

The Storm

There was no obituary for Henrietta Lacks, but word of her death reached the Gey lab quickly. As Henrietta's body cooled in the "colored" freezer, Gey asked her doctors if they'd do an autopsy. Tissue culturists around the world had been trying to create a library of immortal cells like Henrietta's, and Gey wanted samples from as many organs in her body as possible, to see if they'd grow like HeLa. But to get those samples after her death, someone would have to ask Henrietta's husband for permission.

Though no law or code of ethics required doctors to ask permission before taking tissue from a living patient, the law made it very clear that performing an autopsy or removing tissue from the dead without permission was illegal.

The way Day remembers it, someone from Hopkins called to tell him Henrietta had died, and to ask permission for an autopsy, and Day said no. A few hours later, when Day went to Hopkins with a cousin to see Henrietta's body and sign some papers, the doctors asked again about the autopsy. They said they wanted to run tests that

might help his children someday. Day's cousin said it wouldn't hurt, so eventually Day agreed and signed an autopsy permission form.

Soon Henrietta's body lay on a stainless-steel table in the cavernous basement morgue, and Gey's assistant, Mary, stood in the doorway breathing fast, feeling like she might faint. She'd never seen a dead body. Now there she was with a corpse, a stack of petri dishes, and the pathologist, Dr. Wilbur, who stood hunched over the autopsy table. Henrietta's arms were extended, as if she were reaching above her head. Mary walked toward the table, whispering to herself, *You're not going to make a fool of yourself and pass out.*

She stepped around one of Henrietta's arms and took her place beside Wilbur, her hip in Henrietta's armpit. He said hello, Mary said hello back. Then they were silent. Day wanted Henrietta to be presentable for the funeral, so he'd only given permission for a partial autopsy, which meant no incision into her chest and no removal of her limbs or head. Mary opened the dishes one by one, holding them out to collect samples as Wilbur cut them from Henrietta's body: bladder, bowel, uterus, kidney, vagina, ovary, appendix, liver, heart, lungs. After dropping each sample into a petri dish, Wilbur put bits of Henrietta's tumor-covered cervix into containers filled with formaldehyde to save them for future use.

The official cause of Henrietta's death was terminal uremia: blood poisoning from the buildup of toxins normally flushed out of the body in urine. The tumors had completely blocked her urethra, leaving her doctors unable to pass a catheter into her bladder to empty it. Tumors the size of baseballs had nearly replaced her kidneys, bladder, ovaries, and uterus. And her other organs were so covered in small white tumors it looked as if someone had filled her with pearls.

Mary stood beside Wilbur, waiting as he sewed Henrietta's abdomen closed. She wanted to run out of the morgue and back to the lab, but instead, she stared at Henrietta's arms and legs — anything to avoid looking into her lifeless eyes. Then Mary's gaze fell on Henrietta's feet, and she gasped: Henrietta's toenails were covered in chipped bright red polish.

"When I saw those toenails," Mary told me years later, "I nearly

fainted. I thought, *Oh jeez, she's a real person.* I started imagining her sitting in her bathroom painting those toenails, and it hit me for the first time that those cells we'd been working with all this time and sending all over the world, they came from a live woman. I'd never thought of it that way."

A few days later, Henrietta's body made the long, winding train ride from Baltimore to Clover in a plain pine box, which was all Day could afford. It was raining when the local undertaker met Henrietta's coffin at the Clover depot and slid it into the back of a rusted truck. He rolled through downtown Clover, past the hardware store where Henrietta used to watch old white men play checkers, and onto Lacks Town Road, turning just before The Shack, where she'd danced only a few months earlier. As the undertaker drove into Lacks Town, cousins filed onto porches to watch Henrietta pass, their hands on hips or clutching children as they shook their heads and whispered to the Lord.

Cootie shuffled into his yard, looked straight into the falling rain, and yelled, "Sweet Jesus, let that poor woman rest, you hear me? She had enough!"

Amens echoed from a nearby porch.

A quarter-mile down the road, Gladys and Sadie sat on the broken wooden steps of the home-house, a long pink dress draped across their laps and a basket at their feet filled with makeup, curlers, red nail polish, and the two pennies they'd rest on Henrietta's eyes to keep them closed for the viewing. They watched silently as the undertaker inched through the field between the road and the house, his tires sinking into puddles of red mud.

Cliff and Fred stood in the graveyard behind the house, their overalls drenched and heavy with rain. They'd spent most of the day thrusting shovels into the rocky cemetery ground, digging a grave for Henrietta. They dug in one spot, then another, moving each time their shovels hit the coffins of unknown relatives buried with no markers.

Eventually they found an empty spot for Henrietta near her mother's tombstone.

When Cliff and Fred heard the undertaker's trucks, they walked toward the home-house to help unload Henrietta. When they got her into the hallway, they opened the pine box, and Sadie began to cry. What got her most wasn't the sight of Henrietta's lifeless body, it was her toenails: Henrietta would rather have died than let her polish get all chipped like that.

"Lord," Sadie said. "Hennie must a hurt somethin worse than death."

For several days, Henrietta's corpse lay in the hallway of the home-house, doors propped open at each end to let in the cool wet breeze that would keep her body fresh. Family and neighbors waded through the field to pay respects, and all the while, the rain kept coming.

The morning of Henrietta's funeral, Day walked through the mud with Deborah, Joe, Sonny, and Lawrence. But not Elsie. She was still in Crownsville and didn't even know her mother had died.

The Lacks cousins don't remember much about the service—they figure there were some words, probably a song or two. But they all remember what happened next. As Cliff and Fred lowered Henrietta's coffin into her grave and began covering her with handfuls of dirt, the sky turned black as strap molasses. The rain fell thick and fast. Then came long rumbling thunder, screams from the babies, and a blast of wind so strong it tore the metal roof off the barn below the cemetery and sent it flying through the air above Henrietta's grave, its long metal slopes flapping like the wings of a giant silver bird. The wind caused fires that burned tobacco fields. It ripped trees from the ground, blew power lines out for miles, and tore one Lacks cousin's wooden cabin clear out of the ground, threw him from the living room into his garden, then landed on top of him, killing him instantly.

Years later, when Henrietta's cousin Peter looked back on that day, he just shook his bald head and laughed: "Hennie never was what you'd call a beatin-around-the-bush woman," he said. "We shoulda knew she was tryin to tell us somethin with that storm."

1951-1953

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The HeLa Factory

Not long after Henrietta's death, planning began for a HeLa factory—a massive operation that would grow to produce trillions of HeLa cells each week. It was built for one reason: to help stop polio.

By the end of 1951 the world was in the midst of the biggest polio epidemic in history. Schools closed, parents panicked, and the public grew desperate for a vaccine. In February 1952, Jonas Salk at the University of Pittsburgh announced that he'd developed the world's first polio vaccine, but he couldn't begin offering it to children until he'd tested it on a large scale to prove it was safe and effective. And doing that would require culturing cells on an enormous, industrial scale, which no one had done before.

The National Foundation for Infantile Paralysis (NFIP)—a charity created by President Franklin Delano Roosevelt, who'd himself been paralyzed by polio—began organizing the largest field trial ever conducted to test the polio vaccine. Salk would inoculate 2 million children and the NFIP would test their blood to see if they'd become immune. But doing this would require millions of neutralization tests,

which involved mixing blood serum from newly vaccinated children with live poliovirus and cells in culture. If the vaccine worked, the serum from a vaccinated child's blood would block the poliovirus and protect the cells. If it didn't work, the virus would infect the cells, causing damage scientists could see using a microscope.

The trouble was, at that point, the cells used in neutralization tests came from monkeys, which were killed in the process. This was a problem, not because of concern for animal welfare—which wasn't the issue then that it is today—but because monkeys were expensive. Doing millions of neutralization tests using monkey cells would cost millions of dollars. So the NFIP went into overdrive looking for a cultured cell that could grow on a massive scale and would be cheaper than using monkeys.

The NFIP turned to Gey and a few other cell culture experts for help, and Gey recognized the opportunity as a gold mine for the field. The NFIP's March of Dimes was bringing in an average of \$50 million in donations each year, and its director wanted to give much of that money to cell culturists so they could find a way to mass-produce cells, which they'd been wanting to do for years anyway.

The timing was perfect: by chance, soon after the NFIP contacted Gey for help, he realized that Henrietta's cells grew unlike any human cells he'd seen.

Most cells in culture grew in a single layer in a clot on a glass surface, which meant they ran out of space quickly. Increasing their numbers was labor-intensive: scientists had to repeatedly scrape the cells from one tube and split them into new ones to give them more space. HeLa cells, it turned out, weren't picky—they didn't need a glass surface in order to grow. They could grow floating in a culture medium that was constantly stirred by a magnetic device, an important technique Gey developed, now called growing in suspension. This meant that HeLa cells weren't limited by space in the same way other cells were; they could simply divide until they ran out of culture medium. The bigger the vat of medium, the more the cells grew. This discovery meant that if HeLa was susceptible to poliovirus, which not all cells

were, it would solve the mass-production problem and make it possible to test the vaccine without millions of monkey cells.

So in April 1952, Gey and one of his colleagues from the NFIP advisory committee—William Scherer, a young postdoctoral fellow at the University of Minnesota—tried infecting Henrietta's cells with poliovirus. Within days they found that HeLa was, in fact, more susceptible to the virus than any cultured cells had ever been. When they realized this, they knew they'd found exactly what the NFIP was looking for.

They also knew that, before mass-producing any cells, they'd need to find a new way to ship them. Gey's air freight shipping system worked fine for sending a few cells to colleagues here and there, but it was too expensive for shipping on a massive scale. And growing cells by the billions wouldn't help anyone if they couldn't get those cells where they needed to go. So they began experimenting.

On Memorial Day 1952, Gey gathered a handful of tubes containing HeLa cells and enough media for them to survive for a few days, and packed them into a tin lined with cork and filled with ice to prevent overheating. Then he typed up careful instructions for feeding and handling, and sent Mary to the post office to ship them to Scherer in Minnesota. Every post office in Baltimore was closed for the holiday except the main branch downtown. Mary had to take several trolleys to get there, but she made it. And so did the cells: When the package arrived in Minneapolis about four days later, Scherer put the cells in an incubator and they began to grow. It was the first time live cells had ever been successfully shipped in the mail.

In the coming months—to test different delivery methods, and make sure the cells could survive long trips in any climate—Gey and Scherer sent tubes of HeLa cells around the country by plane, train, and truck, from Minneapolis to Norwich to New York and back again. Only one tube died.

When the NFIP heard the news that HeLa was susceptible to poliovirus and could grow in large quantities for little money, it immediately contracted William Scherer to oversee development of a HeLa

Distribution Center at the Tuskegee Institute, one of the most prestigious black universities in the country. The NFIP chose the Tuskegee Institute for the project because of Charles Bynum, director of "Negro Activities" for the foundation. Bynum—a science teacher and civil rights activist who was the first black foundation executive in the country—wanted the center to be located at Tuskegee because it would provide hundreds of thousands of dollars in funding, many jobs, and training opportunities for young black scientists.

In just a few months, a staff of six black scientists and technicians built a factory at Tuskegee unlike any seen before. Its walls were lined with industrial steel autoclaves for steam sterilizing; row upon row of enormous, mechanically stirred vats of culture medium; incubators; glass culturing bottles stacked on their sides; and automatic cell dispensers—tall contraptions with long, thin metal arms that squirted HeLa cells into one test tube after another. The Tuskegee team mixed thousands of liters of Gey culture medium each week, using salts, minerals, and serum they collected from the many students, soldiers, and cotton farmers who responded to ads in the local paper seeking blood in exchange for money.

Several technicians served as a quality-control assembly line, staring through microscopes at hundreds of thousands of HeLa cultures each week, making sure the samples were alive and healthy. Others shipped them on a rigid schedule to researchers at twenty-three polio-testing centers around the country.

Eventually, the Tuskegee staff grew to thirty-five scientists and technicians, who produced twenty thousand tubes of HeLa—about 6 trillion cells—every week. It was the first-ever cell production factory, and it started with a single vial of HeLa that Gey had sent Scherer in their first shipping experiment, not long after Henrietta's death.

With those cells, scientists helped prove the Salk vaccine effective. Soon the *New York Times* would run pictures of black women hunched over microscopes examining cells, black hands holding vials of HeLa, and this headline:

UNIT AT TUSKEGEE HELPS POLIO FIGHT

Corps of Negro Scientists Has Key Role in Evaluating of Dr. Salk's Vaccine

HELA CELLS ARE GROWN

Black scientists and technicians, many of them women, used cells from a black woman to help save the lives of millions of Americans, most of them white. And they did so on the same campus—and at the very same time—that state officials were conducting the infamous Tuskegee syphilis studies.

At first the Tuskegee Center supplied HeLa cells only to polio testing labs. But when it became clear that there was no risk of a HeLa shortage, they began sending the cells to any scientist interested in buying them, for ten dollars plus Air Express fees. If researchers wanted to figure out how cells behaved in a certain environment, or reacted to a specific chemical, or produced a certain protein, they turned to Henrietta's cells. They did that because, despite being cancerous, HeLa still shared many basic characteristics with normal cells: They produced proteins and communicated with one another like normal cells, they divided and generated energy, they expressed genes and regulated them, and they were susceptible to infections, which made them an optimal tool for synthesizing and studying any number of things in culture, including bacteria, hormones, proteins, and especially viruses.

Viruses reproduce by injecting bits of their genetic material into a living cell, essentially reprogramming the cell so it reproduces the virus instead of itself. When it came to growing viruses—as with many other things—the fact that HeLa was malignant just made it more useful. HeLa cells grew much faster than normal cells, and therefore produced results faster. HeLa was a workhorse: it was hardy, it was inexpensive, and it was everywhere.

And the timing was perfect. In the early fifties, scientists were just beginning to understand viruses, so as Henrietta's cells arrived in labs around the country, researchers began exposing them to viruses of all kinds—herpes, measles, mumps, fowl pox, equine encephalitis—to study how each one entered cells, reproduced, and spread.

Henrietta's cells helped launch the fledgling field of virology, but that was just the beginning. In the years following Henrietta's death, using some of the first tubes of her cells, researchers around the world made several important scientific advances in quick succession. First, a group of researchers used HeLa to develop methods for freezing cells without harming or changing them. This made it possible to send cells around the world using the already-standardized method for shipping frozen foods and frozen sperm for breeding cattle. It also meant researchers could store cells between experiments without worrying about keeping them fed and sterile. But what excited scientists most was that freezing gave them a means to suspend cells in various states of being.

Freezing a cell was like pressing a pause button: cell division, metabolism, and everything else simply stopped, then resumed after thawing as if you'd just pressed play again. Scientists could now pause cells at various intervals during an experiment so they could compare how certain cells reacted to a specific drug one week, then two, then six after exposure. They could look at identical cells at different points in time, to study how they changed with age. And by freezing cells at various points, they believed they could see the actual moment when a normal cell growing in culture became malignant, a phenomenon they called *spontaneous transformation*.

Freezing was just the first of several dramatic improvements HeLa helped bring to the field of tissue culture. One of the biggest was the standardization of the field, which, at that point, was a bit of a mess. Gey and his colleagues had been complaining that they wasted too much time just making medium and trying to keep cells alive. But more than anything, they worried that since everyone was using different media ingredients, recipes, cells, and techniques, and few knew

their peers' methods, it would be difficult, if not impossible, to replicate one another's experiments. And replication is an essential part of science: a discovery isn't considered valid if others can't repeat the work and get the same result. Without standardized materials and methods, they worried that the field of tissue culture would stagnate.

Gey and several colleagues had already organized a committee to develop procedures to "simplify and standardize the technique of tissue culturing." They'd also convinced two fledgling biological supply companies—Microbiological Associates and Difco Laboratories—to begin producing and selling ingredients for culture media, and taught them the techniques necessary to do so. Those companies had just started selling media ingredients, but cell culturists still had to make the media themselves, and they all used different recipes.

Standardization of the field wasn't possible until several things happened: first, Tuskegee began mass-producing HeLa; second, a researcher named Harry Eagle at the National Institutes of Health (NIH) used HeLa to develop the first standardized culture medium that could be made by the gallon and shipped ready to use; and, third, Gey and several others used HeLa to determine which glassware and test-tube stoppers were least toxic to cells.

Only then, for the first time, could researchers around the world work with the same cells, growing in the same media, using the same equipment, all of which they could buy and have delivered to their labs. And soon they'd even be able to use the first-ever clones of human cells, something they'd been working toward for years.

Today, when we hear the word *clone*, we imagine scientists creating entire living animals—like Dolly the famous cloned sheep—using DNA from one parent. But before the cloning of whole animals, there was the cloning of individual cells—Henrietta's cells.

To understand why cellular cloning was important, you need to know two things: First, HeLa didn't grow from one of Henrietta's cells. It grew from a sliver of her tumor, which was a cluster of cells. Second, cells often behave differently, even if they're all from the same sample, which means some grow faster than others, some produce

more poliovirus, and some are resistant to certain antibiotics. Scientists wanted to grow cellular clones—lines of cells descended from individual cells—so they could harness those unique traits. With HeLa, a group of scientists in Colorado succeeded, and soon the world of science had not only HeLa but also its hundreds, then thousands, of clones.

The early cell culture and cloning technology developed using HeLa helped lead to many later advances that required the ability to grow single cells in culture, including isolating stem cells, cloning whole animals, and *in vitro* fertilization. Meanwhile, as the standard human cell in most labs, HeLa was also being used in research that would advance the new field of human genetics.

Researchers had long believed that human cells contained forty-eight chromosomes, the threads of DNA inside cells that contain all of our genetic information. But chromosomes clumped together, making it impossible to get an accurate count. Then, in 1953, a geneticist in Texas accidentally mixed the wrong liquid with HeLa and a few other cells, and it turned out to be a fortunate mistake. The chromosomes inside the cells swelled and spread out, and for the first time, scientists could see each of them clearly. That accidental discovery was the first of several developments that would allow two researchers from Spain and Sweden to discover that normal human cells have forty-six chromosomes.

Once scientists knew how many chromosomes people were *supposed* to have, they could tell when a person had too many or too few, which made it possible to diagnose genetic diseases. Researchers worldwide would soon begin identifying chromosomal disorders, discovering that patients with Down syndrome had an extra chromosome number 21, patients with Klinefelter syndrome had an extra sex chromosome, and those with Turner syndrome lacked all or part of one.

With all the new developments, demand for HeLa grew, and Tuskegee wasn't big enough to keep up. The owner of Microbiological Associates—a military man named Samuel Reader—knew nothing about science, but his business partner, Monroe Vincent, was a researcher who understood the potential market for cells. Many scientists needed cells, but few had the time or ability to grow them in large

enough quantities. They just wanted to buy them. So together, Reader and Vincent used HeLa cells as the springboard to launch the first industrial-scale, for-profit cell distribution center.

It started with what Reader lovingly referred to as his Cell Factory. In Bethesda, Maryland, in the middle of a wide-open warehouse that was once a Fritos factory, he built a glass-enclosed room that housed a rotating conveyor belt with hundreds of test-tube holders built into it. Outside the glass room, he had a setup much like Tuskegee's, with massive vats of culture medium, only bigger. When cells were ready for shipping, he'd sound a loud bell and all workers in the building, including the mailroom clerks, would stop what they were doing, scrub themselves at the sterilization station, grab a cap and gown, and line up at the conveyor belt. Some filled tubes, others inserted rubber stoppers, sealed tubes, or stacked them inside a walk-in incubator where they stayed until being packaged for shipping.

Microbiological Associates' biggest customers were labs like NIH, which had standing orders for millions of HeLa cells delivered on set schedules. But scientists all over the world could call in orders, pay less than fifty dollars, and Microbiological Associates would overnight them vials of HeLa cells. Reader had contracts with several major airlines, so whenever he got an order, he'd send a courier with cells to catch the next flight out, then have the cells picked up from the airport and delivered to labs by taxi. Slowly, a multibillion-dollar industry selling human biological materials was born.

Reader recruited the top minds in the field to tell him what products they needed most and show him how to make them. One of the scientists who consulted for Reader was Leonard Hayflick, arguably the most famous early cell culturist left in the field today. When I talked with him he said, "Microbiological Associates and Sam Reader were an absolute revolution in the field, and I'm not one to use the word *revolution* lightly."

As Reader's business grew, demand for cells from Tuskegee plummeted. The NFIP closed its HeLa production center because places like Microbiological Associates now supplied scientists with all the

cells they needed. And soon, HeLa cells weren't the only ones being bought and sold for research—with media and equipment standardization, culturing became easier, and researchers began growing cells of all kinds. But none grew in quantities like HeLa.

As the Cold War escalated, some scientists exposed Henrietta's cells to massive doses of radiation to study how nuclear bombs destroyed cells and find ways to reverse that damage. Others put them in special centrifuges that spun so fast the pressure inside was more than 100,000 times that of gravity, to see what happened to human cells under the extreme conditions of deep-sea diving or spaceflight.

The possibilities seemed endless. At one point, a health-education director at the Young Women's Christian Association heard about tissue culture and wrote a letter to a group of researchers saying she hoped they'd be able to use it to help the YWCA's older women. "They complain that the skin and tissues of the face and neck inevitably show the wear and tear of years," she wrote. "My thought was that if you know how to keep tissue alive there must be some way of equalizing the reserve supply to the area of the throat and face."

Henrietta's cells couldn't help bring youth to women's necks, but cosmetic and pharmaceutical companies throughout the United States and Europe began using them instead of laboratory animals to test whether new products and drugs caused cellular damage. Scientists cut HeLa cells in half to show that cells could live on after their nuclei had been removed, and used them to develop methods for injecting substances into cells without destroying them. They used HeLa to test the effects of steroids, chemotherapy drugs, hormones, vitamins, and environmental stress; they infected them with tuberculosis, salmonella, and the bacterium that causes vaginitis.

At the request of the U.S. government, Gey took Henrietta's cells with him to the Far East in 1953 to study hemorrhagic fever, which was killing American troops. He also injected them into rats to see if they'd cause cancer. But mostly he tried to move on from HeLa, focusing instead on growing normal and cancerous cells from the same patient, so he could compare them to each other. But he couldn't escape

the seemingly endless questions about HeLa and cell culture from other scientists. Researchers came to his lab several times each week wanting to learn his techniques, and he often traveled to labs around the world to help set up cell-culture facilities.

Many of Gey's colleagues pressured him to publish research papers so he could get credit for his work, but he always said he was too busy. At home he regularly stayed up all night to work. He applied for extensions on grants, often took months to answer letters, and at one point continued to pay a dead employee's salary for three months before anyone noticed. It took a year of nagging from Mary and Margaret for George to publish anything about growing HeLa; in the end, he wrote a short abstract for a conference, and Margaret submitted it for publication. After that, she regularly wrote and submitted his work for him.

By the mid-fifties, as more scientists began working with tissue culture, Gey became weary. He wrote to friends and colleagues saying, "Someone should coin a contemporary phrase and say, at least for the moment, 'The world has gone nuts over tissue culture and its possibilities.' I hope that some of this hullabaloo over tissue culture has at least had a few good points which have helped others . . . I wish for the most part, however, that things would settle down a bit."

Gey was annoyed by the widespread fixation on HeLa. After all, there were other cells to work with, including some he'd grown himself: A.Fi. and D-1 Re, each named after the patient it came from. He regularly offered them to scientists, but they were harder to culture, so they never took off like Henrietta's cells. Gey was relieved that companies had taken over HeLa distribution so that he didn't have to do it himself, but he didn't like the fact that HeLa was now completely out of his control.

Since the launch of the HeLa production factory at Tuskegee, Gey had been writing a steady stream of letters to other scientists, trying to restrict the way they used Henrietta's cells. At one point he wrote his longtime friend and colleague Charles Pomerat, lamenting the fact that others, including some in Pomerat's lab, were using HeLa for

research Gey was "most capable" of doing himself, and in some cases had already done, but not yet published. Pomerat replied:

With regard to your . . . disapproval for a wide exploration of the HeLa strain, I don't see how you can hope to inhibit progress in this direction since you released the strain so widely that it now can be purchased commercially. This is a little bit like requesting people not to work on the golden hamster! . . . I realize that it is the goodness of your heart that made available the HeLa cell and therefore why you now find that everybody wants to get into the act.

Pomerat suggested that Gey should have finished his own HeLa research before "releasing [HeLa] to the general public since once released it becomes general scientific property."

But Gey hadn't done that. And as soon as HeLa became "general scientific property," people started wondering about the woman behind the cells.

14

Helen Lane

So many people knew Henrietta's name, some one was bound to leak it. Gey had told William Scherer and his adviser Jerome Syverton in Minneapolis, plus the people at the NFIP, who'd probably told the team at Tuskegee. Everyone in the Gey lab knew her name, as did Howard Jones, Richard TeLinde, and the other Hopkins doctors who'd treated her.

Sure enough, on November 2, 1953, the *Minneapolis Star* became the first publication to name the woman behind the HeLa cells. There was just one thing—the reporter got her name wrong. HeLa, the story said, was "from a Baltimore woman named Henrietta Lakes."

No one knows who leaked the near-correct version of Henrietta's name to the *Minneapolis Star*. Soon after the article ran, Gey got a letter from Jerome Syverton, saying, "I am writing to assure you that neither Bill nor I provided the [*Minneapolis Star*] with the name of the patient. As you know, Bill and I concur in your conviction that the cell strain should be referred to as HeLa and that the patient's name should not be used."

Regardless, a name was out. And two days after it was published,

Roland H. Berg, a press officer at the NFIP, sent Gey a letter saying he planned to write a more detailed article about HeLa cells for a popular magazine. Berg was "intrigued with the scientific and human interest elements in such a story," he wrote, and he wanted to learn more about it.

Gey replied saying, "I have discussed the matter with Dr. TeLinde, and he has agreed to allow this material to be presented in a popular magazine article. We must, however, withhold the name of the patient."

But Berg insisted:

Perhaps I should describe further to you my ideas on this article, especially in view of your statement that the name of the patient must be withheld. . . . To inform [the public] you must also interest them. . . . You do not engage the attention of the reader unless your story has basic human interest elements. And the story of the HeLa cells, from what little I know of it now, has all those elements. . . .

An intrinsic part of this story would be to describe how these cells, originally obtained from Henrietta Lakes, are being grown and used for the benefit of mankind. . . . In a story such as this, the name of the individual is intrinsic. As a matter of fact, if I were to proceed with the task, my plan would be to interview the relatives of Mrs. Lakes. Nor would I publish the story without the full cooperation and approval of Mrs. Lakes' family. Incidentally, you may not be aware, but the identity of the patient is already a matter of public record inasmuch as newspaper reports have completely identified the individual. For example, I can refer you to the story in the *Minneapolis Star*, dated November 2, 1953.

I am entirely sympathetic to your reasons for withholding the name of the patient and thus prevent a possible invasion of privacy. However, I do believe that in the

kind of article I am projecting there would be complete protection of the rights of all individuals.

Berg didn't explain how releasing Henrietta's name to the public would have protected the privacy or rights of her family. In fact, doing so would have forever connected Henrietta and her family with the cells and any medical information eventually derived from their DNA. That wouldn't have protected the Lackses' privacy, but it certainly would have changed the course of their lives. They would have learned that Henrietta's cells were still alive, that they'd been taken, bought, sold, and used in research without her knowledge or theirs. Gey forwarded the letter to TeLinde and others at Hopkins, including the head of public relations, asking how they thought he should respond.

"I see no reason why an interesting story cannot be made of it without using her name," TeLinde replied. "Since there is no reason for doing it I can see no point in running the risk of getting into trouble by disclosing it."

TeLinde didn't say what "trouble" he worried they might get into by releasing Henrietta's name. Keeping patient information confidential was emerging as a standard practice, but it wasn't law, so releasing it wasn't out of the question. In fact, he wrote Gey, "If you seriously disagree with me in this, I will be glad to talk to you."

Gey wrote to Berg saying, "An interesting story could still be built around a fictitious name." But he wasn't entirely opposed to releasing her real name. "There may still be a chance for you to win your point," he wrote. "I fully realize the importance of basic human interest elements in a story such as this and would propose therefore that you drop down to see Dr. TeLinde and myself."

Gey never told Berg that the *Minneapolis Star* article had Henrietta's name wrong, and Berg never wrote his article. But the press wasn't going away. A few months later, a reporter from *Collier's* magazine by the name of Bill Davidson contacted Gey—he was planning to write a story identical to the one Berg had proposed. This time Gey

took a harder stance, perhaps because Davidson wasn't affiliated with one of Gey's major funding organizations, as Berg was. Gey agreed to be interviewed under two conditions: that he be allowed to read and approve the final article, and that the magazine not include the personal story or full name of the patient the cells came from.

The editor of the story balked. Like Berg, she wrote that "the human story behind these cells would be of great interest to the public." But Gey wouldn't budge. If she wanted him or any of his colleagues to talk with Davidson, *Collier's* would have to publish the article without the patient's name.

The editor eventually agreed, and on May 14, 1954, *Collier's* published a story about the power and promise of tissue culture. Watching HeLa cells divide on a screen, Davidson wrote, "was like a glimpse at immortality." Because of cell culture, he said, the world was "on the threshold of a hopeful new era in which cancer, mental illness and, in fact, nearly all diseases now regarded as incurable will cease to torment man." And much of that was thanks to cells from one woman, "an unsung heroine of medicine." The story said her name was Helen L., "a young woman in her thirties when she was admitted to the Johns Hopkins Hospital with an incurable cancer of the cervix." It also said Gey had grown Helen L.'s cells from a sample taken *after* her death, not before.

There's no record of where those two pieces of misinformation came from, but it's safe to assume they came from within the walls of Hopkins. As agreed, the *Collier's* editor had sent the story to Gey before publication for review. One week later she got a corrected version back from Joseph Kelly, the head of public relations at Hopkins. Kelly had rewritten the article, presumably with Gey's help, correcting several scientific errors but leaving two inaccuracies: the timing of growing the cells and the name Helen L.

Decades later, when a reporter for *Rolling Stone* asked Margaret Gey where the name Helen Lane came from, she'd say, "Oh, I don't know. It was confused by a publisher in Minneapolis. The name wasn't supposed to be revealed at all. It was just that somebody got confused."

One of Gey's colleagues told me that Gey created the pseudonym to throw journalists off the trail of Henrietta's real identity. If so, it worked. From the moment the *Collier's* article appeared until the seventies, the woman behind the HeLa cells would be known most often as Helen Lane, and sometimes as Helen Larson, but never as Henrietta Lacks. And because of that, her family had no idea her cells were alive.