



MEDICINE OF **FREQUENCIES**

BY CINDY LEFLER

M E D I C I N E O F FREQUENCIES

The blue and white fabric flashed and shimmied into a blur until the machine settled in. Avram Kahn pulled on the form-fitting gloves studded with hundreds of sensors and sat stiff-spined before the hologram floating in front of him. The room was cold, colorless, and antiseptic; Avram always felt lonely there. He tapped at the patient's hospital gown and let it fall to the floor, then slowly clenched his fists and opened them to stretch his fingers. He was ready for surgery. The virtual instruments were laid out on a tray to his right, a robotic assistant stood ready to serve on his left.

"Are we ready on the other side?" Avram asked.

"Ready," replied a voice.

The patient was thousands of miles away, tucked neatly under the automaton that mimicked Avram's every move. The 3D printer had spit out a new pancreas in a matter of hours. It was pink and plump and primed to take over the job of the organ that had failed the man on the table.

The surgeon worked quickly, his hands moving deftly to grab the tools, snake the endoscopes through the body, and replace the organ with the new and improved version. It began working immediately. Avram removed the instruments and leaned back to admire his work.

"All good on your end?" he asked.

"All's good," the voice answered.

Avram pulled off the gloves, shut down the machine, and watched the hologram flicker and disappear.

Rose Flannery was devastated. She had just celebrated her 70th birthday when the symptoms began and the diagnosis was made. She had a tumor in her stomach, and there was nothing the doctors could do – no, nothing they *would do* – about it. She had missed the deadline.

People on Earth had been dying of disease for millions of years. But by 2100 that had all changed. They didn't die anymore – unless, of course, they happened to contract an illness after the age of 70. Once medicine had progressed to the point of being able to save everyone, a line had to be drawn to prevent overpopulation. An international panel of judges decided on the arbitrary age, and the Natural Course Law was passed; once a patient turned 70, they could receive only palliative care.

"You have a few months, Rose," the doctor told her. "Go home, enjoy what time is left."

Stunned by the news, Rose didn't go home. She ran to her sanctuary – the Ocean City, NJ, beach where she loved to spend hours standing at the water's edge, feeling the sand sink beneath her feet and the surf curve around her ankles. Breathing in the sticky salt air and looking out at the line where the sea touched the sky, Rose felt terribly, frighteningly, mortal.

Over the next few weeks, Rose walked the beach trying to make peace with her fate. She found solace in her beloved garden where she cultivated the asters and alyssum that attracted butterflies with delicate paper-thin wings, and tended the sunflowers and snapdragons that beckoned the bumblebees to gather nectar. When the solitude of the garden became too much for her, she visited the neighborhood elementary school where she sat in a large wooden rocking chair and read to the children, who would throw their arms around her in genuine, adoring hugs.

Rose didn't want to die, but she had received her sentence; while there was plenty that could be done medically, there was nothing that could be done legally. If the damn tumor had just shown up just

a little earlier, a targeted laser would have destroyed it and she could have lived, she thought. But Rose missed the cutoff; for want of a few days, she was just another septuagenarian with a terminal condition.

Avram Kahn walked through the door of his home, tossed his coat on a chair, kissed his wife, and poured himself a glass of Jameson.

"How'd it go today?" asked Callie.

"You know," he sighed. "Another day, another duodenum."

He had performed five surgeries that day, everything from implanting a new pancreas to removing cancer from a liver. He gravitated to the bookshelf and pulled a large, fragile tome from the center. The dry, cracked book was one he had looked at many times before – a gift from his father. It was his grandfather's textbook from medical school, circa 2015.

"Why are you reading that dusty old book again?" asked Callie.

"It's intriguing," he said, leafing through the time-brittled pages.

"Barbaric, if you ask me," she answered abruptly. A surgeon herself, Callie couldn't understand her husband's interest in the dark ages of medicine.

But something drew Avram to the old ways, when scalpels would pierce the flesh and blood would rush from veins, and surgeons literally cut disease from the body. He studied the primitive treatment they called chemotherapy – a method that often caused as much misery as it cured. Brutal, he thought. And yet... and yet.

"Fascinating," Avram whispered to himself as he read the text and perused the photos.

It was the photos that were most curious to him. Pictures of physicians face to face with patients, arms around them, holding their hands, looking into their eyes. There was something about these photos that haunted him, something that gave him the feeling that he, as a healer, was missing something.

After gazing at the book for what seemed to be hours, he looked up and blurted out, "I want to do it the old way."

"What? What are you talking about? What old way?" Callie asked.

"I want to... I need to know... what it feels like to get to know the patient, to touch the patient, to heal the patient the old way – like in the book."

"You're insane," she said. "The old way killed people."

"Not always. Lots of people survived back then. And there was... a connection. A connection between the doctor and patient. I want to feel that connection."

"Who is going to be crazy enough to let you operate on them like some kind of a Neanderthal surgeon?" she said more as a statement than a question.

He thought for a second.

"Someone with nothing to lose," he said.

"Avram, if you're suggesting breaking the Natural Course Law..." she said, her voice trailing off. "You can't – you would lose your medical license."

"The law is stupid," he shot back. "We shouldn't decide who lives and who dies based on something as arbitrary as someone's age. If we *can* save them we *should* save them. Over the past century, we've learned to eradicate disease, but what have we sacrificed in return?"

"No, the law makes sense," she said. "You can't keep people alive forever, it would lead to overpopulation and all sorts of natural and manmade catastrophes."

"It's playing God!" he answered, his voice now rising.

"What do you think doctors do every day," she argued back. "We're replacing organs with 3D- printed pieces of plastic and substituting chemicals for blood and gene-editing embryos so they're born without disease and..."

"I know, I know," he interrupted. "But do you think God would turn his back on someone just because they're old? Is that the way God works? Or is that the way our society and our lawmakers work?"

Now she was angry, partially because her husband was suggesting breaking the law, and partially because she was starting to see his point.

"Don't talk to me about God. You're not religious, and you're not an idealist, you're, you're... just curious," she spit out, hoping to end the discussion.

"That too," he admitted softly.

Then, after a moment: "Will you help me? You're the best surgeon I know. I can't do it without you."

Callie surprised herself with her own silence. She was thinking about it. Maybe she was curious, too.

Avram logged into the medical center's database, searching for his patient. He or she needed to be over 70, geographically close, and want to live.

Rose Flannery was surprised by the visitor who appeared at her door with an unusual offer. She invited him in.

Avram meant only to stay for a few minutes, long enough to present her with a chance to live and to get her answer in return. But she brought him a cup of tea and they sat together for hours, talking about everything – how she loved to feel the sun on her face when she gardened; how her greatest joy was walking on the beach just as the sun was rising; and how she always sipped licorice spice tea in the evening before bed.

"Avram," she said. "I'm not ready to die. I will be your patient."

And then she confessed she was scared. And he confessed right back.

Reaching across the table, Avram took her hands in his. He looked into her eyes, and made a solemn promise: "I will take good care of you."

Then they stopped talking and sat in silence for a very long time.

In the weeks leading up to the surgery, Avram did copious research, drew diagrams, made notes, and watched hours of videos from the era when his great-grandfather performed surgery. Every day, he studied a little more. And every day he visited Rose – at first to discuss the surgery, but then to walk the beach with her and look out at the great, expansive ocean. And to watch the butterflies and bumblebees flitter and dance through the black-eyed Susans and delphinium. And to look through the photos of a smiling Rose with the schoolchildren on her lap in a big, wooden rocking chair. And to drink licorice spice tea and talk.

She told him about her beloved husband, a man much older than her who died at 75 when the Natural Course Law determined his leukemia would not be treated. He told her about Callie, whom he had to court throughout four years of medical school before she would even agree to a date. She told him that she married too late in life to have children, but found joy in reading Dr. Seuss to kindergarteners. He told her that he and Callie planned to have children someday. And there they were, sitting at a kitchen table with their steaming cups – a dying old woman and the man who wanted more than anything to save her. Not because of curiosity, because he cared.

It was Sunday – the only day treatments were not scheduled and the surgical center was empty. Callie had carefully prepared the operating room. She raided the surgical center's archives and collection room and filled the trays with medical instruments from the past, relics from days gone by made of gleaming metal and cold, hard plastic. Overhead lights glared, the monitors stood as still as time. Avram began to wonder if he should take the chance. Without the surgery, Rose still had a few months. A few months to enjoy her garden, her beach, her giggling kindergartners, her evening cup of tea. If something went wrong, he would be robbing her of those last moments of joy.

Avram leaned over the operating table and touched Rose's face.

"Are you sure?" he asked.

Taking the doctor's hand, she smiled and said, "I trust you."

Callie administered the anesthesia; Rose's eyes fluttered and then closed. Once the breathing tube was in place, Avram picked up the iodine swab, placed it on the old woman's stomach, and began the ever-widening circular motion. He watched, mesmerized, as the dark red liquid spread like a stain. The smell of the antiseptic filled his nose. The constant whoosh of the respirator echoed steadily in time with his own breathing. He closed his eyes for a second, and touched his patient's wrist, feeling the warmth of her skin and the cadenced thumping of her pulse. And, for the first time ever, he felt the crushing weight of a responsibility that hadn't been felt by a physician in decades.

He picked up the scalpel and marveled at how light it felt in his hand. Then he began to cut.

It was easier than he thought it would be, the skin yielding to the blade effortlessly, but giving forth more blood than he expected. Callie suctioned; Avram cut more deeply. And then, there it was – the tumor. It was thrilling and terrifying all at once. Using the techniques he read about in the ancient textbooks and saw on the old videos, he skillfully lowered the blade, delicately slicing, eventually edging the tumor out, leaving only tissue to be sutured. With steady hands, Avram closed the incision and breathed a satisfied sigh of relief.

The surgery had taken much longer than he anticipated, putting a strain on Rose's body. Her blood pressure was dropping. The obsolescent machines started beeping warnings at him. Callie pushed phenylephrine into the IV. No change. The line went flat. Callie pushed epinephrine. Still no change. Panicking, Avram reached to do something he had read about in the book – something he never thought he would have to do. He put his hands together, placed them on his patient's chest, and began rhythmically pushing.

Callie's eyes widened as she watched, unconsciously holding her breath. After a long minute, Avram stopped and looked at the monitor. Nothing. He felt for a pulse. Nothing. Again, he put his hands together and began another round of compressions, with each one softly

imploping, "please... please... please..." The machine continued its relentless monotone admonition.

"She's gone, Avram," Callie said gently. He didn't answer, he just kept pushing.

"She's gone," Callie said louder this time. "There's nothing more you can do."

Callie reached over to quiet the monitor.

Avram stopped. He was panting, astonished at how physically taxed he felt. He stared at the lifeless body, dumbfounded. He had saved so many people over the years, but the one that mattered most was the one he had failed.

Was it arrogance, hubris, or just curiosity that led him to such imprudence? Whatever the reason, something had changed in him. The woman on the table wasn't just a nameless hologram miles away. She was a human being. A woman who liked to coax flowers to grow from the soil; a woman who loved to watch the sun rise from the depths of the ocean; a woman who took joy in sipping licorice spice tea at the end of the day. A woman who trusted him.

The room was awash in susurrus accusations – the whispering respirator, the humming monitor, his wife's shallow breathing. The sounds reverberated in the very depth of his consciousness. The feeling of loss was overwhelming; Rose's death made her life that much more important to him. The tears came quickly, catching him by surprise.

Avram tenderly wrapped the body in a white sheet and brought her to the surgical center's crematory. Ashes to ashes, he thought sadly, as he said goodbye. Then he went home and put the antiquated medical book back on the shelf, never to be opened again.

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"Are we ready?" asked the voice on the other side.

He paused for a second – just long enough to gaze at the woman in front of him and wonder what kind of tea she drank.

"Ready."

THE END



Cindy Lefler

By day, Cindy is a mild-mannered writer for the Office of Institutional Advancement at Thomas Jefferson University/Jefferson Health; by night, she's a crazed community theatre actor and director, unknown playwright, aspiring novelist, and bathroom Broadway belter.

Although she's been writing since she was old enough to pick up a pencil, Cindy began her professional journalism career at the age of 18 as an editorial assistant at the now-defunct *Philadelphia Bulletin*. After graduating from Rutgers University, she moved on to the *Bucks County Courier Times* in Pennsylvania, where she won several awards, including the Pennsylvania Press Association's Better Newswriting Award and the Associated Press Managing Editors' Award. After taking a hiatus to raise her three sons, she returned to the workforce as editor of *Hospital & Healthcare News* and website content writer for CHOP; she later freelanced for magazines, non-profits, and local companies in need of someone who could turn a phrase. In 2016 she was lucky enough to join the Office of Institutional Advancement family at Jefferson, and the rest, as they say, is history.

Cindy lives in Haddonfield, NJ, with her husband Don, and enjoys frequent visits from their kids – Daniel (and Shelby), Jake (and Beth), and Ben (and Sabrina).