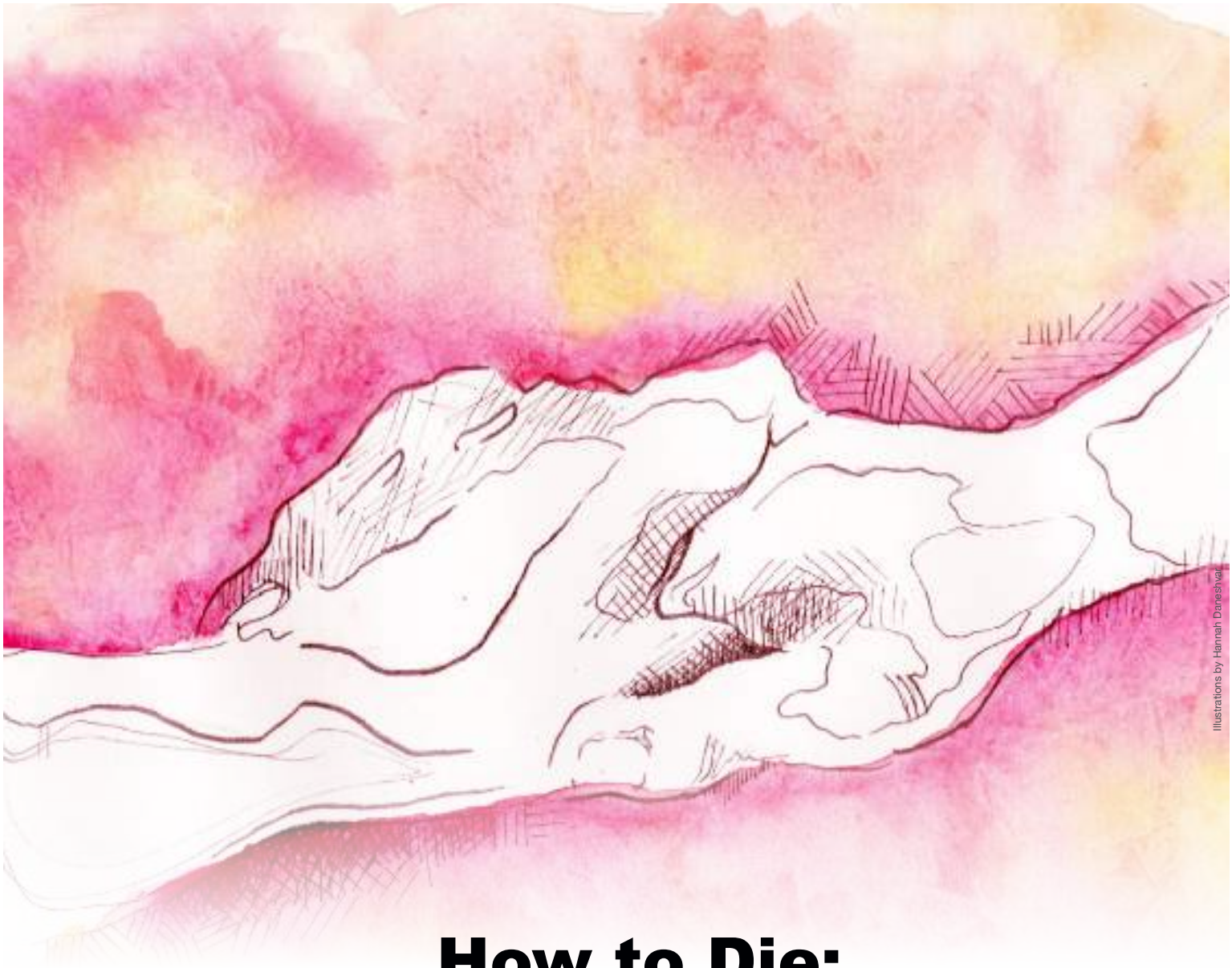
How to Die: The Limits of Modern Medical Technology

Katrina Lettang



Illustrations by Hannah Daneshvar

How to Die:
The Limits of Modern Medical Technology

By Katrina Lettang

At 9 PM Friday night, I entered the emergency room, wearing my blue scrubs with an EMT badge clipped to the front pocket. As I passed the rows of patient rooms, the usual sounds and sights bombarding me, I gathered the sense that this shift would be a hectic one — full of overdoses, alcohol poisonings, and gun shot wounds. When I spotted an elderly man in a dimly lit room, however, my assurance faltered. Driven by curiosity, I stepped inside and knew instantly that this man, completely alone and hooked up to bundles of tubes and wires, had come here to die.

The ER was packed with patients, but I decided to sit with him and listen to his story. He spoke between breathless wheezes, his voice wet and crackling. I wrapped my hand around his, noting the frailty of his limbs and how tissue paper skin sunk away from his bones, cracked and bleeding. Some parts of his skin were so thin that blood broke through and stained the sheets. Twice, a nurse stepped in to check his vitals, but each time always left promptly, without a word. He died an hour after I arrived, the grip of his hand loosening around mine.

I drove home from my shift at 5 AM, his face and voice seared into my brain. Though I felt moved by the experience, I also felt confusion. I began to question the purpose of medicine. I had always thought that medicine strove to improve the quality of life, not extend its quantity, yet the hour with the man in the ER room made me think differently.

The development of medical technology over the past century partially explains this new attention to life extension. From the Human Genome Project to the utilization of antibiotics, our recent medical advancements have saved millions of lives, and the discoveries show no signs of stopping. As a result, the average life expectancy in the United States has risen from 69 to 78 years in just half a century. The caveat, however, is that these achievements instill the false reassurance that with medicine, we can avoid death indefinitely. When the terminal diagnosis comes, we believe our technological advances will overcome it.

Sure enough, fighting off a serious illness and winning is possible. Of the 44,030 people in the United States that are diagnosed with pancreatic cancer each year, seven percent will continue to live for at least five years. However, most will face futility when medicine fails to save their lives. The problem is, no patient knows whether they are part of that seven percent or not. So when does the treatment of a disease become futile? When do IV fluids, ventilation, feeding tubes, and dialysis turn from treating a disease into prolonging death?

To understand why interventions used to treat patients are also used to stave off death, Jad Abumrad and Robert Krulwich of WNYC's Radiolab took to the streets of NYC to ask people their hypothetical preferences, were an irreversible brain injury ever to befall them. The vast majority said they would consent to all possible procedures, including breathing machines, major surgery, ventilation, dialysis, and chemotherapy.

While many people outside the medical profession are quick to ask for these procedures, a doctor is much less likely to agree to most of them. Joseph G. Gallo, a professor at Johns Hopkins University, came to this very conclusion in a portion of the Precursors Study. Of the 765 physicians that responded to the survey, which included the same hypothetical scenario as Abumrad and Krulwich's street study, ninety percent declined CPR, dialysis, and ventilation. Sixty percent even declined antibiotics. The only medical intervention that the majority (80%) of doctors consented to was pain medication.

The differences in preference between medical professionals and people outside the medical field are striking, which raises the question: why? What leads to such a wide gap in the desire to consent to potentially life-saving procedures? With great insurance and plenty of personal connections to doctors who specialize in difficult diseases, it might seem like a waste for a medical professional to forego treatment. Dr. Ken Murray, author of How Doctors Die, proposes an explanation of the preference of doctors to seek far less medical intervention than the average patient. He argues that a doctor's "inside" view of the medical world may be the very reason for their choice against undergoing these procedures. Doctors see the effects of futile care every day. They know exactly what it is and exactly what it does to their patients. They bring in the most cutting edge medical technology because their patients demand it or because it would be illegal to do otherwise. "The patient will get cut open, perforated with tubes, hooked up to machines, and assaulted with drugs," Murray states. "All of this occurs in the Intensive Care Unit at a cost of tens of thousands of dollars a day. What it buys is misery we would not inflict on a terrorist."

If doctors know the magnitude of pain and suffering they will put patients through in these procedures, why do they not intervene? Murray reasons that doctors often fear litigation if they present their personal judgments to a patient. Additionally, introducing the idea of death to a patient and their family is difficult. The family may not know the doctor, as is probably the case in an ICU or ER, leading them to believe that they are trying to save time or beds by advising to forego treatment. And yes, the fee-for-service system often leads to the encouragement of excessive medical care to make money.

Mostly, the reason for the average patient's choice to continue with futile care lies in an overconfidence in medical technology itself. When a doctor confronts a patient about the stark realities of their condition, the patient will likely choose to proceed with the treatment because of hope, because surely medical technology is advanced enough to cure them. Atul Gawande, a journalist, surgeon, and associate professor at Harvard Medical School, explains the problems with this sentiment in his article "Letting Go". "We've created a multitrillion-dollar edifice for dispensing the medical equivalent of lottery tickets — and have only the rudiments of a system to prepare patients for the near-certainty that those tickets will not win. Hope is not a plan, but hope is our plan."

The danger of hope as a plan lies in how it can blind a patient from the truth of medical technology. In fact, most people are unaware of how infrequently it works and how painful it is. For instance, many people are unaware that CPR often cracks the sternum and ribs when done correctly. Even more disheartening, CPR revives people back to a meaningful life only about 2-10% of the time, though medical TV shows exhibit an impressive 75% revival rate. Ventilators often lead to anxiety, pain, and delirium, which are usually treated with sedatives and paralytics. The experience of life support in the ICU is even so stressful and traumatic that 20% of those that leave the ICU will experience symptoms of post-traumatic stress disorder.

When I think about how I want to die, the words "peacefully", "painlessly", and "not alone" come to mind, as they mostly likely do for most. Yet whenever I transfer another patient from the ER to the ICU, I feel a sickening mixture of hope that the patient will pull through, and dread that they will die here in the exact opposite way they wanted. In this way, medical technology has utterly failed those who need it most. There must be a better approach to futility that meets the needs of the dying and pulls us away from the quantity of life over quality of life sentiment.

Over the past few years, palliative and hospice care have become more popular among those facing death. In lieu of drug therapies and invasive

medical procedures, these fields focus on alleviating suffering and giving the patient a full, end of life experience. In a 2008 study conducted by the national Coping with Cancer project, researchers concluded that those in hospice care experienced a substantially higher quality of life in their final week than those in the ICU. Furthermore, close family members were much less likely to suffer from major depression. Surprisingly, when medical treatment is halted and patients turn to hospice or palliative care, they actually live longer.

The lesson is practically zen. The less we stop trying to lengthen our lives, the fuller lives we will live. Seven out of ten Americans will die from a chronic disease and 80% of patients say they don't want hospitalization or intensive care in their final weeks, yet more than half of us will end up dying in a hospital just like the man I met that Friday night. More truthful than any projected statistic however, is the fact that death will eventually come for all of us, and the greatest medical achievement of the century will not be learning how to stave it off, it will be learning when to accept it.