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2001

"All That's My Mother"

By the time Deborah was ready to see her mother's cells for the first time, Day couldn't come. He'd said many times that he wanted to see his wife's cells before he died, but he was eighty-five, in and out of the hospital with heart and blood pressure problems, and he'd just lost a leg to diabetes. Sonny had to work, and Lawrence said he wanted to talk to a lawyer about suing Hopkins instead of seeing the cells, which he referred to as "a multibillion-dollar corporation."

So on May 11, 2001, Deborah, Zakariyya, and I agreed to meet at the Hopkins Jesus statue to go see Henrietta's cells. Earlier that morning, Deborah had warned me that Lawrence was convinced Hopkins was paying me to gather information about the family. He'd already called her several times that day saying he was coming to get the materials she'd collected related to her mother. So Deborah locked them in her office, took the key with her, and called me saying, "Don't tell him where you are or go see him without me."

When I arrived at the Jesus, it stood just as it had when Henrietta

visited it some fifty years earlier, looming more than ten feet tall beneath a tiered dome, pupil-less marble eyes staring straight ahead, arms outstretched and draped in stone robes. At Jesus's feet, people had thrown piles of change, wilted daisies, and two roses—one fresh with thorns, the other cloth with plastic dewdrops. His body was gray-brown and dingy, except for his right foot, which glowed a polished white from decades of hands rubbing it for luck.

Deborah and Zakariyya weren't there, so I leaned against a far wall, watching a doctor in green scrubs kneel before the statue and pray as others brushed its toe on their way into the hospital without looking or breaking stride. Several people stopped to write prayers in oversized books resting on wooden pedestals near the statue: "Dear Heavenly Father: If it is your will let me speak to Eddie this one last time." "Please help my sons conquer their addictions." "I ask you to provide my husband and I with jobs." "Lord thank you for giving me another chance."

I walked to the statue, my heels echoing on marble, and rested my hand on its big toe—the closest I'd ever come to praying. Suddenly Deborah was beside me, whispering, "I hope He's got our back on this one." Her voice was utterly calm, her usual nervous laugh gone. I told her I did too.

Deborah closed her eyes and began to pray. Then Zakariyya appeared behind us and let out a deep laugh.

"He can't do nothin' to help you now!" Zakariyya yelled. He'd gained weight since I'd seen him last, and his heavy gray wool pants and thick blue down coat made him look even bigger. The black plastic arms of his glasses were so tight they'd etched deep grooves into his head, but he couldn't afford new ones.

He looked at me and said, "That sister of mine, she crazy for not wantin' money from them cells."

Deborah rolled her eyes and hit his leg with her cane. "Be good or you can't come see the cells," she said.

Zakariyya stopped laughing and followed as we headed toward Christoph-Lengauer's lab. Minutes later, Christoph walked toward us

through the lobby of his building, smiling, hand outstretched. He was in his mid-thirties, with perfectly worn denim jeans, a blue plaid shirt, and shaggy light brown hair. He shook my hand and Deborah's, then reached for Zakariyya's. But Zakariyya didn't move.

"Okay!" Christoph said, looking at Deborah. "It must be pretty hard for you to come into a lab at Hopkins after what you've been through. I'm really glad to see you here." He spoke with an Austrian accent, which made Deborah wiggle her eyebrows at me when he turned to press the elevator call button. "I thought we'd start in the freezer room so I can show you how we store your mother's cells, then we can go look at them alive under a microscope."

"That's wonderful," Deborah said, as though he'd just said something entirely ordinary. Inside the elevator, she pressed against Zakariyya, one hand leaning on her cane, the other gripping her tattered dictionary. When the doors opened, we followed Christoph single file through a long narrow hall, its walls and ceiling vibrating with a deep whirring sound that grew louder as we walked. "That's the ventilation system," Christoph yelled. "It sucks all the chemicals and cells outside so we don't have to breathe them in."

He threw open the door to his lab with a sweeping *ta-da* motion and waved us inside. "This is where we keep all the cells," he yelled over a deafening mechanical hum that made Deborah's and Zakariyya's hearing aids squeal. Zakariyya's hand shot up and tore his from his ear. Deborah adjusted the volume on hers, then walked past Christoph into a room filled wall-to-wall with white freezers stacked one on top of the other, rumbling like a sea of washing machines in an industrial laundromat. She shot me a wide-eyed, terrified look.

Christoph pulled the handle of a white floor-to-ceiling freezer, and it opened with a hiss, releasing a cloud of steam into the room. Deborah screamed and jumped behind Zakariyya, who stood expressionless, hands in his pockets.

"Don't worry," Christoph yelled, "it's not dangerous, it's just cold. They're not minus twenty Celsius like your freezers at home, they're

minus eighty. That's why when I open them smoke comes out." He motioned for Deborah to come closer.

"It's all full of her cells," he said.

Deborah loosened her grip on Zakariyya and inched forward until the icy breeze hit her face, and she stood staring at thousands of inch-tall plastic vials filled with red liquid.

"Oh God," she gasped. "I can't believe all that's my mother." Zakariyya just stared in silence.

Christoph reached into the freezer, took out a vial, and pointed to the letters *H-e-L-a* written on its side. "There are millions and millions of her cells in there," he said. "Maybe billions. You can keep them here forever. Fifty years, a hundred years, even more—then you just thaw them out and they grow."

He rocked the vial of HeLa cells back and forth in his hand as he started talking about how careful you have to be when you handle them. "We have an extra room just for the cells," he said. "That's important. Because if you contaminate them with anything, you can't really use them anymore. And you don't want HeLa cells to contaminate other cultures in a lab."

"That's what happened over in Russia, right?" Deborah said.

He did a double take and grinned. "Yes," he said. "Exactly. It's great you know about that." He explained how the HeLa contamination problem happened, then said, "Her cells caused millions of dollars in damage. Seems like a bit of poetic justice, doesn't it?"

"My mother was just getting back at scientists for keeping all them secrets from the family," Deborah said. "You don't mess with Henrietta—she'll sic HeLa on your ass!"

Everyone laughed.

Christoph reached into the freezer behind him, grabbed another vial of HeLa cells, and held it out to Deborah, his eyes soft. She stood stunned for a moment, staring into his outstretched hand, then grabbed the vial and began rubbing it fast between her palms, like she was warming herself in winter.

"She's cold," Deborah said, cupping her hands and blowing onto the vial. Christoph motioned for us to follow him to the incubator where he warmed the cells, but Deborah didn't move. As Zakariyya and Christoph walked away, she raised the vial and touched it to her lips. "You're famous," she whispered. "Just nobody knows it."

Christoph led us into a small laboratory crammed full of microscopes, pipettes, and containers with words like BIOHAZARD and DNA written on their sides. Pointing to the ventilation hoods covering his tables, he said, "We don't want cancer all over the place, so this sucks all the air to a filtration system that catches and kills any cells that are floating around."

He explained what culture medium was, and how he moved cells from freezer to incubator to grow. "Eventually they fill those huge bottles in the back," he said, pointing to rows of gallon-sized jugs. "Then we do our experiments on them, like we find a new drug for cancer, pour it onto the cells, and see what happens." Zakariyya and Deborah nodded as he told them how drugs go through testing in cells, then animals, and finally humans.

Christoph knelt in front of an incubator, reached inside, and pulled out a dish with HeLa growing in it. "They're really, really small, the cells," he said. "That's why we go to the microscope now so I can show them to you." He flipped power switches, slid the dish onto the microscope's platform, and pointed to a small monitor attached to the microscope. It lit up a fluorescent green, and Deborah gasped. "It's a pretty color!"

Christoph bent over the microscope to bring the cells into focus, and an image appeared on the screen that looked more like hazy green pond water than cells.

"At this magnification you can't see much," Christoph said. "The screen is just boring because the cells are so small, even with a microscope you can't see them sometimes." He clicked a knob and zoomed

in to higher and higher magnifications until the hazy sea of green turned into a screen filled with hundreds of individual cells, their centers dark and bulging.

"Oooo," Deborah whispered. "There they are." She reached out and touched the screen, rubbing her finger from one cell to the next.

Christoph traced the outline of a cell with his finger. "All this is one cell," he said. "It kinda looks like a triangle with a circle in the middle, you see that?"

He grabbed a piece of scrap paper and spent nearly a half-hour drawing diagrams and explaining the basic biology of cells as Deborah asked questions. Zakariyya turned up his hearing aid and leaned close to Christoph and the paper.

"Everybody always talking about cells and DNA," Deborah said at one point, "but I don't understand what's DNA and what's her cells."

"Ah!" Christoph said, excited, "DNA is what's *inside* the cell! Inside each nucleus, if we could zoom in closer, you'd see a piece of DNA that looked like this." He drew a long, squiggly line. "There's forty-six of those pieces of DNA in every human nucleus. We call those chromosomes—those are the things that were colored bright in that big picture I gave you."

"Oh! My brother got that picture hanging on his wall at home next to our mother and sister," Deborah said, then looked at Zakariyya. "Did you know this is the man who gave you that picture?"

Zakariyya looked to the ground and nodded, the corners of his mouth turning up into a barely perceptible smile.

"Within the DNA in that picture is all the genetic information that made Henrietta *Henrietta*," Christoph told them. "Was your mother tall or short?"

"Short."

"And she had dark hair, right?"

We all nodded.

"Well, all that information came from her DNA," he said. "So did her cancer—it came from a DNA mistake."

Deborah's face fell. She'd heard many times that she'd inherited

some of the DNA inside those cells from her mother. She didn't want to hear that her mother's cancer was in that DNA too.

"Those mistakes can happen when you get exposed to chemicals or radiation," Christoph said. "But in your mother's case, the mistake was caused by HPV, the genital warts virus. The good news for you is that children don't inherit those kinds of changes in DNA from their parents—they just come from being exposed to the virus."

"So we don't have the thing that made her cells grow forever?" Deborah asked. Christoph shook his head. "Now you tell me after all these years!" Deborah yelled. "Thank God, cause I *was* wonderin!"

She pointed at a cell on the screen that looked longer than the others. "This one is cancer, right? And the rest are her normal ones?"

"Actually, HeLa is *all* just cancer," Christoph said.

"Wait a minute," she said, "you mean none of our mother *regular* cells still livin'?"

"That's right."

"Oh! See, and all this time I thought my mother *regular* cells still livin'!"

Christoph leaned over the microscope again and began moving the cells quickly around the screen until he shrieked, "Look, there! See that cell?" He pointed to the center of the monitor. "See how it has a big nucleus that looks like it's almost pinched in half in the middle? That cell is dividing into two cells right before our eyes! And both of those cells will have your mother's DNA in them."

"Lord have mercy," Deborah whispered, covering her mouth with her hand.

Christoph kept talking about cell division, but Deborah wasn't listening. She stood mesmerized, watching one of her mother's cells divide in two, just as they'd done when Henrietta was an embryo in her mother's womb.

Deborah and Zakariyya stared at the screen like they'd gone into a trance, mouths open, cheeks sagging. It was the closest they'd come to seeing their mother alive since they were babies.

After a long silence, Zakariyya spoke.

"If those our mother's cells," he said, "how come they ain't black even though she was black?"

"Under the microscope, cells don't have a color," Christoph told him. "They all look the same—they're just clear until we put color on them with a dye. You can't tell what color a person is from their cells." He motioned for Zakariyya to come closer. "Would you like to look at them through the microscope? They look better there."

Christoph taught Deborah and Zakariyya how to use the microscope, saying, "Look through like this . . . take your glasses off . . . now turn this knob to focus." Finally the cells popped into view for Deborah. And through that microscope, for that moment, all she could see was an ocean of her mother's cells, stained an ethereal fluorescent green.

"They're *beautiful*," she whispered, then went back to staring at the slide in silence. Eventually, without looking away from the cells, she said, "God, I never thought I'd see my mother under a microscope—I never dreamed this day would ever come."

"Yeah, Hopkins pretty much screwed up, I think," Christoph said. Deborah bolted upright and looked at him, stunned to hear a scientist—one at Hopkins, no less—saying such a thing. Then she looked back into the microscope and said, "John Hopkin is a school for learning, and that's important. But this *is* my mother. Nobody seem to get that."

"It's true," Christoph said. "Whenever we read books about science, it's always HeLa *this* and HeLa *that*. Some people know those are the initials of a person, but they don't know who that person is. That's important history."

Deborah looked like she wanted to hug him. "This is amazing," she said, shaking her head and looking at him like he was a mirage.

Suddenly, Zakariyya started yelling something about George Gey. Deborah thumped her cane on his toe and he stopped in midsentence.

"Zakariyya has a lot of anger with all this that's been goin on," she told Christoph. "I been trying to keep him calm. Sometime he explode, but he's trying."

"I don't blame you for being angry," Christoph said. Then he

showed them the catalog he used to order HeLa cells. There was a long list of the different HeLa clones anyone could buy for \$167 a vial.

"You should get that," Christoph said to Deborah and Zakariyya. "Yeah, right," Deborah said. "What I'm gonna do with a vial of my mother cells?" She laughed.

"No, I mean you should get the money. At least some of it."

"Oh," she said, stunned. "That's okay. You know, when people hear about who HeLa was, first thing they say is, 'Y'all should be millionaires!'"

Christoph nodded. "Her cells are how it all started," he said. "Once there is a cure for cancer, it's definitely largely because of your mother's cells."

"Amen," Deborah said. Then, without a hint of anger, she told him, "People always gonna be makin money from them cells, nothing we can do about that. But we not gonna get any of it."

Christoph said he thought that was wrong. Why not treat valuable cells like oil, he said. When you find oil on somebody's property, it doesn't automatically belong to them, but they do get a portion of the profits. "No one knows how to deal with this when it comes to cells today," he said. "When your mother got sick, doctors just did what they wanted and patients didn't ask. But nowadays patients want to know what's going on."

"Amen," Deborah said again.

Christoph gave them his cell phone number and said they could call any time they had questions about their mother's cells. As he walked toward the elevator, Zakariyya reached up and touched Christoph on the back and said thank you. Outside, he did the same to me, then turned to catch the bus home.

Deborah and I stood in silence, watching him walk away. Then she put her arm around me and said, "Girl, you just witnessed a miracle."