The Immortal Life of Henrietta Lacks

INTRODUCTION

BRIEF BIOGRAPHY OF REBECCA SKLOOT

With a BS in Biological Science and an MFA in Creative Writing, Rebecca Skloot is uniquely suited to write about scientific topics. Having started out as a successful reporter for both scientific and mass publications, Rebecca became intrigued by the story of Henrietta Lacks while still in high school, and began pursuing it in earnest in 2000. The book ended up taking ten years to write, but topped best-seller lists, and was critically acclaimed. Now, Skloot is writing another book about "humans, animals, science, and ethics," to quote her website. She lives in Chicago, and continues to actively advocate for privacy and patients' rights. In 2015, she wrote an Op-Ed for the New York Times titled "Your Cells. Their Research. Your Permission?" in which she brought up issues of tissue donation and privacy, using Henrietta Lacks as a key example within her work.

HISTORICAL CONTEXT

Almost every medical innovation of the past half century has been directly related to the cells of Henrietta Lacks. Particularly groundbreaking was the invention of the polio vaccine in 1954, which subsequently saved millions of lives. The sequencing of the human genome in in the later half of the 20th century—a giant leap forward in understanding human genetics—also owes its success to research done on Henrietta's cells. Negative events are associated with the cells as well, however. The Tuskegee Syphilis Experiment of 1932-1972, in which hundreds of black men were allowed to suffer from syphilis untreated, speaks to the entrenched racism within the medical establishment of Henrietta's time.

RELATED LITERARY WORKS

For another intimate and immersive portrayal of a minority community struggling with the medical establishment, read Anne Fadiman's *The Spirit Catches You and You Fall Down*. Siddartha Mukherjee's *The Emperor of All Maladies*, meanwhile, provides an exhaustive and vivid exploration of the human relationship to cancer. For a primer on the tricky ethical questions that Skloot asks, pick up *Medical Ethics: A Very Short Introduction* by Tony Hope. *Polio: An American Story* by David M. Oshinsky traces the development of the polio vaccine, an innovation made possible by the cells of Henrietta Lacks. A non-traditional memoir about a woman's struggle with cancer is *Cancer Vixen*, a graphic novel by Marisa Acocella Marchetto. *The Infamous Tuskegee Syphilis Study and its Legacy*, by Susan M. Reverby, offers more discussion on the racism of the mid-century medical establishment.

KEY FACTS

- **Full Title:** *The Immortal Life of Henrietta Lacks*
- **When Written:** 2000-2010
- **Where Written:** Baltimore and Chicago
- **When Published:** 2010
- **Literary Period:** Contemporary non-fiction
- **Genre:** Non-fiction
- **Setting:** Baltimore and the surrounding area
- **Climax:** Deborah and her brother Zakariyya see pictures of their mother's cells
- **Point of View:** First person

EXTRA CREDIT

The Henrietta Lacks Foundation. Rebecca Skloot has donated some of the profits of her book to an organization called The Henrietta Lacks Foundation, specifically set up in order to provide financial assistance and support to the heirs of Henrietta Lacks, particularly those seeking out higher education.

Continued privacy breach. In 2013, researchers fully sequenced Henrietta's genome and released it to the public, seemingly not knowing or not caring about the massive privacy breach this created for her descendants, whose genetic information was now exposed.

PLOT SUMMARY

A journalist named Rebecca Skloot recounts learning about an African American woman named Henrietta Lacks, who died in 1951 of cervical cancer, but whose cancerous cells became the first immortal human cell line, called **HeLa**. Rebecca explains that HeLa made possible some of the most important discoveries of the 21st century, but that we know little about the woman behind them. Rebecca then introduces Deborah Lacks, Henrietta's daughter, and a key figure in Rebecca's quest.

Rebecca narrates Henrietta's first visits to **Johns Hopkins** hospital, where doctors first tell her she is fine, but eventually diagnose her with cervical cancer and treat her with radiation. Skloot explains that Johns Hopkins was one of the best hospitals in the country, but that it subscribed to deeply racist practices when it came to treating African Americans. She then traces Henrietta's lineage back to the town of **Clover**, VA, explaining how Henrietta met her husband (and cousin), Day.

The two first had a daughter named Elsie, who was mentally impaired, and who eventually died in an asylum called **Crownsville**.

Rebecca explains more about cervical cancer research and treatments in the 1950s, before moving on to the practice of cell culturing, which was in its early stages at this time. Doctors such as George Gey (who worked at Hopkins) were seeking to create a breed of human cells that could regenerate eternally—an immortal cell line—but were having no success. Then Gey is given a sample of Henrietta's cervical tissue by her doctors (and without her knowledge), and her cancer cells begin growing at an extraordinary rate. As her cells flourish, however, Henrietta continues to decline.

We jump to 1999, when Rebecca begins attempting to contact the Lackses; she is cautiously aided by Professor Roland Pattillo, an academic at Morehouse College who knows the Lackses, but fears that Rebecca is another white journalist out to exploit them. Rebecca begins calling Deborah every day, as well as two of her brothers, Lawrence and Sonny. Back in 1951, George Gey begins publicizing HeLa, and sending it to many different researchers around the world, but he does not make any financial profit from this. Henrietta, meanwhile, gets worse and worse, until the doctors pronounce her tumor inoperable.

Rebecca travels to Baltimore, where the Lackses live, and encounters Courtney Speed, a local woman determined to publicize Henrietta's story. Still, though, the Lackses refuse to meet with Skloot. Meanwhile in September 1951, Henrietta is in agony, and she dies the next month. The doctors at Hopkins pressure Day into allowing them to autopsy her in order to study her cells further. Her family buries her in an unmarked grave. HeLa continues to thrive, aiding researchers in creating a polio vaccine, and leading to the first ever operation to mass-produce human cells. Scientists begin using the cells to study viruses, human genetics, drugs, environmental stress, and vitamins. Journalists begin wondering about Henrietta's identity, and eventually an article is written about her using the wrong name: Helen Lane.

Without their mother, Henrietta's children suffer under an abusive cousin—especially Henrietta's youngest child, Joe, who quickly becomes a juvenile delinquent. Rebecca continues to explore Henrietta's heritage, especially noticing that though her family is descended from white plantation owners and enslaved women, the clan is strictly divided into white Lackses and black Lackses, who never mix.

We learn more about unethical research practices of the day, as emblemized by Chester Southam, who injected HeLa and other cancer cells into patients without their knowledge, and was eventually reprimanded by the New York Medical Board of Regents. This case started a debate over questions of medical consent. As this conflict rages, HeLa becomes evermore widespread, contaminating hundreds of other cell lines.

Henrietta's children grow up and begin having children of their own; Joe, however, is convicted for murder and sentenced to fifteen years. In prison, he converts to Islam and changes his name to Zakariyya. In the present day, Rebecca finally gets to meet Lawrence, Sonny, and Day, all of whom are furious over the fact that others are profiting off of Henrietta's cells while they live in poverty. Rebecca recounts when the family first found out about HeLa, and describes their shock and confusion. Eventually Hopkins contacts them to study their own genetic information, but never explains why; the fearful Deborah believes that they are testing to see if she will die like her mother.

Rebecca begins exploring the controversy over profiting from another person's tissues, which quickly made its way into the court system, but did little to help the Lackses. They continue to struggle in the 1980s, even as scientists keep making advances using HeLa. Eventually the BBC contacts them to make a documentary about Henrietta and her family, following them to a conference that Pattillo has organized in their honor. An opportunist named Cofield, however, learns about the family and tries to take advantage of them (as he is a distant relative), first pretending to help them sue Hopkins, but then eventually suing them for millions of dollars. The suit is dismissed, but the Lackses are terrified.

In the present day, at long last, Deborah agrees to talk with Rebecca. On their first meeting, Rebecca gives Deborah a gift: a picture of Henrietta's chromosomes, colored and hundreds of thousands of times magnified, taken by researcher Christoph Lengauer. Rebecca struggles to gain Deborah's trust, but it is a difficult process. Eventually Deborah takes Rebecca to meet the still-fearsome Zakariyya; he softens, however, when Deborah gives him Lengauer's picture to keep.

Rebecca learns more about Deborah, her paranoia, her medical problems, and her desperate desire to understand what has happened to her mother and sister. Along with Zakariyya, they eventually visit Lengauer's lab, where Henrietta's children see their mother's living cells. Lengauer expresses regret over the medical establishment's treatment of Henrietta, and Zakariyya thanks him. Deborah calls it "a miracle."

Eventually Deborah and Rebecca travel to Crownsville to learn more about Elsie. They find her records, and even a picture, but learn that she suffered terribly before her death. That night, Deborah finally allows Rebecca to read Henrietta's medical records, but Deborah becomes deeply anxious, even breaking out in hives. On their way back, they stop at the house of a Lacks cousin named Gary. He prays to God to take the burden of HeLa off of Deborah and give it to Henrietta, as Deborah sobs. The next day, Deborah visits the hospital, and learns that she nearly had a stroke.

Indeed, Deborah eventually does have a stroke; but her medical crisis "ease[s] tension in the family." Rebecca visits them a few months later to see one of the Lacks grandbabies be baptized.

While she's there the preacher—Deborah's husband—asks Rebecca to tell the story of Henrietta to the congregation, and she does so. A few more months go by, and Rebecca finishes her book. After repeatedly contacting Deborah, however, she learns that Deborah has died of a heart attack. At the time of her death, though, many of her grandchildren were finishing high school, and even college. Rebecca believes that Deborah died happy, and remembers that she was looking forward to reuniting with Elsie and Henrietta in Heaven.

CHARACTERS

MAJOR CHARACTERS

Henrietta Lacks – An African American wife and mother with a sixth-grade education, Henrietta Lacks dies at 31 of a particularly aggressive form of cervical cancer. Without her knowledge or consent, doctors at **Johns Hopkins** take samples of her cancerous cells and use them to form the first immortal human cell line, which becomes known as **HeLa**, and is used for countless medical innovations and discoveries. Before her illness, Henrietta is beautiful, vivacious, fearless, and devoted to her children. She is married to Day Lacks, and is the mother of Deborah, Elsie, Lawrence, Sonny, and Joe. Henrietta is also known among her family for keeping her **nails** painted a bright red.

Rebecca Skloot (the author) – A young white woman, Rebecca becomes obsessed with Henrietta Lacks after learning about her story in high school. Despite the suspicions of Henrietta's family, Rebecca uses persistence, patience, and honesty to gain their respect as she continues to research Henrietta and the fate of her **HeLa** cells. Rebecca eventually becomes a trusted part of the family's circle, and pledges to use her powers as a writer to keep Henrietta's legacy alive. She forms a special bond with Deborah, Henrietta's only surviving daughter.

Deborah (Dale) Lacks – The eccentric but devoted daughter of Henrietta, Deborah proves to be invaluable in helping Rebecca learn more about Henrietta. Although she is paranoid and highly emotional, Deborah also proves to be fiercely loyal to Rebecca, and to believe wholly in her mission to revive Henrietta's reputation in medical history. The narrative eventually becomes as much her story as it is Henrietta's, as Deborah finds out truths both joyful and devastating about her mother and her family. She also suffers from health issues of her own, and is very anxious.

David (Day) Lacks – Henrietta's husband, Day is old and forgetful by the time that Rebecca begins to write her story about his wife. Day is raised along with Henrietta as a child, and the two begin having children together in their mid-teenage years. Although Day seems to love Henrietta, he also is frequently unfaithful to her, and passes along several venereal diseases (one of which may have been responsible for the mental challenges of their oldest daughter, Elsie).

Dr. George Gey – The head of tissue culture research at **Johns Hopkins**, George Gey is the scientist responsible for growing **HeLa** into the first immortal human cell line. Having worked his way up from nothing, Gey is incredibly generous with his discovery, believing it to be his duty to share it with the rest of the scientific community. Although the Lackses believe that Gey used their mother for profit, it is unlikely that he made much if any money off of his innovation.

Joe Lacks (Zakariyya) – Henrietta's youngest child, Joe is physically and emotionally abused after his mother dies. He grows up with severe mental issues and problems with authority and is eventually imprisoned for murder. In jail, he converts to Islam and changes his name to Zakariyya Bari Abdul Rahman. Eventually Deborah and Rebecca help him learn more about his mother's legacy, and he is deeply moved by what he finds.

Lucille Elsie Pleasant – Henrietta's oldest daughter, Elsie has mental challenges and seizures, and eventually must be institutionalized. Rebecca implies that her difficulties may have been caused by syphilis that Day passed on to his wife and unborn child. Elsie dies at age 15 in an asylum, under what Deborah and Rebecca later learn were horrific conditions. Finding out what happened to her sister is one of the driving forces of Deborah's life, although the truth causes her to have an emotional and physical breakdown.

Roland Pattillo – A professor of gynecology at Morehouse and one of George Gey's only African American students. Pattillo organizes a cancer control symposium in honor of Henrietta. He is Rebecca's original link to the Lackses. Pattillo is very protective of the family, and he helps Rebecca contact them only after he is sure of her good intentions.

Sir Lord Keenan Kester Cofield – A distant relative of the Lackses, he contacts Deborah Lacks claiming to be both a lawyer and a doctor and urging her to copyright Henrietta's name in order to get a cut of the money that the cells have earned over the decades. In truth, Cofield is a fraud and a swindler who has done jail time; eventually he files a frivolous lawsuit against the Lackses and **Johns Hopkins**, utterly betraying Deborah's trust.

MINOR CHARACTERS

Lawrence Lacks – Henrietta's oldest son, born soon after her fourteenth birthday, Lawrence is drafted into the army at age sixteen after lying about his age. He eventually has children with and marries Bobbette Cooper, who helps raise his younger siblings after Henrietta dies.

Sonny Lacks – Henrietta's second son, Sonny suffers after his mother dies; he joins the air force and is eventually honorably discharged, but then is later jailed for narcotics trafficking.

Dr. Howard Jones – The gynecologist who treats Henrietta's cancer, Howard Jones allows Dr. George Gey to take samples from many of his patients, including Henrietta. After Gey's death, he collaborates on an article about the **HeLa** cell line.

Christoph Lengauer – A researcher at **Hopkins**, he hears about Rebecca's research and is appalled that Henrietta hasn't received more recognition. To thank the Lackses, he creates a colored print of Henrietta's chromosomes magnified by a high-powered microscope. He gives the print to Deborah, who in turn gifts it to Zakariyya (Joe).

Margaret – Henrietta's cousin and one of her closest friends, Margaret lives near **Johns Hopkins**, and Henrietta stays at her house after her treatments. She supplies Rebecca with many memories of Henrietta.

Sadie – One of Henrietta's cousins and closest friends, Sadie has many memories of Henrietta that she shares with Rebecca.

Margaret Gey – George's wife and fellow researcher, Margaret has trained as a surgical nurse, and believes that creating a sterile environment is crucial to encouraging an immortal cell culture.

Mary Kubicek – Twenty-one years old and working at George Gey's lab, Mary processes Henrietta's cell sample despite her initial belief that the cells aren't going to grow. She is chosen for Gey's lab because of her deft, delicate hands.

Dr. Richard Wesley TeLinde – Dr. Howard Jones' supervisor at **Hopkins**, TeLinde is one of the top cervical cancer experts in the country, and advocates for an aggressive treatment approach.

Donald Defler – Rebecca's professor at community college, he is the first person to mention Henrietta's name to her, as he includes a discussion of the **HeLa** cell line in a lesson about cancer.

Laure Aurelian – A microbiologist who worked with Gey when he took samples from Henrietta. Aurelian claims that Gey told a dying Henrietta that her cells would save the lives of countless people, and that Henrietta was moved by the news.

Dr. Lawrence Wharton Jr. – The surgeon who operates on Henrietta's cervical cancer, though he first collects samples of her cancerous cells.

Bobbette Cooper – Lawrence Lacks' wife, who helps to raise the Lacks siblings after Henrietta dies and Ethel's abuse is uncovered.

Alfred "Cheetah" Carter – Deborah's childhood crush. He eventually marries her, but soon after begins abusing her, and they eventually separate.

James Pullum – Deborah's second husband. He is a car mechanic before becoming a preacher. Though the two eventually separate, they remain close.

Alfred Jr. – Deborah's son, who spends his life in and out of jail.

LaTonya – Deborah's daughter.

Stanley Gartler – A geneticist who finds a major problem in cell culturing: **HeLa** cells have contaminated all eighteen of the most commonly used cell cultures in the world.

Alexis Carrel – A French surgeon at the Rockefeller Institute in the early 20th century. Carrel is a famous scientist who wins a Nobel Prize for his work, but he is also a racist and a eugenicist.

Leonard Hayflick – The scientist who disproves Carrel's work.

Michael Rogers – The first reporter to write about the Lackses. His article in *Rolling Stone* features Henrietta in 1976.

Tommy Lacks – Henrietta's grandfather, who raises both her and her future husband, Day, from childhood.

Fred Garret – Henrietta and Day's cousin. Fred convinces the couple to move their family in order to be closer to a steel mill, before getting drafted. A cousin of Henrietta's, he works in the fields with her and Day during their childhood

Cliff Garret – Fred's brother, and co-owner of a convenience store. He's a cousin of Henrietta's, he works in the fields with her and Day during their childhood. Impoverished by the time Rebecca meets him, he eventually shows the author where Henrietta is buried.

Crazy Joe Grinnan – Henrietta's cousin. This giant man is so in love with her that he tries to kill himself several times to prove his affection.

Gladys – Henrietta's sister, who believes that Day isn't good enough to marry Henrietta.

Lillian – Henrietta's youngest sister.

Johnny Pleasant – Henrietta's father, who gives up his children to different relatives after his wife Eliza Pleasant dies.

Eliza Lacks Pleasant – Henrietta's mother, who dies in 1924 in childbirth.

John Hopkins – Having made millions as a banker and grocer, Hopkins donates $7 million to start Hopkins Hospital for the Poor, specifically hoping to help black patients.

George Papanicolaou – A Greek researcher who invents the Pap smear, a crucial test in detecting and combating cervical cancer.

Howard Kelly – The doctor who pioneers the use of radium in treating cervical cancer.

Ethel – Henrietta's cousin and Galen's wife. Ethel hates Henrietta but moves into her house after Henrietta's death. Ethel abuses and starves Henrietta's children, but saves the cruelest treatment for Joe.

Galen – Ethel's husband, who lusts after Henrietta before she dies. After Henrietta's death, he sexually abuses her daughter Deborah.

Courtney Speed – A local woman who owns a grocery store and has created a foundation to build a Henrietta Lacks museum.

Barbara Wyche – A sociologist at Morgan State University who works with Courtney Speed to help get recognition for Henrietta.

Reverend Jackson – A local minister. Jackson helps Rebecca to find Courtney Speed.

Franklin Salisbury Jr. – The president of the National Foundation for Cancer Research. He organizes a conference in Henrietta's honor and invites Deborah.

Paul Lurz – As the director of performance and improvement at **Crownsville**, he helps Deborah and Rebecca find records on Elsie.

Susan Hsu – A graduate student who works for McKusick, she attempts to obtain genetic samples from the Lackses. She does not communicate with them, however, and so they remain unaware of the purpose of the samples.

Henry Beecher – A Harvard anesthesiologist who publishes a study in the New England Journal of Medicine calling hundreds of scientific studies unethical.

George Hyatt – A Navy doctor working at the National Cancer Institute. He witnesses normal transplanted cells becoming malignant.

Lewis Coriell – A renowned cell culturist who publishes a paper about how normal cells become cancerous.

Chester Southam – A virologist who becomes concerned that humans can contract cancer from **HeLa**, and tests his theories on cancer patients and prisoners. His experiments are eventually condemned as immoral.

Emmanuel Mandel – The director of medicine at the Jewish Chronic Disease Hospital in Brooklyn. He makes an agreement with Southam allowing him to conduct research on patients, but other doctors protest the deal and the experiment is eventually condemned and halted.

William Hyman – A lawyer on the Jewish Chronic Disease Hospital's board. He becomes concerned about the Southam experiments.

Louis Lefkowitz – The New York Attorney General who launches an investigation into Southam and Mandel's research, accusing them of fraud and unprofessional conduct.

Bertil Bjorklund – A Swedish cancer researcher who injects both himself and his patients with **HeLa** cells for the purposes of experimentation.

Alice Moore – A researcher and Southam's colleague.

Martin Salgo – The patient whose case provided precedent for the idea of informed consent.

Robert Stevenson – A scientist involved in the meeting about **HeLa** contaminating other cells. He eventually becomes the president of the American Type Culture Collection.

T. C. Hsu – A geneticist from the University of Texas, and the chair of Gartler's conference session.

Robert Chang – The creator of the Chang Liver Cell Line and a Harvard scientist. He is dismayed to find that his cell line has been contaminated by **HeLa**.

Walter Nelson-Rees – A chromosome expert and director of cell culture at the Naval Biomedical Research Laboratory, Nelson-Rees discovers that cells claimed by Russian scientists to have a cancer virus are actually **HeLa**.

Harry Eagle – A researcher at the NIH who uses **HeLa** to develop a standardized culture medium that can be made by the gallon and be shipped ready to use.

Samuel Reader – The owner of Microbiological Associates. He helps to make cell culturing a profitable industry.

Monroe Vincent – A researcher and business partner of Reader's who helps use **HeLa** to create an industrial-scale, for-profit cell distribution center.

William Scherer – One of George Gey's colleagues on the NFIP advisory committee.

Jerome Syverton – William Scherer's adviser in Minneapolis.

Victor McKusick – A leading geneticist at **Hopkins**. He helps write an article about the **HeLa** cells line in tribute to Gey after the researcher's death.

Roland H. Berg – A press officer at NFIP who insists on releasing Henrietta's name in an article about cell cultures.

Bill Davidson – A reporter from Collier's Magazine. He contacts Gey for information about Henrietta, but eventually gets her name wrong in his article.

J. Douglas – A researcher at Brunel University who writes a letter to *Nature* about **HeLa** and Henrietta's anonymity.

Henry Harris – A researcher who fuses **HeLa** with mouse cells, thereby creating human/animal hybrids with his partner John Watkins.

John Watkins – A researcher who fuses **HeLa** with mouse cells, thereby creating human/animal hybrids with his partner Henry Harris.

John Moore – After he contracts leukemia, his cells are used to make the Mo cell line, which eventually becomes immensely profitable for David Golde. Moore ends up suing Golde for the profits.

David Golde – A researcher at UCLA. He investigates John Moore's tissues, and eventually develops a cell line called Mo that makes him millions.

Ananda Mohan Chakrabarty – A scientist at GE, he creates a bacterium that can clean up oil spills but is at first denied a patent because a bacterium is a living organism. Eventually, however, he wins his case because the bacterium wasn't naturally occurring.

Ted Slavin – A hemophiliac who was repeatedly exposed to hepatitis B through contaminated blood. He has large quantities of antibodies in his system to fight the disease, and eventually sells his blood serum to help find a cure for the illness.

Baruch Blumberg – A Nobel Prize-winning virologist, he enters into a years-long partnership with Slavin that eventually leads to his discovering the hepatitis B antigen and creating the first hepatitis B vaccine.

Judge Joseph Warner – He referees the depositions in the case of John Moore against David Golde.

Michael Gold – The author of a book about **HeLa** contamination that eventually makes its way to the Lackses.

Harald zur Hausen – The discoverer of HPV, the virus which caused Henrietta's cancer.

Richard Axel – A Nobel Prize-winning molecular biologist, he infects **HeLa** cells with HIV in order to understand the virus's infection process.

Jeremy Rifkin – An author and activist against the manipulation of DNA. He sues to halt Richard Axel's research.

Leigh van Valen – An evolutionary biologist at the University of Chicago. She posits that the **HeLa** cells have become their own species.

Adam Curtis – A BBC producer who makes a documentary about Henrietta.

Terry Sharrer – As the curator of the Smithsonian National Museum of American History, he helps to organize a small event in honor of Henrietta.

Representative Robert Ehrlich Jr. – A U.S. congressman who speaks in the house asking for Henrietta to be acknowledged as the donor of the **HeLa** cell line.

William Brody – William Brody is the president of **Johns Hopkins** when the Lackses (with the help of Wyche) try to get acknowledgement from the hospital.

Ross Jones – Brody's assistant.

Richard Kidwell – An attorney at **Hopkins** who eventually exposes Cofield as a fraud.

Grover Hutchins – A pathologist who is listed in Cofield's lawsuit.

JoAnn Rodgers – A **Hopkins** spokesperson who speaks to Rebecca.

Kathy Hudson – A molecular biologist and chief of staff at the NIH who talks to Rebecca about privacy issues surrounding stored samples.

Judith Greenberg – The director of the Division of Genetics and Developmental Biology at the National Institute of General Medical Science, she discuss issues surrounding the donation of tissues with Rebecca.

Ellen Wright Clayton – A physician and lawyer, and director of the Center for Biomedical Ethics and Society at Vanderbilt. She seeks a public debate about researchers' possession and use of patients' tissues.

Lori Andrews – The director of the Institute for Science, Law, and Technology at Illinois Institute of Tech. She wants conscientious objectors to refuse to give tissue samples.

David Korn – The vice provost for research at Harvard, who believes that giving patients power over their tissues is shortsighted and ultimately impossible.

Warren Grody – The director of the Diagnostic Molecular Pathology Laboratory at UCLA. He is an opponent of tissue research consent, believing it to be unfeasible.

Robert Weir – The founder of a biomedical ethics center at the University of Iowa, he favors fewer lawsuits and more disclosure by researchers.

Vincent Racaniello – A professor of microbiology and immunology at Columbia, he is horrified at the idea of restricting **HeLa** cell use.

President Richard Nixon – The president of the United States from 1969-74, Nixon signs the National Cancer Act into law and launches the War on Cancer.

Marie Curie – Part of the husband-and-wife team that discovered radium and its ability to destroy cancer cells.

Pierre Curie – Part of the husband-and-wife team that discovered radium and its ability to destroy cancer cells.

Jonas Salk – A researcher who invents the polio vaccine.

Warren Lewis – George Gey's mentor.

Gardenia – A friend of Bobbette's. Her brother-in-law reveals the truth about the **HeLa** cell line to Bobbette, who then shares it with the Lacks family.

Minnie – A cleaning woman local to Baltimore whose job it is to keep the Geys' lab spotless.

Gary – Gladys's son and Henrietta's nephew, he blesses and prays with Deborah after she visits **Crownsville**.

Hector Henry (Cootie) – Henrietta's cousin, who is partially paralyzed because of polio.

Emmett Lacks – A cousin of Henrietta's, he helps organize her relatives to donate blood for her.

Eldridge Lee Ivy – A man in the Lackses' neighborhood. He threatens Joe, but Joe eventually stabs and kills him.

June – A friend of Joe Lacks.

Fannie – The midwife who delivers Henrietta in 1920.

Munchie – The midwife who delivers Day.

Mourning – Henrietta's enslaved great-great grandmother.

Edmund – Mourning's son, and Henrietta's great grandfather.

Henrietta Pleasant – Edmund's daughter and Henrietta's great aunt.

Albert Lacks – Henrietta's maternal great grandfather, who is white.

Winston Lacks – Albert's son.

Benjamin Lacks – Albert's son.

Albert Lacks Jr. – Albert's son.

Maria – A slave, and the mother of Albert's children.

John Smith Pleasants – The white man who owned both Mourning and her husband.

Carlton Lacks – One of the oldest white Lackses in Clover, he is a distant cousin to the black Lackses, but says racist things about them.

Ruby Lacks – One of the oldest white Lackses in Clover, she is a distant cousin to the black Lackses, but says racist things about them.

Davon – Deborah's grandson.

Keith Speed – Courtney Speed's oldest son.

Cyrus Speed – Courtney Speed's son.

Joe Speed – Courtney Speed's son.

Tyrone Speed – Courtney Speed's son.

George Gey Jr. – George Gey's son.

JaBrea – Sonny's baby granddaughter.

The Greeter – A man who welcomes people as they arrive in **Clover**, he directs Rebecca to **Lacks Town**.

Old Man Snow – The first owner of a tractor in **Clover**, Henrietta's childhood home.

THEMES

In LitCharts literature guides, each theme gets its own color-coded icon. These icons make it easy to track where the themes occur most prominently throughout the work. If you don't have a color printer, you can still use the icons to track themes in black and white.

RACISM, CLASSISM, AND SEXISM

The problems of racism, classism, and sexism in America are crucial to understanding the narrative of Henrietta Lacks. A poor and under-educated black woman, Henrietta had essentially no say in her medical care during her life. She simply did what her doctors told her and had faith that she would be healed, even when her cancer treatments put her through tremendous physical and psychological pain. Her doctors, in return, failed at every turn to keep her informed of their decisions and methods, even neglecting to tell her that her cancer treatment would make her infertile. Their arrogant attitude towards her stemmed largely from Henrietta's low social and economic status as a black woman, which made her white, well-educated doctors believe that she didn't even have the capacity to understand their decisions.

Of course, these views grew even worse after Henrietta died, when her cells became known only as **HeLa**. The scientists who used her tissues in their research and innovations rarely had any idea of who Henrietta was; while they received awards and recognitions, she stayed completely unnoticed for her contribution to the scientific community. Even worse, the researchers in question completely failed to keep her family informed of the work that they were doing, or to compensate them in any way. As a result, the Lacks children grew up not to be proud of their mother's "immortality," but instead to be traumatized by it. The scientific community still felt no need to include this largely poor, black family in their discoveries. Despite sharing the genes that helped researchers study everything from polio to cancer to chromosomes to radiation, Henrietta Lacks' descendants didn't even have health insurance. In fact, immoral reporters and swindlers even tried to take advantage of the Lackses, believing them to be stupid and gullible because of their lack of education.

Towards the end of the book, Henrietta's daughter, Deborah, tells the author—a white journalist named Rebecca Skloot—that it's too late for the generation of her and her brothers. Rebecca should seek instead to help their children, bettering their socioeconomic status using the profits she will make with her book about Henrietta. Soon after this, Deborah dies, her health essentially destroyed by conditions that would have been completely preventable in a more privileged member of society. The destruction of Deborah's generation of Lackses is proof that racism, classism, and sexism are still alive and well in America, and by the end of the narrative, the writer has clearly joined in the fight against all three.

FAMILY AND FAITH

Throughout their various trials, the Lacks siblings manage to stick together, bonded by their love for each other and their shared anger and grief over what happened to their mother. As the narrative opens, they even express a great deal of suspicion towards the author of the book, believing that they can only trust one another after the many betrayals that they've experienced. The siblings are also, of course, tied together genetically by the very same genes that compose the **HeLa** cell line. Throughout the book the author, Rebecca Skloot (a white journalist) takes care to mention even the extended family—cousins, stepmothers, distant ancestors, etc.—by name, emphasizing the largeness and complexity of the Lacks clan. While before the world didn't even know Henrietta Lacks' name, Rebecca makes sure that her readers will know the names of everyone from the white

Lacks family patriarch to Henrietta's youngest great-grandchild. Just as the HeLa cell line spreads all over the world, so the Lacks family constantly expands and shifts, even further enhancing the reach of Henrietta's genes.

Within the Lacks family, the idea of faith is a vital means of holding the clan together. Deborah, Henrietta's daughter and one of the main characters in the book, believes deeply in Christianity, and even prays to God for Rebecca to take the burden of her mother's memory away from her. Deborah's brother, Zakariyya, turns to Islam in prison, attempting to use faith to stay sane while behind bars. For the Lackses, faith means family. One of the climactic scenes in the book comes when Deborah's husband at the time, Reverend James Pullum, calls the author onstage to tell his congregation about the book she's working on. An outsider for much of the narrative, Rebecca feels momentarily accepted and included in this scene. Despite being an atheist herself, she understands the power that religion has for the Lacks family, and the deep meaning that it gives to their lives.

PROGRESS VS. PRIVACY

Perhaps the most thorny and difficult issue within the narrative of Henrietta Lacks is the issue of progress vs. privacy. On one hand, Henrietta Lacks' story is clearly one of an arrogant medical establishment taking advantage of a poor black woman. This is irrefutable. Yet at the same time, it is undeniable that Henrietta's cells have created unparalleled progress within the field of cellular biology, leading to innovations that truly may not have happened had scientists not possessed the **HeLa** cell line. Although the medical establishment clearly took advantage of both Henrietta and her family, the world is undoubtedly better because the cell line exists.

This issue, author Rebecca Skloot explains, has huge implications for the modern world. She traces the timeline of when patients began to use their tissue samples for financial gain, and follows several lawsuits in which people claimed that money made off of pieces of their bodies belonged to them. Even now, she explains, a debate rages about discarded tissues that exist in huge quantities in hospitals around the country. Many scientists and researchers believe that these tissues can and should be used for any experimental purposes that researchers require. Other patients' rights activists believe that any such use requires informed consent on the part of the patient.

The question gets only more complicated when you consider the complex problem of DNA sequencing. Such an act can tell you intimate details about a person or a family, such as what diseases they will be predisposed to in life. Since the HeLa line is essentially everywhere in modern medicine, it is all too easy for the Lacks family's privacy to be violated over and over through their DNA. Yet to deny the growing field of DNA research the tools that it needs to continue progressing seems like a terrible course of action. In the end, Skloot doesn't pose any easy answer to this issue, but mostly just reminds her readers of the validity of both sides of the argument.

TECHNOLOGY AND GLOBALIZATION

The history of the **HeLa** cell line is not simply a story of a single woman, a single family, or even a single field (cellular biology). It is, instead, the narrative of a world moving towards a modern, scientific age. To modern readers, the treatments enacted on Henrietta and the experiments carried out on many unknowing subjects are simply horrific. As the book moves forward, and as more and more innovations continue to come about through the HeLa cell line, we begin to understand just how far technology has come since the narrative began. The same medical establishment that didn't even understand the dangers of radiation is, by the end of the book, producing blown-up, colored slides of single chromosomes. Henrietta is crucial to this narrative because it was only due to her cells that many of these innovations came about.

We also see, as HeLa becomes more and more common in the scientific world, how the forces of globalization begin to shape the narrative. Henrietta's cells, for instance, eventually show up in Russia, and even go up into space. As her genetic material spreads from a single hospital to far-flung countries, we as readers are able to track how interconnected the world has become, and how crucial technology has become to every aspect of our lives. While the book often forces us to see the shades of gray within the medical establishment—a place that encourages privilege and often views patients as material rather than people—we still have to stop and wonder at the magnificent inventions that medicine has given us, and at the sheer scope of Henrietta's reach. Her story is the story of modern science, one that has ups and downs, but has undoubtedly created some of the greatest miracles of the past half-century.

IMMORTALITY AND ITS COSTS

Ordinarily, when we think of immortality, we think of a single person living forever. In the case of Henrietta Lacks, however, she has not found the secret to eternal life—but her cells have. Yet as in every fairy tale and myth, immortality comes at a cost. The first price to be paid, of course, was Henrietta herself, who died because of the very same aggression that made her tumor cells such ideal candidates for immortality. Henrietta's death, and the way that her tissues were treated after death, then had huge and costly implications for her family. Her children missed their mother, of course, but they were also shocked, horrified, and confused by the idea that their mother was in some way "immortal." Their mental health, particularly that of Zakariyya and Deborah, was a quick victim of their mother's immortality, leading to mental issues like paranoia and anger over the way that the scientific establishment had (they felt) taken their mother away from them.

The mention of Henrietta's descendants, of course, brings up the question of the financial cost of Henrietta's immortality. Although the original creator of the HeLa cell line, George Gey, made little money off of his innovation, drug and research companies have since made billions of dollars off of research and inventions that began with experiments on **HeLa**. Henrietta's various descendants express their outrage within the book that they are not compensated for their mother's contributions to society; they believe that they are owed something by the medical establishment, for having essentially given away their mother in exchange for scientific innovation.

The question of cost is a complicated one, because of the question of who really *owns* a tissue. The fact remains, however, that Henrietta's cells have cured the world of countless diseases while her family members don't even have health insurance to buy the drugs that their genetic material helped to create. The Lacks family has paid the cost of Henrietta's immortality, but has not truly reaped its rewards.

SYMBOLS

Symbols appear in **teal text** throughout the Summary and Analysis sections of this LitChart.

HELA

HeLa is the cell line that comes from Henrietta Lacks. It is "immortal"—meaning that it can continue to regenerate indefinitely if given nutrients and space to grow. To scientists, HeLa represents essentially endless possibility; it has been used in countless advances and innovations over the past half-century, and continues to be one of the most frequently used cell lines in the world. To Henrietta's descendants, however, it represents a legacy of exploitation and racism, in which scientists profited off of pieces of Henrietta's body while her descendants remain impoverished. Rebecca Skloot examines both sides of this puzzle, noting the medical miracles that HeLa helped researchers to achieve, while also taking an in-depth look at the negative effects that it had on Henrietta's descendants. Ultimately Skloot comes to the conclusion that HeLa does have a deeply complex legacy, but that we must learn from it in order to continue advances in medicine while also leaving behind the racist, classist, and sexist policies that led to its existence in the first place.

STATUE OF JESUS

In front of **Johns Hopkins** is a statue of Jesus, the toe of which patients and doctors alike rub for luck. For Rebecca Skloot, the statue represents the intersection of medicine and religion—two vital forces when understanding the history of Henrietta Lacks. Doctors, after all, see **HeLa** as purely scientific. Henrietta's family members, meanwhile, believe that it was divine providence that led to her cells' immortality. Throughout the book, the cosmopolitan Rebecca struggles to comprehend the Lackses' deep and sincere religious faith, eventually coming to the understanding that they see HeLa as proof of the eternal life promised in the Bible. Of course, the statue is also an ironic symbol; although it is supposed to bring luck, the unlucky Henrietta died in Hopkins. Yet it was her terrible fate that led to the discovery of HeLa, and the various innovations to which it led.

JOHNS HOPKINS

Like many symbols within the book, the research university and hospital of Johns Hopkins is a double-edged sword. Founded specifically to help the poor and minorities, it emblemizes cutting-edge medical advances and high quality of care. On the other hand, in the 1950s Johns Hopkins had segregated wards, and subscribed to practices that were generally racist, sexist, and classist. Henrietta's doctors did not keep her informed about her condition, nor did they tell either her or her family that they were taking the tissue samples that would eventually become **HeLa**. Indeed, for the Lackses, Johns Hopkins represents a criminally negligent institution that actively attempted to keep them in the dark about profits made off of Henrietta's cells. Rebecca comments upon both the good and the bad parts of Hopkins, ensuring that readers understand its complex and troubling legacy.

CLOVER AND LACKS TOWN

Clover and Lacks Town, where Henrietta Lacks grew up, represent a bygone era for Rebecca Skloot. She sees both the idyllic, pre-industrial side, as well as the deep racial divides that lie underneath its surface. Rebecca also notes the extreme poverty in which its residents—especially African Americans—live. At the same time Deborah Lacks thinks of Clover as her favorite place on earth, because she associates it with her mother (and indeed, Clover is where Henrietta is buried in an unmarked grave). At the end of the book, Rebecca returns to Clover to find that it has disappeared entirely, a victim of an economic downturn and of racist and classist financial policies. Once learning that Deborah has died, Rebecca remembers that Deborah hoped that Heaven would look like Clover, and that she would see her mother and sister there. Thus in the end, despite its flaws, Clover becomes a symbol of the life that Deborah never got to have with her mother and her sister.

HENRIETTA'S FINGERNAILS AND TOENAILS

Henrietta's relatives all remember her pristine fingernails and toenails, which she kept painted a vibrant red. Indeed, her female cousins only understood how sick she was once they saw how chipped her nails were becoming, as she was too weak to continue painting them. Meanwhile, the nails mean something quite different for Mary Kubicek, George Gey's assistant. When she attends Henrietta's autopsy, the sight of Henrietta's painted nails makes her realize for the first time that **HeLa** came from the suffering of a real human being.

TUSKEGEE INSTITUTE

Of all the symbols within the book, the Tuskegee Institute has one of the most dramatically double-sided legacies. On one hand, Tuskegee was the site of the cell-production factory where a staff of black, female technicians produced **HeLa** in order to help cure polio. This represented a huge and public step forward for African Americans and women, as these technicians became an integral part of one of the most celebrated medical advances of the 21st century. Yet at the same time, Tuskegee was also the home of the Tuskegee Syphilis Experiments, one of the most infamously racist studies in American history, in which hundreds of black men were allowed to suffer and die from syphilis in the name of science. Thus Tuskegee represents on one hand the ways in which the medical establishment can aid underrepresented groups such as minorities and women, and on the other emblemizes the extent to which doctors victimized these same groups.

CROWNSVILLE STATE HOSPITAL

Elsie Lacks' family sent her to Crownsville (formerly known as the Hospital for the Negro Insane) after it became impossible to keep her safe and healthy at home. During the 1950s, however, Crownsville was essentially a dumping ground for unwanted African Americans—the ill, the mentally impaired, and even criminals. The hospital was hugely overcrowded, and doctors often performed terrible experiments on their patients, who were unable to give consent. For Rebecca Skloot, Crownsville represents the horrors that can be inflicted on voiceless patients (especially a mentally ill black woman like Elsie) by an uncaring medical establishment. For Deborah Lacks, meanwhile, Crownsville emblemizes the breakup of her family. She mourns for Elsie has much as she does for Henrietta, and is obsessed with the horror of her sister's fate.

❝ QUOTES

Note: all page numbers for the quotes below refer to the Random House edition of *The Immortal Life of Henrietta Lacks* published in 2010.

Prologue Quotes

❝ The Lackses challenged everything I thought I knew about faith, science, journalism, and race. Ultimately, this book is the result. It's not only the story of HeLa cells and Henrietta Lacks, but of Henrietta's family—particularly Deborah—and their lifelong struggle to make peace with the existence of those cells, and the science that made them possible.

Related Characters: Rebecca Skloot (the author) (speaker), Henrietta Lacks, Deborah (Dale) Lacks

Related Themes:

Page Number: 8-9

Explanation and Analysis

As she begins her story, the narrator--journalist Rebecca Skloot--reflects on its significance, and its personal effect on her. She emphasizes to her readers that this narrative is not simply about HeLa, the cells that revolutionized cellular biology, but about the human beings behind those cells.

Making clear that this will be a story of faith and family as well as science, Rebecca takes care to credit Henrietta's relatives--the very people who feel forgotten by history and by the medical establishment that profited off of her immortal cancer cells.

In so doing, Rebecca firmly states that her allegiance is to the descendants and their narrative, and that she means to harshly critique the medical establishment for the way it treated them. Although she by no means diminishes the scientific wonders achieved with Henrietta's cells, nor does she let doctors, researchers, and institutions off the hook for the bigoted and arrogant way that they treated both Henrietta and her relatives.

Chapter 1 Quotes

❝ For Henrietta, walking into Hopkins was like entering a foreign country where she didn't speak the language...she'd never heard the words cervix or biopsy. She didn't read or write much, and she hadn't studied science in school. She, like most black patients, only went to Hopkins when she thought she had no choice.

Related Characters: Rebecca Skloot (the author) (speaker), Henrietta Lacks

Related Themes:

Related Symbols:

Page Number: 19

Explanation and Analysis

Rebecca begins Henrietta's story at Johns Hopkins, a hospital renowned for its medical accomplishments and for its willingness to treat poor and minority patients. The narrative, however, questions Hopkins' inclusivity, noting how "foreign" and intimidating it would have seemed to Henrietta.

The narrator also takes this opportunity to introduce race as a vital and omnipresent theme throughout the book. She notes that many black patients viewed going to the hospital as a last resort, and later expands on the American medical establishment's long history of racism and unethical practices when it came to minority patients.

That Henrietta is willing to go go the hospital despite these circumstances also underlines just how sick she is. Although she fears the hospital, she is in too much pain to avoid going there any longer--an early sign of just how sick she is.

Chapter 4 Quotes

> Henrietta's cells weren't merely surviving, they were growing with mythological intensity...They kept growing like nothing anyone had ever seen, doubling the numbers every twenty-four hours, stacking hundreds on top of hundreds, accumulating by the millions.

Related Characters: Rebecca Skloot (the author) (speaker), Henrietta Lacks

Related Themes:

Related Symbols:

Page Number: 47

Explanation and Analysis

With doctors having taken a sample of Henrietta's tissue, these cells now become a different entity from her entirely. While Henrietta is dying, her cancerous cells are thriving; in fact, they are "growing like nothing anyone had ever seen."

In this passage, Rebecca sounds almost hyperbolic, stating that Henrietta's cells seem to grow "with mythological intensity." She is not exaggerating, however. Instead, she is emphasizing for readers just how unprecedented this phenomenon was, and how awestruck researchers were when it occurred. In this way, Rebecca makes clear just how groundbreaking the discovery of HeLa was, foreshadowing the truly world-changing effect that it would have on multiple scientific fields.

Chapter 6 Quotes

> Everything always just about the cells and don't even worry about her name and was HeLa even a person...You know what I really want? I want to know, what did my mother smell like? For all my life I just don't know anything, not even little common little things, like what color did she like? Did she like to dance? Did she breastfeed me? Lord, I'd like to know that. But nobody ever say nothing.

Related Characters: Deborah (Dale) Lacks (speaker), Henrietta Lacks

Related Themes:

Page Number: 61-62

Explanation and Analysis

Reflecting on her mother's legacy, Deborah expresses anger and confusion, still incredulous that people can benefit from her mother's cells without even knowing her name. She emphasizes that Henrietta was a person, and should be remembered for her human qualities rather than for her (unknowing) scientific contribution.

What also comes through in this passage is Deborah's continuing feelings of loss and grief, despite the many decades since Henrietta's death. She longs to know how her mother smelled, her favorite color, and if she liked to dance. In short, she still yearns for a childhood, and a mother, whom she never had.

Without ever saying it, Rebecca makes clear how damaging the continuing controversy around HeLa has been to Deborah. Having lost her mother many years ago, the wound is constantly reopened by insensitive researchers and journalists who think of Henrietta as a resource rather than a human, and who fail to understand Deborah's longing for her mother.

Chapter 8 Quotes

Each day, Henrietta's doctors increased her dose of radiation, hoping it would shrink the tumors and ease the pain until her death. Each day the skin on her abdomen burned blacker and blacker, and the pain grew worse.

Related Characters: Rebecca Skloot (the author) (speaker), Henrietta Lacks

Related Themes:

Page Number: 75

Explanation and Analysis

As Henrietta grows sicker, her doctors turn the only treatment for cancer they know, radiation, in an effort to "ease [her] pain." This procedure, however, burns Henrietta's stomach skin black, and only makes her agony worse.

In addition to being a story of faith, family, and legacy, *The Immortal Life of Henrietta Lacks*is also a narrative of cancer treatments, and their slow advance into the twenty-first century. While radiation was a huge step, as often as not it only increased patients' pain and heralded their demise.

Although it is comforting to tell ourselves that doctors know what they are doing, too often treatments are found to be as harmful as they are helpful. This was definitely true in the case of radiation, which in fact added to the agony and indignity of Henrietta's final days. Ironically, it was her cells that would later help researchers find more effective (and less damaging) cancer treatments that would help generations of patients after her death.

Chapter 10 Quotes

Now I don't know for sure if a spirit got Henrietta or if a doctor did it...but I do know that her cancer wasn't no regular cancer, cause regular cancer don't keep on growing after a person die.

Related Characters: Hector Henry (Cootie) (speaker), Henrietta Lacks

Related Themes:

Related Symbols:

Page Number: 95

Explanation and Analysis

Commenting on the immortality of HeLa, Henrietta's cousin, Cootie, states his relative must have been tampered with, either by a doctor or "a spirit." He believes that HeLa's longevity proves this fact, since "regular cancer" would not continue to live even after its host had passed on.

Although Rebecca comes from a background of science, logic, and medicine, she never derides the more religious or superstitious views of Henrietta's family. Instead, she gives them their due, trying to understand their origins, and allowing various relatives to voice their views within the pages of her book.

Further, as Rebecca will make clear, Cootie's suspicion that a doctor may have altered Henrietta in some way is not entirely unfounded. The American medical establishment of the mid-twentieth century was incredibly cavalier when it came to the bodies of black patients and women, often performing procedures or conducting experiments on them without informing them, let alone obtaining informed consent.

Chapter 12 Quotes

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 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."

Related Characters: Mary Kubicek, Rebecca Skloot (the author) (speaker), Henrietta Lacks

Related Themes:

Related Symbols:

Page Number: 105

Explanation and Analysis

A research assistant at the time of Henrietta's death, Mary Kubicek recounts her patient's autopsy, recalling distinctly her shock and dismay at seeing Henrietta's "chipped bright red [nail]polish." It was only at this point, she recalls, that she realized how HeLa had come "from a live woman."

Mary's account shines a bright light on how easy it is for doctors and researchers to dehumanize their patients. Although Mary is a decent and moral person, she has only been working with Henrietta's cancer cells--which of course feel far removed from an actual person.

Henrietta's toenails, however, deliver a sharp rebuke to the young researcher. In that moment, she sees Henrietta not as a test subject, but as a human woman who--not too long ago--engaged in activities as relatable as painting her toenails.

The vast majority of researchers who work with HeLa, of course, have never had such an experience. To them, HeLa is merely a useful tool, rather than the final remnant of a now-dead woman.

Chapter 13 Quotes

❝ 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…

Related Characters: Rebecca Skloot (the author) (speaker), Henrietta Lacks

Related Themes:

Related Symbols:

Page Number: 112

Explanation and Analysis

At this point in her narrative, Rebecca broadens out, moving from Henrietta's personal story to HeLa's initial effects on modern medicine. Even as she does so, however, she makes sure to stay focused on one of her main themes: race and science in America.

In this passage, Rebecca spotlights the effort to discover a polio vaccine. In order to do so, researchers needed to mass-produce large amounts of HeLa, a task that fell to the black, largely female "scientists and technicians" of the Tuskegee Institute.

On one hand, this moment is an uplifting and optimistic one, as black women use "cells from a black woman" to help end the plague of polio which had been afflicting "millions of Americans." Yet there is a terrible irony in this effort's location: the Tuskegee Institute is also infamous for its syphilis studies, which involved letting huge numbers of black men go untreated and die in an effort by white researchers to further understand the STD. Thus, on one campus and at the same time, racial progress and deadly racism co-existed.

Chapter 15 Quotes

❝ No one told Sonny, Deborah, or Joe what had happened to their mother, and they were afraid to ask…As far as the children knew, their mother was there one day, gone the next.

Related Characters: Rebecca Skloot (the author) (speaker), Sonny Lacks, Henrietta Lacks

Related Themes:

Page Number: 128

Explanation and Analysis

As she will do throughout the narrative, Rebecca makes sure never to stray too far from the story of the Lacks family, and the effects that HeLa and its fame had on Henrietta's descendants. At this point, Henrietta's children know nothing at all about HeLa--in fact, they do not even know how or why their mother died.

Although keeping children in the dark was a common practice at the time, the sudden and mysterious loss of their mother proved hugely traumatic for all three of the Lacks children. To find out decades later that researchers and doctors had benefited (both intellectually, practically, and financially) from their mother's death would only add insult to injury.

As the book continues, Rebecca always takes care to trace the different ways that Henrietta's children were affected by her death--from the stoic Sonny to the troubled Joe (later Zakariyya) to the bereft but ever-determined Deborah. At no point does she allow her readers to forget that her characters are real people who mourn their mother's death (no matter how much the rest of the world profited from it).

Chapter 16 Quotes

❝ It sound strange…but her cells done lived longer than her memory.

Related Characters: Hector Henry (Cootie), Rebecca Skloot (the author) (speaker), Henrietta Lacks

Related Themes:

Related Symbols:

Page Number: 137

Explanation and Analysis

Rebecca returns to Cootie, who reflects on how "strange" it is that Henrietta's "cells" have lived longer than her "memory." In essence, he is saying, a part of Henrietta's body has survived despite the fact that almost everybody (including the people working with it every day) have forgotten who she was, or that she even existed.

In short, the uneducated yet eloquent Cootie has just articulated the ultimate goal of *The Immortal Life of Henrietta Lacks*. A deeply humane journalist and scientist, Rebecca simply cannot bear the thought that Henrietta Lacks, a woman who made inarticulable contributions to medical and technological process, has become lost to history. With her book, she intends to resurrect Henrietta's "memory," ensuring that it will forever be paired with her immortal cells.

> The white Lackses know their kin all buried in here with ours cause they family. They know it, but they'll never admit it. They just say, "Them Black Lackses, they ain't kin!"

Related Characters: Cliff Garret (speaker)

Related Themes:

Related Symbols:

Page Number: 144

Explanation and Analysis

Rebecca now turns her attention to the history of the Lackses--which, it turns out, is filled with mystery and racial divisiveness. Although some members of the Lacks clan are black while others are wait, the black Lackses claim that the white Lackses will never "admit" that they are related to the African-American branch of their family. And indeed, when Rebecca visits a family of white Lackses, they confirm this bigoted viewpoint.

In exploring Henrietta's familial background, Rebecca has of course further humanized her, showing how many people Henrietta was tied to. At the same time, she also uses this passage as an opportunity to further explore America's deeply held problems of racism and classism. Even members of the same family, she reflects, can be divided by their skin color.

The pervasiveness and perniciousness of racism is a constant theme throughout the book, one that Rebecca continually returns to in order to prove just how deeply entwined it is with American history--and with the history of Henrietta Lacks.

Chapter 17 Quotes

> Every human being has an inalienable right to determine what shall be done with his own body. These patients then had a right to know...the contents of the syringe: and if this knowledge was to cause fear and anxiety or make them frightened, they had a right to be fearful and frightened and thus say NO to the experiment.

Related Characters: Louis Lefkowitz (speaker), Chester Southam

Related Themes:

Page Number: 155

Explanation and Analysis

Once again, Rebecca expands out, using the story of Rebecca Lacks as a lens through which to examine some of the most important and controversial issues in American medicine. In this case, the issue is informed consent. Rebecca describes the origins of the term, and the contentious disputes that led to its creation.

In this case, Rebecca quotes Louis Lefkowitz, the Attorney General of New York State, and one of the first advocates for patients' rights. In this statement, Lefkowitz makes clear that every person has a right "to determine what shall be done with his own body," and to say no to any procedure that may be performed on them.

Intuitive as it may seem today, this level of consent was unheard of during the mid-twentieth century. Doctors believed that people did not know what was best for them and that as experts, they had the right to make decisions without consulting their own patients. This belief was definitely true in the case of Henrietta--both while treating her and when harvesting HeLa, her physicians never thought for a moment to explain to her what was going on, let alone obtain her consent.

Chapter 21 Quotes

> Can you tell me what my mama's cells really did?...I know they did something important, but nobody tells us nothing.

Related Characters: Lawrence Lacks (speaker), Rebecca Skloot (the author), Henrietta Lacks

Related Themes:

Related Symbols:

Page Number: 185

Explanation and Analysis

While being interviewed by Rebecca, Lawrence Lacks turns the tables, asking the reporter to tell him what Henrietta's cells "really did." While he knows that they were "important" in some way, he complains that "nobody tells us nothing."

This short, plain passage vividly illustrates just how in-the-dark Henrietta's children were about her effects on the world. While they knew that HeLa was famous in some way, they had no real concept of what it had done, and of the huge benefits that their mother had provided for millions (if not billions) of people.

While the Lackses acutely feel that they have been cheated financially from profiting off of Henrietta's cells, this passage points to another loss: that this woman's own children do not understand how truly revolutionary HeLa was, and how many people Henrietta had helped. Instead of being proud of their mother, the Lackses are simply confused and indignant. Far from being their fault, this ignorance stems from the fact that no one had ever bothered to explain HeLa's--and Henrietta's--legacy to them.

> John Hopkin didn't give us no information about anything. That was the bad part. Not the sad part, but the bad part, cause I don't know if they didn't give us information because they was making money out of it or if they was just wanting to keep us in the dark about it. I think they made money out of it, cause they were selling her cells all over the world and shipping them for dollars.

Related Characters: Sonny Lacks, Rebecca Skloot (the author) (speaker), Henrietta Lacks

Related Themes: ● ● ● ● ●

Related Symbols: ●

Page Number: 193

Explanation and Analysis

Rebecca interviews Sonny, another one of the Lacks children. Here he expresses anger at what he views as Johns Hopkins' cover-up of HeLa, and their continued quest to keep the profits from the cell from the Lacks children.

Although Sonny's view is an overly simplified one, his indignation is absolutely justified. At the time of Rebecca's research, most of the Lackses still struggled to get by, often living from paycheck to paycheck. Most ironically of all, many members of the family had spotty insurance at best, meaning that they could not benefit from the very medical advances that originated from their mother's cells.

At the same time, Sonny's anger also reflects a suspicion widespread in the African-American community towards the medical establishment. In many ways, Sonny does not trust doctors anymore than Henrietta did. He believes them to be deceitful, racist, and greedy--and although such a view is an exaggerated one, it is undoubtedly true that the medical establishment treated the Lacks family in an immensely unfair and prejudiced manner.

> You know what *is* a myth?...Everybody always saying Henrietta Lacks donated those cells. She didn't donate nothing. They took them and didn't ask.

Related Characters: Bobbette Cooper, Rebecca Skloot (the author) (speaker), Henrietta Lacks

Related Themes: ● ● ● ●

Related Symbols: ●

Page Number: 194

Explanation and Analysis

Rebecca goes on to interview Bobbette, Lawrence's wife. Here Bobbette articulates another complaint within the Lacks family: that doctors didn't ask Henrietta for the cells, but rather stole them. To the Lackses, this makes the massive profits that the medical establishment has made off of HeLa even more illegitimate and unfair.

In her anger, Bobbette also happens to be correct. Although it was customary at the time for doctors not to ask patients' consent before removing their tissue, such a practice would be unthinkable today. Further, physicians treated Henrietta with even less respect (and gave her less agency) because she was a black woman.

As a member of not one but two disenfranchised groups, Henrietta was particularly likely to be used and victimized by those in positions of authority. Although the doctors and researchers who discovered HeLa meant well and did not understand the harm in what they were doing, they nevertheless acted in immensely racist and sexist ways in their treatment of Henrietta, and their harvesting of HeLa.

> [Deborah] and I spent the day and night together as I soaked up as much of her story as I could, constantly worried she'd change her mind and stop talking to me. But in reality, it seemed now that Deborah had started talking, she might never stop again.

Related Characters: Rebecca Skloot (the author) (speaker), Deborah (Dale) Lacks

Related Themes:

Page Number: 272

Explanation and Analysis

After months of attempting to gain Deborah's trust, Rebecca at last gains access. She is surprised to find a talkative and excitable woman, who--at first--seems more than willing to share the story of her family, herself, and her mother.

Although it might seem strange that Deborah would be so excited and eager to trust a stranger (especially a reporter), her willingness to speak is in fact completely understandable. Although the Lackses have been caught up in the narrative of HeLa for decades, they have never actually been able to make their voices heard. Now, at last, Rebecca is offering Deborah the chance to tell her story.

By simply treating her like a person who deserves to be heard, Rebecca has done more for Deborah than almost all the researchers and reporters who came before her.

Chapter 30 Quotes

> Only people that can get any good from my mother cells is the people that got money, and whoever sellin them cells—they get rich off our mother and we got nothing...All those damn people didn't deserve her help as far as I'm concerned.

Related Characters: Joe Lacks (Zakariyya), Rebecca Skloot (the author) (speaker), Henrietta Lacks

Related Themes:

Related Symbols:

Page Number: 281

Explanation and Analysis

Rebecca and Deborah go to visit Zakariyya, Henrietta's disturbed youngest son, still fuming decades later over his mother's death, and the medical establishment's profit off of her cells.

Zakariyya articulates an attitude of rage, suspicion, and jealousy. He believes that the world is ot to cheat him, and that the researchers and patients who benefited from Henrietta's tissue "didn't deserve her help."

Yet although Zakariyya might seem unreasonable and even unhinged, he in fact has every reason to be angry. Destitute and mentally ill, Zakariyya's never recovered from his mother's death, undergoing years of abuse and neglect as a result. Yet while he suffered from Henrietta's demise, doctors, researchers, and pharmaceutical companies thrived, using her cells to make both medical advances and profits. Given this disparity, it is easy to understand Zakariyya's rage, and his belief that the world has cheated him out of both money and a mother.

Chapter 31 Quotes

> Truth be told, I can't get mad at science, because it help people live, and I'd be a mess without it. I'm a walking drugstore! I can't say nothing bad about science, but I won't lie, I *would* like some health insurance so I don't got to pay all that money every month for drugs my mother cells probably helped make.

Related Characters: Deborah (Dale) Lacks, Rebecca Skloot (the author) (speaker), Henrietta Lacks

Related Themes:

Related Symbols:

Page Number: 292

Explanation and Analysis

Deborah reflects on her mother's death, stating that she can't be "mad at science," because of how much it has benefited people in the twenty-first century, herself included. At the same time, though, Deborah wishes that she could have "health insurance" so that she could afford the drugs that Henrietta's cells "probably helped make."

Although Deborah is uneducated and speaks plainly, she has here highlighted a tragic irony in the Lacks family's lives: that although their mother's cells helped to catapult modern medicine forward, they are too poor to benefit from many of those same advances.

At the same time, though, Deborah articulates an astounding amount of forgiveness and understanding. While Zakariyya and Sonny hate the medical establishment for supposedly cheating them out of HeLa profits, Deborah refuses to be "mad." She sees the bigger picture, realizing how much better off the world is due to HeLa.

Chapter 32 Quotes

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.
[Deborah] raised the vial and touched it to her lips. "You're famous," she whispered, "Just nobody knows it."

Related Characters: Rebecca Skloot (the author) (speaker), Henrietta Lacks, Joe Lacks (Zakariyya), Deborah (Dale) Lacks

Related Themes:

Page Number: 302

Explanation and Analysis

Within Christoph Lengauer's lab, Deborah and Zakariyya are able to look at a living sample of HeLa under a microscope. Rebecca reflects that they haven't come so close to "seeing their mother alive" in decades.

In this passage, Rebecca perfectly marries the blend of personal and scientific that defines her narrative. Together, she and Lengauer have used the science of microscopes and cell replication to bring two adult children close to what they consider the spirit of their mother. By acknowledging the humanity of Zakariyya and Deborah, the reporter and the scientist have used science for a moment of emotional healing and connection.

Equally poignant and moving is Deborah's decision to tell her mother--through a vial of HeLa--that she is famous, although "nobody knows it." Clearly, Deborah believes that she is in the presence of her mother. Her first impulse, in this deeply profound moment, is to tell her mother about all the good she has done, and how she has changed the world. Unselfish and limitlessly giving, Deborah wishes above all that her mother--a poor, uneducated, black woman--could realize her staggering importance.

Chapter 35 Quotes

Take one of me and my sister by her and my mother grave...It'll be the only picture in the world with the three of us almost together.

Related Characters: Deborah (Dale) Lacks (speaker), Deborah (Dale) Lacks, Henrietta Lacks

Related Themes:

Related Symbols:

Page Number: 327

Explanation and Analysis

In the midst of a road trip with Rebecca (and having found a photograph of her long lost sister), Deborah requests that the reporter take a picture of herself, the photo, and Henrietta's grave.

In this moment, it becomes clear to both the reader and to Rebecca just how much Deborah has lost. Although she barely knew her mother or her sister, the adult woman still longs for them, yearning for a childhood of which she was robbed.

It is a mark of the humane nature of Rebecca's storytelling that this quiet moment of grief is treated with as much importance and significance as the famous scientific discoveries that she recounts. This passage, and others like it, make clear that Rebecca considers the story of Henrietta to be one of people, not of research subjects.

LORD, I KNOW you sent Miss Rebecca to help LIFT THE BURDEN of them CELLS...GIVE THEM TO HER!...LET HER CARRY THEM.

Related Characters: Gary (speaker), Henrietta Lacks, Deborah (Dale) Lacks

Related Themes:

Related Symbols:

Page Number: 335

Explanation and Analysis

In a small house with a Lacks cousin named Gary, along with Deborah, Rebecca has an unsettling experience, as Gary fervently prays (along with Deborah) for God to give the "burden" of HeLa to Rebecca, removing it from the Lacks family.

Although Rebecca is a woman of science rather than faith, she is deeply moved by this experience, feeling that the responsibility of Henrietta's legacy has indeed been transferred to her in some way. Always respectful of others' beliefs, Rebecca here finds herself thrown into a world about which she knows and understands very little--yet despite her distance from religion, the prayer affects her deeply.

It is also important to remember how "heavy" the burden of HeLa has been on the Lacks family. It has made them victims of an unfeeling medical establishment and a rapacious news media; it has exposed their genetic material for the world to see; and it has never allowed them to truly mourn or move on from their mother's death.

Chapter 36 Quotes

In that moment…I understood completely how some of the Lackses could believe, without doubt, that Henrietta had been chosen by the Lord to become an immortal being. If you believe the Bible is the literal truth, the immortality of Henrietta's cells makes perfect sense. Of course they were growing and surviving decades after death, of course they floated through the air, and of course they'd led to cures for diseases and been launched into space. Angels are like that. The Bible tells us so.

Related Characters: Rebecca Skloot (the author) (speaker), Henrietta Lacks

Related Themes:

Page Number: 339

Explanation and Analysis

After having spent many months with the Lackses, Rebecca has often felt conflicted between her own scientific mindset and the deeply religious beliefs of those around her. In this moment, however, she has a revelation, realizing that the immortality of HeLa fits perfectly with the Christian idea that the Lord's chosen angels become "immortal being[s]." To many of the Lackses, the existence of HeLa proves the existence of the divine, as well as proving Henrietta's saintliness when she was on Earth.

This moment is a deeply personal one, filled with empathy and understanding. Although educated and well-informed, Rebecca never pretends to be omniscient, nor does she consider herself to be better in any way than the Lackses. Instead, she approaches their beliefs with openness and curiosity, qualities that allow her to have this deep and moving realization about the connection between HeLa and the Lackses' religious beliefs.

Chapter 37 Quotes

This child will someday know that her great-grandmother Henrietta helped the world!...So will that child…and that child…and that child. This is their story now. They need to take hold of it and let it teach them they can change the world too.

Related Characters: James Pullum (speaker), Henrietta Lacks, JaBrea, Davon

Related Themes:

Page Number: 349

Explanation and Analysis

At the baptism of a Lacks grandchild, Reverend James Pullum (Deborah's husband) calls Rebecca up onstage, urging her to tell the congregation about her book. Rebecca does so, and Pullum marvels that, thanks to Rebecca, Henrietta's descendants will always know that their "great-grandmother Henrietta helped the world."

Once again, this passage encapsulates what Rebecca hopes to do with her book. Rather than seeking fame for herself, she instead wants to ensure that Henrietta's descendants understand and celebrate the contribution of their foremother to science and to the "world." It is vital to her that these children know that this is not her story but "their[s]," and that they too can make a difference in the world, just as Henrietta did.

Chapter 38 Quotes

Heaven looks just like Clover, Virginia. My mother and I always loved it down there more than anywhere else in the world.

Related Characters: Deborah (Dale) Lacks, Rebecca Skloot (the author) (speaker), Henrietta Lacks

Related Themes:

Related Symbols:

Page Number: 355

Explanation and Analysis

Always nostalgic for her childhood, Deborah wonders what Heaven looks like, deciding that it must resemble "Clover, Virginia" where her family grew up. Even when imagining the afterlife, Deborah still clings fiercely to what she has lost, identifying herself closely with her mother, and yearning for an idyllic childhood that never actually occurred.

By the book's end, Deborah has died, and has not seen the publication of Rebecca's book. Yet rather than express regret or sadness over Deborah's death, Rebecca instead chooses to share Deborah's simple, generous, innocent vision of what Heaven must be like. At once lovely and deeply sad, this picture of Heaven as a quiet country town is the perfect illustration of Deborah's openness and optimism.

Although she lived an immensely difficult life, Deborah never lost her capacity for wonder, or her belief in better times to come. It is clear that Rebecca deeply admires this quality, and so chooses to celebrate it as she brings her narrative to a close.

SUMMARY AND ANALYSIS

The color-coded icons under each analysis entry make it easy to track where the themes occur most prominently throughout the work. Each icon corresponds to one of the themes explained in the Themes section of this LitChart.

PROLOGUE: THE WOMAN IN THE PHOTOGRAPH

The author, journalist Rebecca Skloot, describes the tattered photo of an African American woman that she has on her wall from the late 1940s. The author warns us, however, that the woman in the photograph doesn't know that she has a tumor growing inside her body that will "leave her five children motherless and change the future of medicine." The photo is labeled, "Henrietta Lacks, Helen Lane, or Helen Larson." The author relates that this picture has been used hundreds of times by scientists and teachers, even though they don't even know her name. Instead, they refer to her as **HeLa**, the code given to cells from her cervix that became the world's first immortal human cell line.

By opening with a description of the ambiguously-named photograph of Henrietta, rather than Henrietta herself, Skloot immediately establishes the mystery surrounding Henrietta Lacks' identity. The brief mention of "HeLa," meanwhile, illustrates the way in which the cells taken from Henrietta's body havealmost erased who Henrietta was as a person. The rest of the book will chronicle Skloot's quest to reverse this process, defining Henrietta as a person rather than just a collection of cells.

Rebecca describes staring at this photo, wondering about Henrietta and her family, and contemplating how Henrietta would feel about cells from her cervix being "bought, sold, packaged, and shipped by the trillions" all over the world in the name of scientific progress. Rebecca recounts how these cells have gone to the moon, and have contributed to dozens of scientific advances. She explains that one scientists estimates that all the Henrietta cells ever grown would weigh more than 50 million metric tons, and that if they were ever wrapped end-to-end, they would go around the Earth over three times.

Readers immediately learn how obsessed Skloot is with discovering Henrietta's identity. She also takes care to explain that Henrietta is important not just to her, but to the world as a whole. By connecting Henrietta (rather than just her cells) to the amazing advances caused by HeLa, Skloot makes readers immediately intrigued by a character about whom we know almost nothing.

Rebecca remembers how she first learned about **HeLa** in 1988, thirty-seven years after Henrietta died. In a community college biology class at age 16, her professor, a man named Donald Defler, was teaching a lecture on cell reproduction.

After establishing Henrietta as the main character of her story, Rebecca Skloot now introduces us to herself as a character as well, taking care to establish how long she has cared about Henrietta's story.

The author also reminds us of basic biology: how there are about one hundred trillion cells in our bodies, "each so small that several thousand could fit on the period at the end of this sentence." They make up our tissues, "muscle, bone, and blood," which make up our organs. Every nucleus of every cell contains a complete copy of our entire genome, which in turn makes our body function, controlling when our cells divide and ensuring that our cells perform their proper functions. Through the voice of Defler, the author goes on, explaining the process of mitosis, by which a cell divides to create new cells.

Throughout the book, Skloot will find new and inventive ways to explain complex scientific facts to her readers. In this case, she does so by using the voice of her own biology professor. As readers, we feel that we are learning along with the teenaged Skloot, rather than being lectured at by an all-knowing authorial voice.

A single malfunction in mitosis, however, can make cells start growing out of control. One enzyme misfiring, or one protein activating incorrectly will cause cancer. It is here that Defler introduces Henrietta Lacks, who died in 1951 from a particularly aggressive case of cervical cancer. Defler goes on, telling the class that surgeons took samples of Henrietta's cells before she died and put them in a petri dish. Although scientists had been attempting for decades to keep human cells alive in this way, they had been unsuccessful. Henrietta's cancer cells, however, reproduced, becoming "the first immortal human cells ever grown in a laboratory."

Since the story of Henrietta Lacks is inextricably bound up with that of cancer, it is important for readers to understand why and how cancer occurs within the human body. Sklootalso makes sure to point out that scientists understand how cancer works in large part because of cancerous cells from Henrietta's own body. In other words, we are only able to understand what happened to Henrietta because of the advances made possible by Henrietta's cells.

Defler explains that almost any cell culture lab in the world would possess millions, or even billions, of Henrietta'scells. Essentially, according to Defler, **HeLa** cells are one of the most important medical innovations of the last century. Defler ends the story by mentioning that Henrietta was a black woman, and then moves on with his lesson.

By recounting Defler's lecture, Skloot illustrates how Henrietta has become such a minor character even in her own history. Although students are told about HeLa's importance, Henrietta's identity is only added in as an afterthought, if at all.

After class, Rebecca visits Defler's office to ask him about Henrietta'sbackground, but he replies, "no one knows anything about her." Rebecca goes to her textbook to look up "cell culture" and finds a passing reference to **HeLa** and Henrietta Lacks.

Skloot becomes obsessed with Henrietta precisely because so little is known about the woman—and Skloot hopes that her readers will feel the same.

Rebecca graduates high school and starts a biology degree in college, learning about **HeLa** in many different subjects, and using the cells herself in experiments. No one, however, mentions Henrietta's name. With the beginning of the Internet in the mid-nineties, the author searches for information about Henrietta, but most sites misidentify her as Helen Lane, and contain contradictory information about both her life and death. Rebecca finally finds several magazine articles about Henrietta. She describes different pictures of Henrietta's family: of Henrietta's sons, a grandchild, and of Henrietta's daughter Deborah. The articles all say that researchers have experimented on the family's cells, although the Lackses don't seem to understand why.

The fact thatSkloot is working with Henrietta's cells and yet knows almost nothing about the woman behind them only further exemplifies how unimportant the scientific community considers Henrietta as a person. By documenting the beginnings of her quest to learn more about Henrietta, Skloot also illustrates just how difficult it is to find any information at all about her. She also begins to introduce the Lacks family, immediately emphasizing that they have been mistreated by the scientific establishment.

As Rebecca continues through grad school, she remains intrigued by Henrietta Lacks. She tells the reader that this exploration would begin "a decade long adventure." Rebecca describes the mistrust and obstacles that she faced, before turning her attention to Deborah, whom she calls "one of the strongest and most resilient women I'd ever known."

While this book is the story of Henrietta and her family, it is also about Skloot coming of age as a journalist. She begins as merely a student with an obsession, and ends up having the power to tell the truth about Henrietta's life to the rest of the world.

The author details the many differences between herself and Deborah. Rebecca is white and from the Pacific Northwest, while Deborah "was a deeply religious black Christian from the South." Faith is a huge part of Deborah's life, but it makes Rebecca uncomfortable. Deborah grew up in a poor, dangerous neighborhood, while the author's childhood was safe and almost entirely white. Rebecca believes in reason and science, while Deborah believes that "Henrietta's spirit lived on in her cells." The author ends her introduction by observing that the "Lackses challenged everything I thought I knew about faith, science, journalism, and race." She emphasizes that the book isn't just about Henrietta and **HeLa**, but also about the Lacks family.

A vital relationship within the book is that between Deborah and Skloot. Despite their many differences, the two women eventually become friends, and each affects the other's life in a dramatic way. Here Skloot seeks to emphasize how unlikely her friendship with Deborah was, while also explaining how distant her own frame of reference is from that of the Lackses. Her confession that she has been changed and "challenged" by the Lackses makes clear the personal investment that she has in this narrative.

DEBORAH'S VOICE

Rebecca includes a transcript of Deborah's voice, as Deborah explains that her mother's name was Henrietta Lacks, and that her cells are still living today in the form of HeLa, which is "all over the world" in both "medical facilities" and "computers." Deborah describes telling doctors about her connection to **HeLa**, and attributes her own medication to her mother's legacy. While she doesn't really understand how her mother helped with these advancements, she is proud that Henrietta is helping so many people. She is upset, however, that the Lackses are too poor to even afford doctors, despite their family's contribution to science.

By incorporating Deborah's voice into the book, Skloot makes clear how important Henrietta's daughter is to the overall narrative. At the same time, she also illustrates how muddled Henrietta's legacy has become in Deborah's head, and how difficult it is for Deborah to understand what exactly has happened to her mother's cells. The speech also brings up the issues of monetary compensation, which will become increasingly important as the book continues.

CHAPTER 1: THE EXAM

It is January 29, 1951, and David Lacks, Henrietta's husband, is waiting with his three children outside **Johns Hopkins Hospital**. A few minutes earlier, Henrietta had entered the hospital, gone past the "colored" bathroom, into the main entrance of Hopkins, past a lucky **statue of Jesus**, and then continued into the waiting room of the gynecology clinic, where she tells the receptionist that she has "a knot on my womb."

Skloot begins the main part of her narrative in a gripping fashion. This is her journalistic technique for telling a story that largely has to do with complicated scientific advances—she never lets her readers forget about the human beings behind those advances, and the lives they led.

We flash back a year, to when Henrietta tells her cousins and close friends, Margaret and Sadie, that she has "a knot inside me" that hurts terribly when she has intercourse with her husband. At first, she believes that it has to do with having given birth to Deborah a few weeks earlier, or to the STIs that David Lacks has given her in the past by being unfaithful. However she refuses to get it checked. Later, Sadie would speculate that Henrietta didn't want to have surgery that would make her infertile.

We are already beginning to learn about a bit more about Henrietta's personality now that she is introduced as a character rather than just a historical or scientific figure. She is intuitive, but also very stubborn.

About a week later, the twenty-nine-year-old Henrietta is pregnant yet again with Joe, her fifth child. Sadie and Margaret believe that the pain had to do with the baby, but Henrietta disagrees. About four and a half months after Joe is born, Henrietta finds blood in her underwear. Henrietta probes her own cervix with a finger, eventually finding "a hard lump" like a marble. She tells her husband that he needs to take her to the doctor because she is "bleedin and it ain't my time." The local doctor believes the lump to be a sore from syphilis, but when it tests negative for the STI, he tells her to go to the **Johns Hopkins** gynecology clinic.

Skloot gradually builds a sense of foreboding as Henrietta's cancer continues to progress untreated. As the narrative goes forward, readers will better understand the reasons for the deep fear that Henrietta and her family have for the medical establishment, which fuels her reluctance to seek a diagnosis for the lump on her cervix.

At this time, **Hopkins** was "one of the top hospitals in the country." Built as a charity hospital in 1889, it services large numbers of poor, black patients. In fact, the reason that Henrietta visits there is because "it was the only hospital for miles that treated black patients" due to the segregation of Jim Crow laws.

Although much of the book will be critical of Johns Hopkins, here Skloot reminds us that Hopkins' policy towards black patients was in fact fairly progressive for its time.

After Henrietta waits, a nurse leads her to a "colored-only" exam room. Howard Jones, an older Southern doctor, treats her. He reads her chart, finding many conditions that Henrietta has left untreated throughout the years. The chart also details that Henrietta has an epileptic daughter. Two months ago, after delivering Joe, Henrietta had significant blood in her urine, and the cells around her cervix seemed abnormal. Despite a doctor recommending further tests, Henrietta canceled her appointment. She also had recently contracted gonorrhea, but hadn't been tested.

Skloot takes care to include the detail about the "colored-only exam room" in her narrative in order to make readers understand the deep inequality and racism that existed within the medical community at this time. We also begin to learn about Henrietta's various ailments, most of which have gone entirely untreated. During this time, black women simply did not get the medical care that they needed—afact that will cost Henrietta her life.

The author explains that it is unsurprising that Henrietta didn't return for follow-ups; "like most black patients," she only went to **Hopkins** when it was the only option.

Henrietta's fear of doctors is based in a long history of oppression—like many of those in her community, she does not trust racist white doctors to care for her properly.

Henrietta tells Dr. Jones about the pain and the blood, and adds that she has found a lump in her cervix. He examines her and finds the lump. While he's seen many cancers, this one is unique: it is "shiny and purple," and prone to bleeding. Jones takes a sample and sends it to a lab for a diagnosis. He later writes how alarming it is that Henrietta was recently in the hospital for the birth of her child, but that she has returned "with a full-fledged tumor" three months later. Either her doctors had missed the growth, "or it had grown at a terrifying rate."

Already we begin to learn that Henrietta's cancer cells are special in some way—they even look visually different than other tumors. The speed of the tumor's growth further confirms the cells' uniqueness. At the same time, the narrative is concerned not just with the medical oddity of the tumor, but about the effect it will have on Henrietta, continuing the pattern of balancing scientific fact with personal narrative.

CHAPTER 2: CLOVER

Henrietta Lacks was born with the name "Loretta Pleasant" in August 1920 in Roanoke, Virginia; no one knows when she became Henrietta. A midwife called Fannie delivered her in the tiny family house. Her mother, Eliza Lacks Pleasant, died in childbirth four years later. Afterwards her father, Johnny Pleasant, took his children back to the family home of **Clover**, Virginia. The relatives divided the children up, and Henrietta was given to Tommy Lacks, her grandfather.

Skloot now jumps back further, all the way to Henrietta's birth. Although this portion of the narration has nothing to do with HeLa or science, it has everything to do with our understanding of Henrietta and her family. Skloot also introduces the setting of Clover here, as a symbolic place of innocence and family.

Tommy Lacks'house was a four-room log cabin which had once served as a slave quarters. He was already raising another older grandchild named David Lacks, whom everyone called "Day." Originally pronounced dead by a white doctor because he wasn't breathing, David eventually revived.

Skloot continues to show that she cares as much about the people in her narrative as she does about scientific information.

Henrietta and Day would get up at 4 AM every morning to tend to the farm before going out to the tobacco fields with many other family members, including their cousins Cliff, Fred, Sadie, and Margaret. In the summer, the cousins played in a swimming hole behind their house, and at night they built bonfires and played games. In the morning, their grandmother made fresh biscuits, while once a month during harvest, Grandpa Tommy Lacks would take a wagon up to South Boston to sell his tobacco, taking the cousins with him. At night, they would sleep in a basement of a warehouse along with the rest of the black farmers, along with "horses, mules, and dogs."

Henrietta grew up in a world that was essentially an extension of Southern slavery—she and her family members had no real opportunity for education or skilled work, and were forced to work at hard labor all day from a young age. Though this was a world of systemic racism and poverty, the Lacks children still had their idyllic, innocent moments growing up.

Clover has a Main Street where, on nice days, the white members of the town would loiter and gossip. Henrietta and her cousins would hire themselves out there, harvesting tobacco in order to get money for the movies, where they would sit in the "colored" section.

Skloot continues to emphasize the discrimination that Henrietta faced because of her race, while also bringing up the theme of poverty. Such questions are crucial to understanding why Henrietta has been erased from history.

Henrietta and Day grow older, racing horses along the dirt road that runs through the former Lacks tobacco plantation (now called **Lacks Town**). They have a cousin named Crazy Joe Grinnan who is desperately in love with Henrietta—"the prettiest girl in Lacks Town"—and is called "Crazy" because he'll do anything for her. Crazy Joe, however, didn't stand a chance, as Henrietta and Day had been sharing a bedroom since she was four, and she has their first child—Lawrence—when she's fourteen. Four years later, she gives birth to Lucile Elsie Pleasant, called Elsie.

Even as she brings up heavy themes of race and class, Skloot also uses a light touch to describe youthful love. In narrating the story of how Day and Henrietta met, Sklootmore fully humanizes them as characters, making the ensuing story of Henrietta's cells seem all the more poignant.

We learn about Elsie, who has epilepsy and an intellectual disability, most likely brought on by syphilis contracted and passed on by Day. The family at **Lacks Town**, however, originally just calls her "simple" or "touched."

The introduction of Elsie is an important moment. While Henrietta's death is one tragedy of the Lacks family, Elsie's illness and death are another.

When he finds out that Henrietta is going to marry Day, Crazy Joe Grinnan stabs himself. Eventually his father ties him up and takes him to the doctor. Henrietta's sister Gladys also tries to stop the marriage. Some believe that Gladys is jealous of Henrietta's good looks, while Gladys herself asserts that Day isn't good enough.

Henrietta's life was already dramatic and far from perfect even before her disease. Skloot gives us more details to help us get a sense of Lacks Town and the Lacks family.

Henrietta and Day get married on April 10, 1941. Soon after, the U.S. enters WWII, and the tobacco farm suffers. The author now introduces Fred and Cliff Garret, cousins to the Lackses. Fred lives near Baltimore and works at Bethlehem Steel's Sparrows Point steel mill. He lives in a black settlement called Turner Station. After Pearl Harbor, demand for steel soars and Sparrows Point becomes the largest steel plant in the world. Black men take on hard and dangerous jobs, inhaling toxic coal dust and asbestos and making far less than their white counterparts.

Now that Skloot has made the story of the Lackses small and personal, she goes on to expand her focus and explore the effect of a wartime economy on African American laborers. Skloot also takes this opportunity to note the inequality between black and white workers' jobs—just one more example of how the health of black Americans was a very low priority to the white establishment at the time.

Fred has returned to **Clover** to try to convince Henrietta and Day to come back to Turner Station with him. The men decide that Henrietta should stay behind and take care of the children and the farm until Day has made enough money for a house. A few months afterwards, Fred gets drafted, and he gives Day the money he's saved so that Henrietta and her children can come to Turner Station. And so at age twenty-one, Henrietta leaves Clover and her family home.

Henrietta's move away from Clover is a symbolically important one—she is leaving behind not only her family, but also her childhood home. For the rest of the book, Clover will emblemize lost innocence and togetherness.

CHAPTER 3: DIAGNOSIS AND TREATMENT

The narrative returns to 1951. After visiting **Hopkins**, Henrietta gets a diagnosis: she has a type of cervical cancer called epidermoid carcinoma. "Carcinoma" refers to the type of cell from which the cancer has formed; in this case, from the cells that cover and protect the surface of the cervix. During Henrietta's treatment, both Dr. Jones and his supervisor, Dr. Richard TeLinde, are involved in a debate over what illnesses could be categorized as cervical cancer and how to treat them.

Skloot now begins to meld Henrietta's personal story with the medical narrative of which she will quickly become a part. She also mentions the debate about cervical cancer at the time, emphasizing how little was known about women's health during this time period—just another kind inequality that Henrietta had to face.

There are two types of cervical cancers: invasive, which means it has penetrated through the surface of the cervix, and noninvasive, also called "carcinoma in situ," which instead grows smoothly over the surface of the cervix. In 1951, most oncologists believed that invasive carcinoma was deadly and that noninvasive was not, so they treated the former aggressively but essentially ignored the latter. TeLinde, however, asserted that carcinoma "in situ" is an early stage of invasive carcinoma.

Here we begin to learn more not only about Henrietta's cancer, but about cervical cancer in general, as well the doctors who are treating Henrietta. Skloot keeps the book interesting and engaging by informing on several narratives at once.

Diagnosing carcinoma in situ had become possible only about a decade earlier, in 1941, due to the innovations of a researcher named George Papanicolaou, who had developed a test called the Pap smear. Before this test, early stage cervical cancer was not discoverable, and by the time a woman began to show symptoms, it was too late. During this time, 15,000 women a year were dying of cervical cancer; the Pap smear could decrease the death rate by over 70%. TeLinde was working to document what was and wasn't cervical cancer, and to persuade surgeons to do biopsies on women before removing their uteruses, while also convincing the medical community of the dangers of carcinoma in situ.

We hear more about the progression of cervical cancer research and treatment during Henrietta's illness, and about the staggering amount of women who are needlessly dying of this disease. Another theme here emerges: the unwillingness of the medical community to admit that it is wrong, even at the cost of patients' lives. Although Skloot respects the advancements that scientists have made, she also remains clear-eyed about the stubbornness and arrogance common among some doctors and researchers.

Recently, TeLinde had presented his carcinoma in situ theory to a conference of pathologists and had faced a hugely negative reaction. His response was to review "all medical records and biopsies from patients who'd been diagnosed with invasive cervical cancer at **Hopkins** in the past decade" to see how many cases had started out as in situ. As with most researchers at the time, TeLinde would use poor patients from the charity wards for research without telling them, believing that this could act as a form of payment.

Skloot begins to focus in again, explaining how exactly the advancing field of cervical cancer research relates to Henrietta. She also illustrates the good and the bad of the medical community perfectly in the character of TeLinde. Although he deeply wishes to help women with cancer, he also sees no problem with using poor patients as guinea pigs without their consent.

For tissue samples, TeLinde went to George Gey, **Hopkins**' head of tissue culture research. Along with his wife Margaret Gey, George Gey had been attempting to grow cancer cells in culture (outside the human body) in order to determine cancer's cause and find a cure. The Geys' ultimate goal was to grow the first immortal human cells, ones which would divide forever. In 1943, a group of researchers had done so with mouse cells, fueling George Gey's obsession. He and TeLinde arranged a trade: TeLinde would provide Gey with cervical cancer tissue, and Gey would attempt to grow it.

The narrative moves ever closer to explaining exactly how Henrietta's cervical cancer tumor transformed into a famous and immortal cell line. We also meet another important figure within the narrative: George Gey, who will come to represent the treacherous side of the medical establishment to Henrietta's family, despite Gey's own good intentions and scientific brilliance.

On February 5, 1951, Dr. Jones calls Henrietta to tell her the results of her biopsy. Henrietta tells no one in her family about the news, but asks her husband to take her to **Hopkins** the next day. She assures Day and the children that nothing is wrong. In the hospital, Henrietta signs a form giving Hopkins the right to perform "any operative surgical procedures…that they may deem necessary." She follows a nurse into a "colored" ward, where Howard Jones and his helpers test "her urine, her blood, her lungs." After two nights, Henrietta is prepared for radiation treatment, the usual method for combating cervical cancer.

This passage emphasizes another way in which the 1950s differed from the present: the secrecy and fear with which people viewed cancer and cancer treatments. Once again, Skloot takes care to emphasize that although Hopkins is treating Henrietta, they have also placed her in the "colored ward" for her treatment. Racism is everywhere, even within a supposedly enlightened, charitable establishment such as Hopkins.

Radium destroys living cells, and killed many who took it when it was marketed as a cure-all in the 1800s. It also, however, kills cancer cells. **Hopkins** had used radium since the early 20th century, following the lead of Dr. Howard Kelly, who had learned about radium from the famous Marie Curie and Pierre Curie, the couple that had discovered radium and its use against cancer. By the 1940s, researchers had found that radium was safer and more effective than surgery when it came to treating cervical cancer.

Like many medical treatments within this book, radium represents a double-edged sword—on one hand, it proves deadly when used in excess, as it originally was. On the other hand, it effectively kills deadly cancer cells and can be lifesaving. Both the use and misuse of radium help to emphasize one of Skloot's larger points—that medicine both hinders and heals, and that it is often difficult, in early stages, to tell which it will do.

ForHenrietta'streatment, doctors use glass tubes of radium. They were sewn into containers called Brack plaques, named after a Hopkins doctor who invented them. He later died of cancer, probably from being exposed to radium, as did a resident of Dr. Kelly's.

Skloot here reveals that doctors and researchers, too, have died in pursuit of knowledge. She consistently raises the stakes of her narrative, keeping up the suspense amidst the science.

The surgeon on duty, a man named Dr. Lawrence Wharton Jr., dilates the unconscious Henrietta's cervix to treat her tumor. Although Henrietta has no idea that her cervix is going to be sampled, Wharton cuts out two pieces of tissue: one cancerous, and one healthy. He then inserts tubes filled with radium into Henrietta's cervix. After the procedure, Wharton notes that Henrietta seems in "good condition," and says that he has given her tissue to Dr. George Gey.

In this seemingly routine surgery, the fateful act of the book occurs, as a surgeon cuts out a sample of Henrietta's cervix to give to Dr. Gey. Skloot relies on dramatic irony here, as we know the implications of this event, but the "characters" do not. Even here, Skloot also takes care to note that Henrietta is unconscious and cannot give consent.

Henrietta's tissue samples travel to George Gey, who greets them eagerly. His assistants, however, believe that the samples will fail and die just like all the others.

The irony continues, as Gey's assistants greet cells that will change the world with resignation and cynicism.

CHAPTER 4: THE BIRTH OF HELA

George Gey's assistant, a young woman named Mary Kubicek, is eating. The lab around her is filled with samples, and one of the walls is lined with cages full of lab animals. Gey comes to tell Mary that he's left her Henrietta's sample to work with. She reacts without enthusiasm, even though she knows that the longer the cells live in the culture, the more likely they are to die. After years without a successful immortal cell line, she has grown tired of her task.

The narrative's routine tone continues as readers meet Mary Kubicek, another vital figure in the story of both HeLa and Henrietta. Mary's jaded reaction to Henrietta's cells helps us to understand how unlikely it was that scientists would grow a human cell line—and therefore how amazing and rare HeLa is.

We learn about the obstacles to successfully growing immortal cells—first of all, scientists did not know what exactly cells needed to survive, or how to supply them with those nutrients. Gey, with his wife Margaret Gey, has been trying for years to develop the perfect "culture medium" with which to feed the cells.

Skloot continues to explain more about what it means to grow an immortal human cell line.

Even trickier than finding the perfect medium, however, is the problem of contamination. Bacteria and multiple other microorganisms can easily get into cultures from people's hands, breath, or from dust particles in the air. As a result Margaret Gey, trained as a surgical nurse, has become obsessed with cleanliness. She has even hired a woman named Minnie whose only job is to clean the glassware used in the lab.

Having humanized Henrietta and her family, Skloot now begins to do the same thing for the researchers who created HeLa. Small details such as Margaret's obsession with cleanliness help us to think of these researchers as people, allowing us to sympathize with them as well as with the Lackses.

Mary Kubicek follows the sterilization rules to the letter before working with Henrietta's sample. This process done, Mary uses forceps and a scalpel to cut the sample ofHenrietta's cervix into tiny, one-millimeter squares before dropping them onto clots of chicken blood at the bottoms of "dozens of test tubes." She then covers the sample in culture medium, stops up the tubes, and labels them with the first two letters of Henrietta's first and last names: "**HeLa**."

Skloot takes the time to describe in minute detail every step that Mary goes through as she preserves Henrietta's cells. This allows her to clearly explain the process of cell culturing while also increasing the suspense of the narrative (even though we basically already know the outcome).

The author gives us background on George Gey: he was raised in Pittsburgh, where his family lived in poverty. After paying his way through university, Gey combined a microscope with a "time-lapse motion picture camera to capture live cells on film." He worked in **Hopkins**'basement, and employed a lab assistant to sleep by the camera at night to ensure that it was remaining stable. Using this process, Gey, along with his mentor Warren Lewis, was able to film the incredibly slow process of cell growth. While Margaret Gey is strict and methodical, George is mischievous and impulsive.

The trend of humanizing doctors as well as patients continues as readers learn more about George Gey's personal and professional life. Doing so makes it less easy to "choose sides" in the coming feud between the Lacks family and the medical establishment. Although the Lackses' anger is totally justified, the physicians like Gey who were responsible for the success of HeLa had mostly good intentions.

The most important innovation George Gey had discovered at the time was called the "roller-tube culturing technique," in which he uses a large rotating device with holes for special test tubes (called roller tubes) to slowly but steadily rotate test tube cultures in order to keep the culture medium in motion, just as blood and fluids move about inside the human body. After she finishes cutting the samples from Henrietta, Mary Kubicek inserts them into the device and turns it on.

Once again, Skloot takes time to explain an important mechanism—"the roller-tube culturing technique"—that will help make HeLa the scientific breakthrough that it is.

Henrietta, meanwhile, is in the hospital after her first radium treatment. Doctors have performed many invasive examinations on her, and report that she seems ready to go home, instructing her to return in two and a half weeks for her second dose.

By cutting quickly between the narratives of HeLa and Henrietta, Skloot reminds readers that the two are inextricably linked—and that a desperately ill person is the source of the cells in question.

Mary checks on Henrietta'scells. Although she initially doesn't believe that they're growing, two days after Henrietta is sent home, Mary finds small cell growths at the bottom of each tube. Even then, she remains sure that the cells will die soon; instead, they double in size every morning. George Gey remains cautious, telling Mary that the cells could die at any time. Instead, the abnormal cancer cells continue their unprecedented growth, multiplying twenty times faster than Henrietta's normal cells, which died soon after being put in culture. All the cancer cells need to survive and thrive is "food and warmth." Gey begins to tell his colleagues that his lab may have created the world's first immortal human cell line. When his colleagues ask for samples for themselves, Gey agrees.

We once again shift quickly back from Henrietta to HeLa, further cementing the simultaneous connection and contrast between the ill woman and the cells that she has unknowingly donated to science. Now, however, the cells have begun to live independently of Henrietta—they have become immortal, while Henrietta's own mortality is rapidly approaching. Although Gey and his team are conscious only of their scientific breakthrough, readers are acutely aware that their success comes at the cost of Henrietta's health.

CHAPTER 5: BLACKNESS BE SPREADIN ALL INSIDE

Meanwhile Henrietta has no idea that her cells are growing in a lab. She has returned home, taking her children on trips to **Clover** and keeping house. While radiation treatments usually have terrible symptoms, no one remembers Henrietta feeling ill. The author describes Henrietta's beauty, especially noting her well-kept **fingernails and toenails**, which she always paints red. Sadie describes Henrietta'sfriendly nature. The only person who doesn't like her is Ethel, the wife of Henrietta's cousin Galen, who's jealous because her of her husband's aggressive attraction to Henrietta.

In this passage, Skloot introduces the important symbols of Henrietta's perfectly painted nails. Throughout the book, Skloot will return to the image of Henrietta's red nail polish in order to remind readers of her subject's humanity. Henrietta was not merely a collection of cells, but a real person with desires, emotions, and experiences.

The author turns her attention to Henrietta'soldest daughter, the mentally impaired Elsie. Before her illness, Henrietta would frequently take Elsie to **Clover**. As she grew older, however, Elsie began to have accidents. When Henrietta became pregnant with Joe, the couple could no longer care for Elsie. On the advice of doctors, they moved her to the **Crownsville State Hospital**, which used to be known as the "Hospital for the Negro Insane." Cousins describe Henrietta's grief at sending Elsie away, and recall her weekly visits to the institution to visit her daughter.

As we learn about Elsie, we come to understand that Henrietta and the Lackses had experienced great tragedy in their lives even before Henrietta contracted cervical cancer. Crownsville will become a vital symbol, not simply of the Lacks family's misfortunes, but of the institutionalized racism that African-American patients—including both Henrietta and Elsie—faced during this time.

While Henrietta'schildren behave when she's in the house, Lawrence runs wild when she's gone, going down to a dangerous pier to dive with his friends. If Henrietta ever catches him, she whips him on the spot. Sadie describes the whippings, noting Henrietta's toughness and fearlessness.

We begin to learn more about Henrietta as a mother, more fully fleshing out our image of her, and also giving us a glimpse of the terrible consequences for her children that will follow her death.

For six weeks after her first radium treatment, no one in Turner Station knows of Henrietta'sillness. At the appointment for her second radium treatment, the doctors note that the tumor seems to be shrinking. Henrietta starts X-ray therapy, which means that she must visit **Hopkins** every weekday for a month. In order to make the appointments, Henrietta will need to wait at her cousin Margaret's house (just a few blocks from Hopkins) for Day to pick her up. Henrietta informs Sadie and Margaret of her illness while they're on a Ferris wheel at a carnival. She tells them of her cancer and treatment, but reassures them that she's "fine."

Henrietta continues to keep her illness a secret, an illustration of the stigma surrounding cancer during this time period. She only reveals her condition to a few select family members, despite the terrible pain it is causing her. This passage is also one of false optimism, as both doctors and Henrietta believe that they have beaten back her cancer. Although this book is a story of scientific triumph, the same medical establishment that makes Henrietta's cells immortal cannot save Henrietta herself.

The doctors believe that Henrietta is doing better, as the tumor has disappeared from the radium treatments and her cervix looks normal. Two weeks after the second treatment, however, Henrietta begins bleeding heavily and for weeks on end. Nevertheless, she begins X-ray treatments.

As we later learn, Henrietta's physical suffering comes to deeply haunt both Deborah and Skloot. We remember throughout the narrative that it is only through the terrible pain of Henrietta Lacks that HeLa even exists.

After her treatments, Henrietta walks to Margaret's, where Day picks her up. Soon enough, Henrietta's bleeding clears up. At the end of her treatments, however, doctors inform Henrietta that her treatments have left her infertile. Although it is common practice for both Howard Jones and TeLinde to inform patients of this devastating side effect beforehand, Henrietta has slipped through the cracks. She is devastated.

Skloot recounts yet another sin of the medical establishment against Henrietta: they have failed to inform her about the most personal of issues: her ability to have children. Even if their intentions are good overall, the racial bias of the white medical establishment has led them to place less value on keeping Henrietta informed of her own condition.

Three weeks after she begins X-ray therapy, Henrietta begins to feel a painful burning sensation when she urinates. While Day claims that she must have given him her illness, Howard Jones thinks it more likely that Day has given Henrietta gonorrhea. Henrietta's condition worsens, and she becomes listless. She shows Margaret and Sadie the side effects of her treatment: radiation has turned her abdomen black.

Skloot continues to give more visceral details about Henrietta's illness, contrasting her suffering with the life and proliferation of her cells.

CHAPTER 6: "LADY'S ON THE PHONE"

We move to 1999, eleven years after Rebecca learned about Henrietta's existence. Rebecca has found a collection of papers from "The **HeLa** Cancer Control Symposium" at Morehouse College, a distinguished and historically black college. A professor at Morehouse named Roland Pattillo created the symposium—he is one of the few African Americans who studied with George Gey.When Rebecca calls Pattillo, he tells her that Henrietta's family will never speak to her. Rebecca, however, spends an hour convincing Pattillo to put her in touch with the family.

Another important theme comes up in this passage: the deep distrust that the Lacks family has for the white medical and journalistic establishment that has taken advantage of them over the years. Their suspicions are justified, as we'll see, and even Roland Pattillo, who ismore educated and worldly than Deborah Lacks and her brothers, initially does not believe that Skloot has good intentions.

On the phone with Pattillo, Rebecca displays her knowledge of the mistreatment of African Americans by the scientific establishment. She fills readers in about the **Tuskegee Institute** scandal, in which U.S. Public Health officials watched black men die of syphilis. They used black men because they believed that "black people were 'a notoriously syphilis-soaked race.'" Rebecca next discusses the "Mississippi Appendectomies," in which doctors performed unnecessary hysterectomies on poor black women so that inexperienced doctors could practice the surgery. She next moves on talk about the lack of funding for sickle-cell anemia research—a disease that almost entirely affects African Americans.

Skloot uses the story of her quest for Henrietta's family to fill us in on a crucial reason for the black community's mistrust of the medical establishment: the successive abuses of African-American patients by white researchers. Henrietta, too, fits into this category, giving us further proof that the doctors and researchers responsible for some of science's greatest advances all too often did so through dehumanization, lies, and arrogance.

Pattillo informs Rebecca that he's organizing the next **HeLa** conference. He mentions that Deborah Lacks lives in Baltimore, and that Day is still alive at eighty-four. He then moves on to Elsie, whom he reveals died at fifteen. Deborah, he explains, recently had a stroke because of the stress of her mother's fame.

We begin to learn the costs of Henrietta's death, including Elsie's demise and Deborah's later-in-life health problems. Clearly, Skloot means to explore every part of Henrietta's story.

After three days of phone calls, Roland Pattillo at last gives Deborah'sphone number to Rebecca. He tells her the "do's and don'ts" for their conversation: she must be honest without being aggressive, she must not be condescending, and she must be understanding of the family's trauma. Most of all, she must be patient.

Roland Pattillo helps provide a journalistic template that Skloot will follow for the rest of the book. As she learns more and more about the Lackses, she is also becoming more and more confident and skilled as a journalist.

Rebecca calls Deborah and tells her that she wants to write a book about Henrietta. Deborah is cautious but polite, until Rebecca comments how important Henrietta's cells were to science. Deborah is thrilled that her mother will be getting the recognition she deserves. Deborah despairs over having no one to trust, and begs Rebecca to help her learn about her mother.

We immediately get a sense of Deborah's personality from her suspicionbut also her excitement. Seemingly less cynical than her brothers, Deborah deeply cares about her mother's legacy, and will stop at nothing to make sure that the world remembers Henrietta.

Deborah eventually gets off the phone but first makes Rebecca promise to call her on Monday. When Rebecca calls back, however, Deborah seems drugged and confused, saying that the men don't want her to talk to Rebecca. She gives Rebecca three numbers: those of her father Day, her brother Lawrence, and her brother David (called Sonny) before hanging up.

We now reach another pattern within the book: Skloot's near-constant struggle to gain the trust of the Lacks family. Although Deborah is an extraordinary person, she is also emotionally unstable, making her both a helper and a hurdle in Skloot's quest.

The persistent Rebecca begins calling Deborah every day, as well as her brothers and father. After several days, two boys answer the phone at Day's house. Upon hearing Rebecca's voice, they immediately know that she wants to learn about Henrietta's cells. Later, Rebecca comments, she would realize that "the only time white people called Day was when they wanted something having to do with **HeLa** cells." Eventually a woman answers the phone, and she connects Rebecca with a confused and elderly Day. He asks her if she's "got" Henrietta's cells, and when Rebecca replies that she does, he tells her that she should talk to the cells and not him—then he hangs up.

Here we begin to learn more about the character of Rebecca Skloot herself—particularly her stubbornness. Skloot is aware of her own role as a white woman telling the story of a black family, partly contributing to the same racial divide her book details. We also begin to get sense of how deeply traumatized the Lackses still are by all the controversy surrounding the use of Henrietta's cells—and the fact that, despite HeLa being famous, Henrietta's family still doesn't really understand why.

CHAPTER 7: THE DEATH AND LIFE OF CELL CULTURE

We flash back to April 1951, where George Gey appears on a TV show in Baltimore. Polite and handsome, he is introduced as a doctor who is going to conquer cancer. He explains to the TV audience about cells, giving them an "overview of cell structure and cancer." He uses a bottle full of Henrietta's cells as an example, commenting that studying them may help scientists to stop cancer once and for all.

This is when the media's obsession with HeLa—but its complete ignorance of Henrietta—truly begins. We also witness the incredible (but partly misguided) optimism of this medical period, as George Gey announces that HeLa is going to provide a cure for cancer.

George Gey begins sending Henrietta's cells out to a variety of scientists who want to use them for cancer research. He flies to many labs showing others his culturing techniques, and when scientists visit his lab, Gey usually sends them home with **HeLa** cells.

As HeLa's fame expands, the cells themselves begin to spread as well, traveling all over the world. These parallel tracks are crucial in understanding HeLa's true impact.

Rebecca explains why Henrietta's cells are so precious: because they allow "scientists to perform experiments that would have been impossible with a living human." They cut the cells apart, expose them to poisons and infections, and immerse them in drugs that they hope may kill cancerous cells.

Skloot makes sure that her readers understand how instantaneously essential Henrietta's cells became for research experiments.

Although **HeLa** is spreading, Gey doesn't mention Henrietta or her cells in the press, so the general public doesn't learn about his innovation. Rebecca explains, however, that cell culture had become unpopular in the press in recent years. This began in 1912, when a French surgeon named Alexis Carrel claimed to have grown an "immortal chicken heart." A Nobel Prize-winner, Carrel became a celebrity, and the press trumpeted that he had found the key to immortality. Carrel, however, was also a eugenicist, meaning that he believed that certain people were genetically superior to others; he thought that only certain people worthy of eternal life.

The issues of public opinion, over-optimism, and racism all come together in the figure of Dr. Alexis Carrel, who lied to the public about creating immortal cells, while also supporting racist, pseudo-scientific ideas about eugenics. As a symbol, he illustrates how terribly wrong science and even brilliant scientists can go, and helps readers to understand the deep mistrust of the medical establishment that this book often exhibits.

Rebecca describes the eccentric Carrel, who believed in telepathy and fortune telling. Newspapers and the public continued to keep track of how long the chicken heart cells had been alive, and Carrel and his assistants even sang "Happy Birthday" to them once a year. Carrel began claiming that the cells would eventually become larger than the solar system, and the press began printing reports of a giant rooster that could cross oceans. Books began warning about "the dangers of tissue cultures."

As Skloot continues to describe the deceptive Carrel, he becomes more and more grotesque as a character. We also begin to learn about all the misinformation that the press spreads about HeLa—another pattern that will repeat over and over again throughout the book.

The real chicken-heart cells, meanwhile, turned out to be a sham. After Carrel was eventually accused of collaborating with the Nazis and died awaiting trial, a scientist named Leonard Hayflick became suspicious that no one had been able to replicate Carrel's experiment. He found that Carrel had actually been replenishing the culture with new cells every few days. Because of this, by 1951, when George Gey begins growing Henrietta's cells, the idea of immortal cells is thought of as distasteful, even racist, and is largely ignored.

The story of Carrel serves not only to illustrate the terrible actions of some researchers, but also to further highlight just how incredible the discovery of HeLa really was. Skloot is not saying that all scientists are misguided and manipulative—rather she is saying that scientific advancements must all be viewed through a humane and unbiased lens.

CHAPTER 8: A MISERABLE SPECIMEN

In early June, Henrietta begins to tell her doctors that the cancer is spreading, but they assert that she is incorrect. The author explains the practice of "benevolent deception," in which doctors would withhold information from their patients in order to keep from upsetting them. This idea was especially prevalent when dealing with black patients. Rebecca wonders if Henrietta's treatment would have been different if she'd been white, citing studies that reveal how black patients were hospitalized later and less frequently than their white counterparts.

Skloot makes sure to contrast the increasing success and spread of HeLa with Henrietta's physical decline. She also uses this moment to describe yet another way in which doctors of this time violated their patients' rights: the practice of "benevolent deception." Skloot makes sure to point out that this practice is also directly related to race, as white doctors would have thought of black patients as less able to understand or accept medical information.

Rebecca returns to Henrietta's medical records, which show that she returned to **Hopkins** complaining of discomfort, but was told that she was fine. Two and a half weeks later, she is in so much pain that she can barely urinate or walk. A doctor inserts a catheter to relieve her bladder, but then sends her home. When she returns in three days, a doctor feels a hard mass in her abdomen; after X-raying her, he finds that the mass is blocking her urethra. He calls Howard Jones, who declares the tumor "inoperable." In a week Henrietta has gone from healthy to doomed.

In this passage we learn how doctors' arrogance and bias towards Henrietta may in fact have been fatal to her. Although doctors consider Henrietta's cells to be of the highest importance, they can't be bothered to take care of their suffering, dying patient—an inattention that is directly related to Henrietta's race, class, and gender.

Up until now, only Sadie, Margaret, and Day know that Henrietta is sick. Now everyone knows, however, and neighbors can hear Henrietta's cries of pain from a block away. When Day takes his wife back to **Hopkins** for X-rays the next week, doctors find tumors on her uterus, on both her kidneys, and on her urethra. The doctors conclude that the only way they can help her is to use radiation to "relieve her pain." Day and Henrietta's cousins believe that the medical professionals are still trying to save her.

It is a testament to Henrietta's suffering that while she was previously so careful to hide her cancer, she is now completely unable to do so. This passage also introduces the pattern of the Lacks family being misinformed by doctors and researchers. It is easy to understand why the Lackses do not trust the medical establishment, considering how often its representatives have lied to and manipulated them.

As radiation continues to burn her skin and her pain becomes even worse, Henrietta arrives at **Hopkins** on August 8 and says that she wants to stay there. A nurse draws her blood and puts it in a vial marked "colored" in case Henrietta needs a transfusion later. On the orders of George Gey, a doctor takes more cells from her cervix. Her body is polluted with toxins that would usually be flushed out in urine, however, so the cells die almost immediately. Doctors try to give her a variety of painkillers, but nothing helps. Tumors appear all over her body, and her temperature shoots up to 105. Doctors stop radiation, and note repeatedly how miserable Henrietta is.

Even with their patient in such dire condition, it seems that the Hopkins doctors care as much (or more) about obtaining more cell samples from her as they do about caring for her. By now, Henrietta has reached the peak of her suffering—it is this physical ordeal that will haunt her daughter Deborah for the rest of her life.

"There is no record" that George Gey visited Henrietta in the hospital or talked to her about her cells. Yet one of Gey's colleagues, a woman named Laure Aurelian, claims that Gey did visit Henrietta, and told her that her cells were going to "help save the lives of countless people."

This passage is crucial: no one will ever know whether Henrietta was in fact aware of the massive impact she had on the world. This question, of Henrietta's legacy and if she knew about it, will resonate throughout the narrative.

CHAPTER 9: TURNER STATION

The narrative returns to the present. A few days after speaking with Day, Rebecca drives to Baltimore to meet with Sonny, who has finally called her back. The plan is for Rebecca to page Sonny, at which point he'll take her to meet Lawrence, Day, and maybe Deborah. Yet when Rebecca checks into her hotel, Sonny doesn't reply to her page. She then decides to use the Baltimore phone book to look up different Lackses in the area. Before doing so, she reads an old *Rolling Stone* article from 1976 about the Lackses, by a writer named Michael Rogers. Halfway through the article, Rebecca realizes that Rogers too stayed in her hotel and used the telephone book to call the Lackses. Finally Rebecca digs up an old newspaper article with Henrietta's former address and uses a map to find Henrietta's old neighborhood, Turner Station.

Back in the present, Rebecca experiences a series of seemingly impassable obstacles in her quest to learn more about the Lackses. As readers, we also begin to hear about all of the reporters who came before Rebecca, and begin to understand a little better the family's determination to have nothing to do with them.

Rebecca relates the history of Turner Station, explaining that in the forties, when Henrietta first arrived, "the town was booming." By the end of WWII, though, more and more houses were demolished to make room for factories, leaving thousands of people homeless, most of them black. People begin moving out of the area, to Baltimore or the country, and the population fell by half.

Turner Station too becomes an important location within the narrative, as its rise and fall mirrors the ways in which African Americans' economic status often rose and fell unpredictably along with the economy. Like Clover, Turner Station eventually becomes an emblem of the past.

The article that Rebecca'sfound refers to a woman named Courtney Speed who owns a grocery store and has created a foundation meant to build a Henrietta Lacks museum. When Rebecca arrives at the address of the grocery, however, she finds only an a mobile home with a few men loitering outside. Since Turner Station's radius is under a mile, Rebecca continues driving around in circles to find the grocery. She finally arrives at the New Shiloh Baptist Church. When she stops, a man named Reverend Jackson comes to her aid. Although he hasn't ever heard of Henrietta, he offers to take Rebecca to Speed's Grocery Store.

Skloot's quest narrative continues, injecting suspense and adventure into a book that could otherwise be fairly dry and unexciting. Readers also begin to catch glimpses of the extremely close community that has formed around the Lackses, as emblemized both by Reverend Jackson and Courtney Speed. This community will become more important as the narrative goes on, because of the support network it provides for Henrietta's family.

The two drive back to the mobile home with the men outside, who turn out to be some of Courtney's sons. Courtney herself warmly welcomes Rebecca. When Courtney hears that Rebecca has come to talk about Henrietta Lacks, however, she becomes terrified, asking if she's come from "Mr. Cofield." Rebecca tries to reassure her, telling her that she doesn't know anyone named Cofield, and that she's been trying her best to contact the Lacks family. Courtney tells Rebecca to "follow me" in her car.

For the first time, we begin to understand that the suspicion and fear surrounding Henrietta's cells extends beyond her immediate family, even to brave and grounded people such as Courtney Speed. The cells are powerful, but they are also controversial, and they seem to attract trouble almost everywhere they touch.

The car drive ends at the local public library, where a now-excited Courtney tells Rebecca that "February first is Henrietta Lacks day here in Baltimore county." She is still working on the museum, despite "the Cofield situation," although Deborah is now afraid to continue. Courtney takes Rebecca into the library, and asks the librarian for "the tape." The two women then travel to a small beauty parlor that Courtney owns. Courtney promises again that she will tell Rebecca everything she knows as soon as the family gives the okay. She then tells Rebecca to watch the tape, and not to "open this door for nothing or nobody but me."

As Rebecca moves ever closer to being connected with the Lacks family, the tension and suspense continue to build (especially heightened by Courtney's seemingly-paranoid warnings). We also learn that Deborah is not alone in her belief that Henrietta should be recognized and honored. Instead, Henrietta has become a symbol for her community, one from which women like Courtney Speed draw strength and inspiration.

Rebecca watches the video: a BBC documentary about Henrietta called *The Way of All Flesh*. It begins with melodramatic narration and footage of a young black actress dancing. Soon after there is footage of **Clover**, Henrietta's childhood home. It ends with an interview with Fred Garret standing near the family cemetery, where Henrietta is buried in an unmarked grave. He marvels at the "miracle" of Henrietta's cells.

By the end of the documentary, the "miracle" and success of Henrietta's cells clearly contrasts with her own end, in an unmarked tomb.

That night back at the hotel, Rebecca gets Sonny on the phone; he won't meet her, and won't say why. She asks him to put her in touch with the Lacks family members still living in **Clover**, but he refuses.

Right after getting closer than ever to meeting the Lackses, Rebecca experiences another setback. This pattern will in fact shape the rest of the narrative.

CHAPTER 10: THE OTHER SIDE OF THE TRACKS

Rebecca describes **Clover** a community in Southern Virginia, which she visits on a warm day in December. By 1998, Clover had a population of only 198 and lost its town charter. The only steady business left is a post office, which is closed when Rebecca arrives. Near one of the shops, Rebecca meets a man called the Greeter, who has spent most of his life welcoming people who come to Clover. She asks him to point her towards **Lacks Town**.

When Rebecca first arrives at Clover, it has already decayed significantly from the town that Henrietta knew when she was a child. Skloot will latch on to Clover's degeneration, consistently connecting it with the happy familial past that the Lackses lost when they lost Henrietta.

The divide between **Clover** and **Lacks Town** is clear: on one side of the road there are well-kept farms, and on the other side is a series of one-room shacks, slave cabins, cinder-block houses, and trailers. An older man comes out to ask Rebecca if she's lost. She asks if he's heard of Henrietta, and he responds that he's named Cootie, and that he's Henrietta's first cousin. He explains that everyone in Lacks Town is related to Henrietta, but that few remember her.

The sharp distinction between Clover and Lacks Town shows just how present racial divides still are in the present, as the legacy of slavery and Jim Crow lingers even in the architecture of Lacks Town.Sklootalso highlights the fact that even many of Henrietta's relatives have forgotten her.

Rebecca describes Cootie’s small house. He’s recently gotten indoor plumbing, but still prefers to use his outhouse. Cootie goes into his bedroom to find papers about Henrietta that he’s hidden under his mattress. He laments the fact that “other countries” are buying Henrietta’s cells, but that the family has never gotten money. He emerges with the *Rolling Stone* article, but explains that he can’t read, and asks Rebecca if the piece mentions Henrietta’s childhood in **Clover**.

Cootie lives in even more poverty than Henrietta’s immediate family, even further proof of how much they all could have benefited from more financial recognition of Henrietta’s contributions to science. That Cootie can’t even read the article that praises his cousin is a piece of poignant irony.

Cootie reminisces about Henrietta, whom he remembers as cheerful and loving. He marvels at how her cells have multiplied, explaining that she used to care for him when he was in pain. He imagines that she is still using her cells to help others. None of the Lackses understands, though, how Henrietta’s cells can be alive when she herself is dead. He wonders whether Henrietta’s illness was caused by voodoo, or by doctors performing tests on her.

Cootie here brings in another crucial thread: the Lacks family’s belief that Henrietta’s spirit still remains in HeLa, and that HeLa heals people because of her kindness and blessedness. His reference to voodoo also proves just how far removed his frame of reference is from the world of cell culturing.

CHAPTER 11: “THE DEVIL OF PAIN ITSELF”

By September 1951, cancer has taken over Henrietta’sbody. She must receive constant blood transfusions because her kidneys aren’t filtering toxins out of her body. Finally doctors decide to stop giving her transfusions because she’s using up too much blood. Henrietta’s cousin Emmett Lacks hears that Henrietta needs blood, and gathers more of her male cousins to visit an emaciated Henrietta, who’s being watched by Sadie and Gladys. After visiting Henrietta, Emmett and the men go to a room designated for “colored” blood collection to give blood for her. In the present day, Emmett remembers Henrietta’s kindness and beauty, and her pain.

Sklootkeeps hammering home the racial themes in her book; even while they are running low on blood, doctors will only give Henrietta donations from the “colored blood” supply. This constant inequality throughout the medical system, while not necessarily responsible for Henrietta’s death, most certainly made her last days more difficult, and also probably kept her from getting proper care beforehand.

Late September in 1951, a doctor gives Henrietta a heavy dose of morphine and orders all other treatment to cease. Henrietta wakes up terrified and disoriented. She then tells Gladys that she is going to die, and she begs her sister to care for her children. After she falls asleep, Gladys goes back home to **Clover**. She then calls Day to tell him that Henrietta is going to die, and to say that her last thoughts were of her children.

At the end of her life, Henrietta’s last thought is for her children; yet as we will see in future chapters, her request that they be taken care of and loved will not be honored. Readers know this even as Henrietta dies, a fact that only increases the tragedy of the scene.

CHAPTER 12: THE STORM

Although there's no obituary for Henrietta, the Gey lab hears news of her death quickly. Her body is put in the "colored" freezer, and Gey asks her doctors if they can perform an autopsy to see if other cells in her body will grow like **HeLa**. Although there's no law about taking cells from a living patient, the doctors at **Hopkins** must ask Day whether they can remove tissue from Henrietta's dead body. When they first call, Day says no. When he goes to see her body, the doctors ask again, adding that the tests they run may help Henrietta and Day's children. Day agrees.

Even in death, Henrietta's body is segregated in the "colored" freezer. We also begin to see a new trend amongst Henrietta's doctors: they manipulate Day in order to get more research materials, telling him that their research may help his children. They decide to use his ignorance about their research in order to get what they want.

Mary Kubicek is deputized to collect tissue for George Gey at the autopsy. The pathologist samples from almost every organ in Henrietta'sbody, as well as saving pieces of her tumors. As she watches Gey work, Mary is struck by Henrietta's **toenails** with their chipped, red nail polish. In the present, Mary recounts seeing the toenails and realizing that Henrietta was "a real person."

Mary's realization of Henrietta's humanity is both understandable and tragic. Of course, having only worked with Henrietta's cells, it is easy for her to forget that they came from a person; at the same time, however, it is this exact mentality that makes it possible for so many researchers and doctors to mistreat their subjects and patients.

Days later, a train takes Henrietta from Baltimore to **Clover** in a cheap coffin. The Clover undertaker drives Henrietta's coffin into **Lacks Town**. Cootie prays that she rest in peace, while Gladys and Sadie get ready to prepare the body for burial. Cliff and Fred, meanwhile, have spent the day digging a grave. When Sadie sees Henrietta's chipped **toenail polish**, she begins to cry; "Henrietta would rather have died than let her polish get all chipped like that." On the day of her burial, there is a sudden thunderstorm.

Both Sadie and Mary are deeply affected and saddened by Henrietta's nail polish. Yet while Mary realizes only that Henrietta is human, Sadie remembers the vibrant woman she once was. The thunderstorm also makes for perfect symbolism, as Henrietta's death, and the cells that caused it, have set off a storm—one that will envelop the rest of the narrative.

CHAPTER 13: THE HELA FACTORY

Soon after Henrietta's death, researchers begin to plan for a massive operation that will produce trillions of **HeLa** cells in order to help cure polio. At the end of 1951, the world is in the throes of the biggest polio epidemic in history. In February 1952, Jonas Salk announces that he's developed a polio vaccine, but he needs to test it on a large scale. This will require an enormous number of cell cultures. The National Foundation for Infantile Paralysis (NIFP) begins to organize the largest field trial ever. They plan to inoculate two million children and then test their blood to see if they're immune. This process, however, will require millions of tests in which blood serum from the vaccinated children is mixed with live poliovirus plus cells in culture. Should the vaccine work, the blood serum from the children will protect the cultured cells. Until now, however, the cultured cells have come from expensive monkeys, which must be killed in order to harvest their cells.

Here begins the first of the many medical miracles that HeLa will facilitate: in this case, the polio vaccine. This episode proves how in many ways, the success of HeLa has to do with its having been discovered in the right place at the right time. Had the polio epidemic not been raging, there would not have been such an urgent need to culture cells on a huge, industrial scale—and without this effort, such large amounts of HeLa would never have been made. The story of HeLa, therefore, is also a story of luck—as many (if not all) great scientific breakthroughs often are.

The NFIP turns to cell culture experts—including George Gey—to help find these cells. Gey recognizes how valuable an opportunity this is, as the NFIP is well funded, and cell culturists have wanted to produce cells on an industrial scale for years. **HeLa** is the perfect resource for Gey to offer to the NFIP.

Gey is profiting of the cells he cultured—not in terms of money, but in terms of prestige. HeLa will prove instrumental in stopping polio, the cause of one of the most terrible epidemics of modern times.

Rebecca explains the difference between **HeLa** and other human cells. Most cells in culture grow in a single layer on their culture, running out of space quickly. HeLa cells, however, don't need a glass surface to grow. They can grow suspended in a culture medium without any surface at all. In 1951, this meant that if HeLa was susceptible to poliovirus, scientists would be able to test the vaccine on it.

We know by now that HeLa is special, but we don't know exactly why it is,so Skloot takes this moment to explain why HeLa is so valuable to the scientists who use it. The theme of HeLa as some resilient and unstoppable force will crop up again, and the Lackses will assert that it is a testament to Henrietta's stubborn and tenacious spirit.

In April 1952, George Gey and a colleague from the NFIP advisory committee named William Scherer try infecting Henrietta's cells with polio. As it happens, **HeLa** is in fact more susceptible to the virus than most cultured cells—in other words, it is exactly what the NFIP has been seeking.

HeLa, we learn, just so happens to be perfect for testing the polio vaccine; more proof that in scientific breakthroughs of this scale, chance, rather than skill, often plays a deciding part.

George Gey knows that if he is going to be mass-producing cells, he will also need a new way to ship them. On Memorial Day, Gey tests a new way for the **HeLa** cells to travel, putting them in tubes with culture medium and packing them in a tin filled with ice. He then gives them to Mary Kubicek, who ships them to William Scherer in Minnesota. The cells arrive four days later, and begin to grow in an incubator—this is the first time that live cells have ever been shipped via mail.

An old saying goes that, "Necessity is the mother of invention." That cliché proves true here, as a need to ship HeLa forces Gey to find a new way for cells to travel. Although this may sound small, it is in fact an enormous breakthrough, and one in which HeLa was utterly instrumental—just one of the many times this will occur over the next half century.

The NFIP hears about **HeLa** and contracts William Scherer to create a HeLa Distribution Center at the **Tuskegee Institute**, "one of the most prestigious black universities in the country." They choose this organization because of Charles Bynum, who is the director of "Negro Activities" for the foundation. A scientist, an activist, and "the first black foundation executive in the country," Bynum wants to put the HeLa center there because of the opportunities and funding it will provide for young black scientists. The Tuskegee staff eventually expands to thirty-five, and produces twenty thousand tubes of HeLa every week.

We've already learned about the Tuskegee syphilis experiments, and so we know about the immensely symbolic nature of this institution. Although the story of HeLa often encompasses racism and prejudice, here there is a glimmer of hope, as a place used to conduct some of the most unethical medical testing in American history here provides money and jobs for black scientists and staff—all because of HeLa.

HeLa helps scientists to prove that the Salk vaccine works, and the *New York Times* runs an article about "Negro Scientists," mentioning HeLa. Rebecca notes the significance of "black scientists and technicians, many of them women, us[ing] cells from a black woman to help save the lives of millions of Americans, most of them white."

Even as the overall environment of America is still one of rampant inequality and institutionalized racism, HeLa is now providing some hope for black empowerment in the medical establishment.

Soon **HeLa** cells are available for sale, and any scientist can buy them for ten dollars. Although Henrietta's cells are cancerous, they function similarly to normal cells, and react to many stimuli in the same way. HeLa quickly becomes widespread, used in labs internationally.

As so often happens in the medical industry, a breakthrough designed to save lives also gets used to turn a profit. Henrietta's cells, which have already helped cure polio, now begin to make money as well.

The timing, the Rebecca comments, is "perfect." Scientists in the early fifties were just beginning to research viruses, and **HeLa** helps them to study how different types of viruses infect cells and reproduce. HeLa essentially helps create the field of virology. Scientists also use HeLa to research methods for freezing cells without killing them, enabling humans to send cells around the world and store them in between experiments. They can also freeze cells at different intervals during an experiment so that they can compare identical cells at different points in time. They hope that freezing cells will allow them to understand how normal cells become malignant, a process called "spontaneous transformation."

Skloot continually widens the lens of her reporting, making sure that readers understand the global impact that this one lucky discovery—fueled by Henrietta's cancerous cells—has on the scientific community.

HeLa also brings about standardization within the field of tissue culture. Before HeLa, different researchers used different "ingredients, recipes, cells, and techniques," making it difficult to replicate each other's experiments. Gey and his colleagues had created a committee to standardize techniques, but momentum doesn't pick up until "Tuskegee [begins] mass-producing HeLa." This standardization allows researchers to "work with the same cells, growing in the same media, using the same equipment."

Once again, an incredibly basic idea—standardizing a field so that scientists can replicate each others' results—in fact ties directly back to HeLa, and the discoveries that it made possible. HeLa is influential not simply because of one breakthrough that it facilitated, but because of the way it has become woven into the very fabric of biological research.

Scientists also use **HeLa** to advance their research in cellular cloning. Rebecca explains that HeLa did not grow from one of Henrietta'scells, but from a cluster of tumorous cells. Different "cells often behave differently, even if they're all from the same sample." Researchers want to grow lines from single individual cells so that they can compare different behaviors. Using HeLa, a group of scientists succeeds.

The list of medical topics HeLa influences continues to grow. Henrietta's cells are indeed immortal, and spreading around the world, but we are still acutely aware that the Lacks family is simultaneously stuck in their poverty and disempowerment—totally removed from HeLa's success.

The cloning advances developed using **HeLa** lead directly to the ability to isolate stem cells, clone entire animals, and use in vitro fertilization. HeLa also powers the field of human genetics, when in 1953, a geneticist in Texas mistakenly mixes HeLa with the wrong liquid. This accident causes the chromosomes within the cell to swell and spread, allowing scientists to differentiate between them and count them. Eventually researchers are able to discover that "normal human cells have forty-six chromosomes."

Skloot next moves to some of the most popular and controversial scientific innovations of the twentieth century—genetics and cloning—in order to illustrate how far-reaching HeLa's scope is. It influences very basic ideas, such as standardization, and also extremely complex topics, like cloning.

These developments eventually outgrow the **TuskegeeInstitute**'s production mechanism. At this point, a biotech company called Microbiological Associates gets involved. Its owners decide to use **HeLa** cells to create "the first industrial-scale, for-profit cell distribution center, creating a "Cell Factory," located in Bethesda, Maryland. The biggest customers for this business are labs like NIH (National Institutes of Health), but scientists worldwide can call in orders at under fifty dollars.

This moment is crucial, both in the history of biological research and in the story of the Lacks family, as for the first time the field of cell culturing becomes truly profitable. For the Lackses, however, this turn of events means further disempowerment, as others profit off of Henrietta's cells while her family still lives in poverty.

Owner Samuel Reader recruits top scientists "to tell him what products they needed most and show him how to make them." These scientists include Leonard Hayflick, who recalls the "revolution" that Microbiological Associates created within the field. Soon, researchers begin growing all different kinds of cells for research purposes. But none grow as fast as **HeLa**.

Here we witness how capitalism can, when working properly, fuel innovation—promises of financial benefit in fact motivate scientists to make greater and greater advances, and encourage businessmen to fund their research. The line between science and finance is another controversial issue that Skloot explores.

During the Cold War, researchers use **HeLa** to study the effects of radiation, and to see what will happen to cells at extreme conditions like spaceflight. Pharmaceutical companies use them to test drugs. Scientists "cut HeLa cells in half to show that cells could live on after their nuclei had been removed," and test the effects of "steroids, chemotherapy drugs, hormones, vitamins, and environmental stress," as well as many viruses or bacteria.

HeLa even becomes politicized, as scientists begin to make use of it in the Cold War. Skloot now lists these innovations faster and faster, ensuring that her readers will understand just how many fields, innovations, and historical events in which HeLa has actually played a major part.

George Gey himself uses **HeLa** to study hemorrhagic fever, and to see if the cells will cause cancer in rats. For the most part, however, he tries to move on from HeLa, but the effects of the cell culture are inescapable. He spends much of his time traveling around the world "to help set up cell-culture facilities."

After widening out so broadly, Skloot now moves back to the human scope again, reminding us that HeLa has a great and double-edged impact on Gey, the man who originally discovered it. In fact, HeLa largely takes over his career.

Many of George Gey'scolleagues feel that he should publish research papers on **HeLa** so that he can be credited for his innovation, but he always claims to be too busy. After much prodding from Mary Kubicek and Margaret Gey, he finally writes a short abstract. Subsequently, Margaret begins simply writing and submitting his work for him.

Once again we see that Gey truly doesn't seem interested in making a profit off of his discovery—or even really taking credit for it. At the same time, he seemingly made no attempt to inform Henrietta or her family about what he did with her cells, making him a complicated and morally ambiguous figure in the story.

As tissue culture continues to grow as a field, George Gey becomes tired of the "the widespread fixation on **HeLa**," complaining to a friend and colleague, Charles Pomerat, that scientists are using HeLa for research that he could be doing. Pomerat replies that there is no way to restrict the use of HeLa, and he adds that Gey should have finished his own HeLa research before releasing it. Rebecca adds that "as soon as HeLa became 'general scientific property,' people started wondering about the woman behind the cells."

Skloot emphasizes that although Gey feels that his career has been taken over by HeLa, he truly has not gained financially from it—instead, it has become "general scientific property." This is both commendable (since Gey has not tried to use his discovery for selfish reasons) and disturbing, considering that this "property" used to belong to a living, breathing woman.

CHAPTER 14: HELEN LANE

Rebecca explains that considering how many people knew Henrietta's name, it was impossible that the info wouldn't be leaked eventually. On November 2, 1953, the *Minneapolis Star* publishes Henrietta's identity, but uses the wrong name, calling her Henrietta Lakes.

A new pattern now arises in the book: that of journalists repeatedly seeking out Henrietta's identity, getting it wrong, and publishing anyway.

Roland H. Berg, an NFIP press officer, contacts Gey saying that he wants to write an article about **HeLa**. Gey replies that he will not allow him to publish Henrietta'sname. Berg fires back that the article will not be interesting without Henrietta's identity. Rebecca explains that such an article "would have forever connected Henrietta and her family with the cells and medical information…derived from their DNA." It also would have informed the Lackses about the existence of HeLa.

Gey once again acts with good intent, protecting Henrietta and her family's identity from a curious reporter. Even his protective act, however, has unintended consequences, since it means that the Lackses continue to live unaware of HeLa's existence. This episode illustrates the complex issues bound up in any discussion of HeLa.

Gey sends Berg'sletter to TeLinde and other officials at **Hopkins** asking what he should do. TeLinde replies that the story can still be "interesting" without releasing Henrietta's name. Gey responds to Berg saying that the article could still work with a false name, but adds that he could be convinced otherwise.

The group of doctors discussing Henrietta's identity have good intentions, but also entirely miss the point; they believe that it is their job to decide whether or not to release Henrietta's identity, when it should be up to her family.

Gey never tells Berg that the name in the *Minneapolis Star* article is wrong, nor does Berg ever write the story. A few months later, a reporter named Bill Davidson contacts Gey. This time Gey says that he must approve the final article and that the magazine must not include Henrietta's"personal story or full name." In May 1954, Davidson writes about cell culturing, saying that it may help cure nearly every known disease, and crediting the cells of a woman he calls "Helen L." He also asserts that the sample was taken from Henrietta after she died, not before. Rebecca reports that there is no record of how these two pieces of misinformation originated, but that they likely came from someone in **Hopkins**.

The issue of Henrietta's identity only becomes more thorny and complex as more reporters begin to write (inaccurately) about her. Although Gey intended to protect Henrietta and her family by not releasing her name, he has instead ensured that Henrietta will not be recognized or honored for the massive contribution that she has made to science. Once again, he has clearly made decisions that should actually be up to her family.

Decades later, a *Rolling Stone* reporter questions Margaret Gey about the name Helen Lane, and she says that it was simply the result of confusion. One of George Gey’scolleagues, however, asserts that Gey created a pseudonym on purpose in order to keep journalists off the scent of Henrietta’sidentity. If this was the aim, Rebecca says, it worked; from the fifties until the seventies, articles identified the originator of the HeLa cells as Helen Lane or Helen Larson, but never Henrietta Lacks. For this reason, “her family had no idea her cells were alive.”

Skloot makes sure that her readers are fully aware of the consequences of confusion over Henrietta’s identity: first of all, the scientific community has no idea (and makes no attempt to find out) who is responsible for the cells fueling their innovations and research. Second, the Lackses have utterly no idea about what is happening to their mother’s cells, let alone that people are making a profit off of them.

CHAPTER 15: “TOO YOUNG TO REMEMBER”

The narrative jumps back to the 1950s. After Henrietta’s funeral, cousins from **Clover** and Turner Station help to care for her family. While Day works two jobs, Lawrence drops out of school to care for his siblings. At sixteen, he lies about his age and goes to the pool halls, even getting himself a voter registration saying that he’s eighteen. This lie, however, results in his getting drafted for the Korean War at age sixteen.

After giving her readers a broad view of HeLa’s scientific consequences, Sklootnow moves back into the realm of the intimate and personal, allowing us to understand the very real human consequences of Henrietta’s death within the Lacks family (like Lawrence getting drafted early).

Deborah, Sonny, and Joe are never told exactly what happened to their mother. In the meantime, their cousin Ethel comes to care for them, moving in along with her husband Galen. Many of the cousins believe that Ethel is trying to move on from Galen to Day, while others believe that she is trying to get back at Henrietta, whom she hated, by torturing her children.

Skloot notes that Henrietta’s younger children never even learn what happened to her—presumably to spare them from trauma. But keeping Henrietta’s children in the dark in fact only increases their feelings of loss and anger.

Ethel starves Henrietta’s children, waking them at dawn and forcing them to do chores. In the summers, she sends them to **Clover** to pick worms off tobacco leaves. If they ever stop, Ethel beats them. She focuses most of her vitriol on Joe, hitting him for no reason, forcing him to stand in a dark basement for hours on end, and tying him up with a rope. Joe becomes incredibly angry and hostile, and the family starts wondering whether Henrietta’s cancer somehow affected his brain in the womb.

Skloot details the most terrible consequences of Henrietta’s death: her children’s near-constant abuse from Ethel. Skloot does this in order to give us a full picture of the reverberations of Henrietta’s death, and for us to understand that no matter how great the innovations of HeLa, we must always remember the human cost at the center of this story.

In 1959, Lawrence moves into a house with his girlfriend, Bobbette, when he’s twenty-four and she’s twenty. The two have a child, and they learn about Ethel’s abuse of the other Lacks siblings. Bobbette insists that the whole family move in with her and Lawrence.

In the often tragic story of the Lackses, the introduction of Bobbette is one of the few bright spots. An immensely protective individual, she becomes a mother figure for the younger Lackses.

At ten years old, Deborah has caught the eye of Ethel’s husband Galen, who begins to sexually abuse her. She tries to tell Day, but he doesn’t believe her. Galen chases Deborah naked and calls her a “whore,” but also gives her gifts, telling her that he will “wear a rubber” so that she doesn’t have to worry about getting pregnant. Deborah begs him to leave her alone.

Skloot now focuses more directly on the character of Deborah—unprotected, disempowered, and sexually abused. Even within her own family, Deborah still faces sexism and violence.

Deborah begins doing chores at other people's houses to make money, and tries to walk home after work, although Galen often tries to abuse her in his car. One day Deborah is walking home with a boy called Alfred "Cheetah" Carter, and Galen pulls up and begins screaming at her. When Deborah refuses to get in, he returns with Day. Galen throws her into the car and punches her in the face, all as Day watches.

While this episode helps us learn more about Deborah and her traumatic history, it also helps us understand Day's deep failures as a father. Although the Lacks children still have a parent after Henrietta dies, he is entirely useless without his wife, unable to protect his children in any meaningful way.

Deborah runs into Bobbette and Lawrence'shouse, bleeding and sobbing. When Bobbette demands to know what's happened, Deborah tells her that Galen has been hitting her and talking dirty to her. In response, Bobbette goes over to Galenand Ethel's house and tells them if they ever touch the Lacks children again, she will kill them.

Skloot presents another bright spot in her dark narrative: female solidarity, as Bobbette protects Deborah when her own father fails to. Female friendship will again become important when Rebecca and Deborah finally meet.

Rebecca explains that school is difficult for all of the Lacks children; they have all inherited some kind of genetic hearing disorder. They never reveal their disability to their teachers, and so it goes untreated. When Deborah tells Bobbette about her difficulty, Bobbette tells her to sit up front. Since Bobbette has told Deborah that her hearing problems might be caused by her parents being first cousins, Deborah wonders whether Elsie'smental challenges might be due to a genetic disorder as well.

As poor, black, motherless, disabled children, it is all too easy for the Lacks children to fall through the cracks of the system. Although Skloot does not explicitly say this, it's clear that their lives would have been utterly transformed by just a fraction of the money that HeLa has made for the research industry. Instead, they continue to struggle.

While growing up, Deborah doesn't even know she has a sister. When Day finally tells her, Elsie is already dead. Inconsolable, Deborah starts trying to learn about Elsie. She asks Lawrence for memories of their sister and mother until he begins sobbing. Deborah cries herself to sleep over what happened to her mother and sister, and repeatedly asks Day what happened to the two of them.

Many secrets are kept from the Lacks children—including, of course, Elsie's death. We also gain more and more information about Deborah (a crucial character in the book), and all of the traumatic experiences that have shaped her into the woman she is when Rebecca meets her.

CHAPTER 16: "SPENDING ETERNITY IN THE SAME PLACE"

During Rebecca'sfirst visit with Cootie, he tells her that no one ever talks about Henrietta. He muses about how strange it is that "her cells…lived longer than her memory," and adds that Rebecca should go talk to Henrietta's cousin Cliff.

Skloot now returns to the present day, reminding us again of the divide between Henrietta's own life and the life of her cells.

When Cliff learns that Rebecca is writing a book about Henrietta, he brings her to the now-dilapidated house where Henrietta was born. He remembers how "nice" Henrietta kept it. Upstairs the two find several remnants from the house's inhabitants, including an open-toed woman's shoe, which Rebecca speculates may have belonged to Henrietta. Outside, they reach the family cemetery. Cliff shows Rebecca where Henrietta's mother is buried, and explains that Henrietta is buried somewhere nearby.

Skloot here returns to another theme of the book: Henrietta's family past, before various tragedies struck the Lacks family. She also re-emphasizes the fact that Henrietta is buried in an unmarked grave—a shocking fact, considering the billions of dollars that her cells have made for corporations and researchers alike.

Cliff expresses confusion about Henrietta's cells. He knows that it's amazing that her cells are still alive, and that her cells have cured a lot of other diseases. He then speaks directly to the ground, calling out, "They named them **HeLa**! And they are still living!"

Since the Lackses believe that Henrietta's spirit is still present in HeLa, it makes sense to them that she somehow knows the miracles that her cells have created.

Rebecca explores Henrietta'sfamily history: she had a great-great-grandmother who was a slave named Mourning. A white man, John Smith Pleasants, inherited both Mourning and her husband on a tobacco plantation in Clover. Mourning had a son named Edmund Pleasant. On the other side of her family, Henrietta's maternal grandfather was a white man named Albert Lacks, who divided up his plantation among three sons: Winston, Benjamin, and Albert Lacks, Jr. Albert had five "colored" heirs, probably his children with a former slave named Maria.

Skloot expands her narrative out again, all the way back to before the Civil War, in order to dig into Henrietta's history. In doing so, she not only gives readers more background about Henrietta's story, but also reminds us that Henrietta and her family have faced discrimination and racism for centuries. It is impossible, she implies, to tell the story of Henrietta without telling the story of American slavery and racism.

After Albert Lacks' death, Benjamin sued to take land away from his black heirs. The court gave half of the original plantation to Benjamin Lacks, and the other half to the black Lackses—this land became **Lacks Town**. Sixteen years later, when Benjamin died, he split his land between his sisters, and seven of his own "colored" heirs, including TommyLacks.

Racial conflict becomes even more important to the story as Skloot reveals that, in fact, there are black Lackses and white Lackses—and that they fought over land during the nineteenth century. There are racial prejudices even within a single family.

Rebecca recounts how omnipresent race still is in **Clover**. While all insist that race relations have never been bad there, only twelve miles away there is a "Lynch Tree," and the Ku Klux Klan used to hold meetings at a local school baseball field. Back at the cemetery, Cliff explains that the white Lackses still deny their relation to the black Lackses.

The book travels quickly from the Civil War to the present day, proof that the racial biases that were dominant during the nineteenth century still exist today, even if they're less immediately visible. The white Lackses seem to be ashamed of their black relations.

Rebecca goes to visit Carlton Lacks and Ruby Lacks, the oldest white Lackses. They are distant cousins both to each other, and to Henrietta and Day. When Rebecca mentions Henrietta, however, they deny any connection with her, saying that white Lackses and black Lackses never mix.

Although Carlton and Ruby are welcoming and kind to Rebecca, they have no interest whatsoever in associating themselves with the black Lackses. Despite living in the modern era, they remain deeply racist.

Rebecca visits Henrietta's cousin Gladys, who mentions Lillian,Henrietta'syoungest sibling. In the last letter she sent to the family, sometime in the eighties, Lillian expresses paranoia about why people know about her family, her life in **Clover**, and Henrietta. Gladys explains that because of her light skin, Lillian "converted to Puerto Rican."

We witness just how far the consequences of HeLa have spread, even to the point of driving Henrietta's sister, Lillian, to sever all ties with her family and seek to escape the notoriety that comes with being a Lacks.

CHAPTER 17: ILLEGAL, IMMORAL, AND DEPLORABLE

As **HeLa** spreads, a well-respected virologist named Chester Southam becomes worried that the cancer cells may infect scientists. He and many colleagues believe that cancer may be caused by a virus or immune system deficiency, and he decides to test these theories using HeLa, injecting cancer patients with doses of HeLa to see whether Henrietta'scancer will spread. He tells the patients that he is testing their immune systems. Tumors begin to grow on their arms within hours. Southam removes some of these, while others vanish on their own. Four patients, however, experience a recurrence.

We now enter a new phase of the novel: in which Skloot begins to discuss other ethical lapses by researchers who chose to mislead or lie to their human subjects. It is appropriate, given the mistreatment at her physicians' hands that Henrietta experienced, that Southam should use HeLa cells in order to inject his patients with cancer—an idea that is nothing short of shocking in the present day.

Southam decides to see how healthy people will react to the injections, and to use prisoners as subjects. Fifteen years later, research on inmates would become heavily regulated because of the difficulty of obtaining informed consent, but at this time, inmates were being used all over the country for experiments, some of them dangerous. In June 1956, helped by his colleague Alice Moore, Southam begins injecting prisoners with **HeLa**. The tumors grow in the prisoners' arms, and the press begins writing stories about their bravery in agreeing to participate.

Skloot now brings up the idea of informed consent, meaning that humans must understand and agree to procedures before they can be carried out. Prisoners, however, present a tricky ethical barrier because they are relatively powerless, and can be easily bribed or forced into agreeing to experiments that they do not fully understand. Southam, however, appears not even to have considered such ethical concerns.

Southam eventually injects **HeLa** and other cancer cells into more than 600 patients. When he does so, he says simply that he's testing for cancer. He believes that this is true, because people with cancer seem to reject the cells slower than people without the disease. Rebecca asserts that he was deliberately withholding information, however, in order to keep people from refusing to participate in the study.

In actively lying to his patients about the purpose and facts of his study, Southam crosses even further into unethical behavior. He has made a value judgment that his research matters more than his individual patients' consent or their health, a choice that Skloot rigorously condemns.

In July 1963 Southam makes an agreement with Emmanuel Mandel, the director of medicine at the Jewish Chronic Disease Hospital in Brooklyn, deciding to inject 22 patients with cancer cells. When Mandel instructs his staff not to tell patients that the injections contain cancer, three of the doctors refuse, comparing the injections to research done by Nazis.

This moment represents a turning point in the Southam story—for the first time, physicians begin to question the morality of his research. It's also telling that only fellow physicians were able to speak out against Southam, not patients.

Rebecca gives background on the Nuremberg trials, in which seven Nazi doctors were sentenced to death by hanging for the "unthinkable research" they conducted on Jewish prisoners. The tribunal creates a code of ethics called the Nuremberg Code, which governs "all human experimentation worldwide." Most importantly, it emphasizes the necessity of "voluntary consent." The Code, however, is not law, nor is it taught in medical schools at this time.

Skloot briefly touches on the most extreme and evil example of doctors mistreating their research subjects: the "experiments" that Nazi scientists conducted on Jewish and other minority victims during the Holocaust. The horrific truths that emerged after WWII at least began a discussion of research, ethics, and consent, but governing bodies did not make any attempt to actually regulate such issues.

Rebecca traces the origins of the phrase “informed consent,” first used in 1957 in a civil court ruling for a patient named Martin Salgo, who was paralyzed from the waist down during a routine procedure. His doctor hadn’t informed him that the procedure carried any risks, and a judge ruled that this was in violation of a doctor’s duty and a patient’s rights.

“Informed consent” is a crucial concept in the book, and Skloot brings it up repeatedly. It’s important to note that the idea didn’t even have a name until years after Henrietta’s death. This book is not just about medical innovation, but also about the evolution of ethical/medical thought.

The three doctors who refuse to help Southam believe that injecting cancer cells into a person without their consent is in “clear violation of basic human rights and the Nuremberg Code.” Mandel bypasses the doctors and has a resident give the injections, and the doctors resign and send their resignation to a reporter. Mandel accuses the doctors of being too sensitive because of their Jewish heritage, but a member of the hospital’s board of directors, a lawyer named William Hyman, is appalled. He asks to see the records of the study’s patients, but his request is denied.

Terrible events like the Nazi experiments canat least show people (like the three doctors in question) the absolute extremes of immoral behavior. It is important to remember, though, that all those who object to Southam’s experiment are powerful, educated, white men. They have a voice in this system; poor, black women like Henrietta do not.

Simultaneously, Sweden penalizes a cancer researcher named Bertil Björklund who has given himself and his patients injections of **HeLa** cells. In punishment, he has been expelled from his laboratory. Hyman hopes that Southam may be similarly punished. He sues the hospital for the study’s medical records, comparing Southam to a Nazi scientist.

As publicity around Hyman’s suit grows, the powerful legal establishment butts up against the powerful medical establishment. Shockingly, many doctors see no problem with Southam’s research, despite powerful legal arguments that disagree with them.

Although the hospital calls the suit “misleading,” the media latches onto the story. New York State Attorney General Louis Lefkowitz begins investigating the study, accusing Southam and Mandel of “fraud and unprofessional conduct.” He asserts that human beings have a right to decide what is happening to their bodies. Many doctors testify that they’ve conducted similar research, and argue that it’s not necessary to obtain consent. The New York Medical Board of Regents finds Southam and Mandel guilty, suspending their licenses for a year. The suspension is eventually converted to probation.

At this point in time, many scientistsbelieved thatthe only way to continue medical innovation (and thus save exponentially more lives) was to violate their patients’ rights. Given this mindset, it becomes much easier to understand how a genuinely good person like Gey believed it morally right to sample and replicate Henrietta’s cells without her consent.

Southam’scase gets the attention of the NIH, which investigates the organizations it funds and finds that under 20% of them protect research subjects’ rights. As a result, the NIH decides that any proposal that it funds must be approved by an independent review board to make sure that they follow the NIH’s code of ethics, which includes informed consent.

This is an important sea change in the argument of privacy vs. progress—or essentially, how important the concept of informed consent is, even when it might stand in the way of potential medical breakthroughs.

Scientists complain that informed consent will doom their research. Later that year, however, a Harvard doctor named Henry Beecher publishes a study showing that hundreds of studies have breached ethics with methods similar to Southam’s.

The scientists who lament the idea of informed consent are basically saying that in their research, the ends justify the means. This belief is finally being seriously questioned.

CHAPTER 18: “STRANGEST HYBRID”

By the 1960s, **HeLa** is everywhere. Russian and American scientists have even grown them in space, in order to test the effects of spaceflight on human cells. They find that while cancerous cells grow normally in orbit, HeLa divides even faster.

Skloot continues to show how HeLa has impacted many landmark events of the twentieth century—even something seemingly unrelated to cellular biology like space travel.

Scientists have also begun noticing two things about cultured cells: first, it looks like all cells growing in culture either die or become cancerous. Researchers have also found that once they become malignant, all cultured cells—even different cells—begin behaving in exactly the same way. Scientist Lewis Coriell speculates that **HeLa** is contaminating other cells. At this time, scientists are finding it fairly easy to culture cells from different parts of the body. Using these cells, they are making groundbreaking discoveries: that cigarettes caused lung cancer, that X-rays could make normal cells malignant, why cancer cells didn’t stop growing, and how chemotherapy drugs could destroy cancerous cells. Yet scientists don’t seem at all worried about contamination of their cultures, despite the fact that results will be worthless if they are working with the wrong cells.

Since discovering HeLa, the field of cell culturing has grown exponentially—in contrast to the Lacks family, which has encountered nothing but difficulty after difficulty. Now, however, the first major stumbling block in HeLa research comes up: contamination. Up until this point, scientists have cared little about whether their samples are mixing with each other—in contrast to Margaret Gey’s constant, relentless emphasis on cleanliness and sterility.

A meeting of prominent scientists decides that researchers must begin to take precautions against contaminants. The NIH, in response, creates a Cell Culture Collection Committee that includes William Scherer, Lewis Coriell, and Robert Stevenson, in order to create a cell bank at the American Type Culture Collection. They want to create “the Fort Knox of pure, uncontaminated cell culture.” All cells must be tested for contamination, and come from their original source.

It seems that the cell culturing research has grown so fast as to get out of hand, and now there needs to be a standardizing system to make sure the right cells are being used as intended.

The group contacts George Gey for a sample of the original **HeLa** culture. Gey, however, has kept no original HeLa for himself, and must contact Scherer for some of the original cells. The team begins testing samples for viral and bacterial contamination, but soon starts testing for cross-species contamination as well. They find that of “ten cell lines thought to be from nine different species” nine are all from primates.

That Gey has kept no HeLa for himself is even more proof of his immense, even irrational generosity. The group’s finding, meanwhile, is shocking—it means that scientists haven’t even been working with the correct species of cells, pointing to a staggering amount of carelessness and faulty data.

In 1960, French researchers find that cells infected with certain viruses in culture will fuse, combining their genetic material. Though the technical term is “somatic cell fusion,” researchers name it “cell sex.” Rebecca explains that “genetically speaking, humans are terrible research subjects” because scientists can’t control our mating, and we don’t reproduce copiously. Cell sex solves this problem, because researchers can “combine cells with any traits they wanted and study how those traits were passed along.”

Skloot continues to give more background scientific and historical info necessary to later points she will make about HeLa.

In 1965, two British scientists—Henry Harris and John Watkins—combine **HeLa** with mouse cells. They also fuse HeLa with chicken cells that can no longer reproduce, and find that HeLa allows the cells to replicate once again. This means that something within cells can regulate genes. If scientists can find a way to turn disease genes off they may be able to "create a form of gene therapy." Researchers at NYU discover that human-mouse hybrid cells gradually lose their human chromosomes, meaning that scientists can map "human genes to specific chromosomes by tracking the order in which genetic traits vanished." The press condemns the research, speculating that scientists are creating hybrid man/animal monsters. The public comes to believe that research of this type is "pointless and dangerous."

So far during this narrative the press has often been misguided and has reported misinformation when it comes to Henrietta and her identity. Here we witness how the press is often wrong about scientific progress as well, sensationalizing, demonizing, and simplifying complex medical discoveries. What the press perceives as monstrous is actually something closer to miraculous, in that it leads to the ability to analyze a person's genes—an innovation that will eventually allow scientists to identify and treat genetic diseases.

CHAPTER 19: "THE MOST CRITICAL TIME ON EARTH IS NOW"

At age sixteen, Deborah gets pregnant. Though Bobbette is upset, she tells Deborah that she is going to have to continue school. Soon after giving birth to Alfred Jr.—Cheetah's son—in November 1966, Deborah returns to school, while Bobbette cares for Alfred. When Deborah graduates, she gets a job.

Like Henrietta, Deborah gets pregnant young—but unlike Henrietta, Deborah is able to continue with her education. The presence of Bobbette as a mother figure is crucial, but also highlights the absence of Henrietta herself.

As for Deborah'solder brothers, Lawrence has opened a convenience store, and Sonny has joined the air force. Joe, however, has been fighting with teachers and fellow students. He drops out of school, ends up in court at seventeen for fighting, and joins the military at eighteen. After nine months, he's discharged for fighting, "angrier than ever."

The consequences of Henrietta's death continue to affect her family—although Lawrence and Sonny seem to do well, Joe's anger and antisocial tendencies are a direct result of the terrible abuse that he suffered at the hands of Ethel.

Only weeks later, a boy named Eldridge Lee Ivy threatens Joe. For three months, Joe ignores him, but in September 1970, after a night of drinking with his friend June, Joe meets Ivy yet again. This time, Joe beats him. The next day. Joe finds Ivy and fatally stabs him in the heart. The family hides Joe in **Clover**, where he fights with so many of his cousins that they send him to DC. At last, Joe calls Sonny and says that he wants to turn himself in. On trial, he claims that he didn't mean to kill Ivy. Neither the judge nor Joe's court-appointed lawyer know about the abuse he experienced, but the judge asks to see Joe's medical and psychiatric reports, and eventually decides to sentence him "only fifteen years out of a possible thirty." In prison, Joe fights and challenges authority yet again. Eventually, he converts to Islam, and changes his name to Zakariyya Bari Abdul Rahman.

The story of Joe/Zakariyya, though an abbreviated one, includes crisis after crisis and conflict after conflict. Zakariyyaundoubtedly brings many of his troubles upon himself, but the anger and mental disturbance behind his crimes no doubt stems, at least in part, from his history of tragedy and traumatic abuse, and the fact that as a poor black man the decks are already stacked against him in society.Henrietta's loss and the lack of monetary compensation to the Lackses continues to have far-reaching effects.

Sonny, meanwhile, is honorably discharged, while Lawrence works on the railroad. Deborah has married Cheetah and borne him a girl named LaTonya. Cheetah becomes addicted to drugs and begins beating Deborah. Eventually, to defend herself, Deborah pushes Cheetah down a flight of stairs. He wakes up in the morning with no memory of the night's events, and Deborah calls Bobbette to say that she intends to kill Cheetah. Bobbette, however, tells her not to, and so the next day, Deborah takes all her children and her belongings and moves out. She begins working two jobs to support her children.

Sklootreturnsagain to Deborah, whose life continues to be difficult and traumatic as she grows older. Yet Skloot also makes sure to emphasize Deborah's strength, resilience, and tenaciousness. In many ways, Deborah is as much a hero of this story as Henrietta herself. Robbed of both her mother and her sister, Deborah continues to soldier on against all odds, a testament to the strength she inherited from Henrietta.

CHAPTER 20: THE HELA BOMB

In September 1966, at a conference for cell culture scientists, a geneticist named Stanley Gartler makes an unexpected presentation, revealing that the eighteen most commonly used cell cultures in the world all have in common a "rare genetic marker" that is present only in a small minority of black Americans. Gartler speculates that since **HeLa** is from an African American, HeLa may have contaminated all of the cell lines.

We begin to learn more about the contamination problem, realizing its scope and the massive problem that it presents for scientists. It is ironic, of course, that HeLa—a miracle discovery for cell culturists—now in fact is ruining their cell cultures and skewing their results.

Up until this moment, scientists were careful to keep their cultures safe from bacterial and viral contamination. They did not realize, however, how easily **HeLa** could contaminate other cells. As it turns out, HeLa can ride dust particles, latch onto unwashed hands, attach to coats and shoes, and travel through ventilation systems. Even one HeLa cell can contaminate a culture dish and take it over.

Skloot discusses the wide-ranging consequences of Gartler's discovery—essentially, if scientists have been working with HeLa this entire time rather than the various other cells that they believed they were culturing, then hundreds of studies are now utterly useless.

Scientists are not pleased by Gartler's findings. **HeLa** has been growing for fifteen years. Researchers have been using cells to study different tissue types, and to test responses of different cells to various "drugs, chemicals, or environments." If all these cells are HeLa, then this research is worthless. Robert Stevenson explains that six of the contaminated cultures had come from the ATCC (American Type Culture Collection), which was by now storing dozens of different cell types. While all these cultures had been tested to ensure that they were free of viral, bacterial, and animal contamination, no one had developed a test to see if different human cell cultures had contaminated each other.

Although scientists had evidence that HeLa contamination might be occurring, they ignored it—presumably because it would ruin so many of their results and mean so much wasted time and money. We once again witness evidence of scientific hubris, in which researchers assume that they are not capable of such human error.

Gartler goes further: he points out that since scientists had started “taking protective measures against cross-species contamination,” growing new cell lines had suddenly become much harder, and human cell cultures had ceased to produce spontaneous transformation—the process by which benign cells apparently became malignant. He suggests that what seemed like normal cells becoming cancerous was in fact other cell cultures being taken over by **HeLa**.

Rather than accepting Gartler’s warning and taking immediate measures to counteract contamination, scientists instead attack him; proof that even the most educated of people can become stuck in outdated ways of thinking, particularly when “progress” also means admitting one’s mistakes.

The assembled scientists are struck dumb by this declaration. Finally the chair of the conference session, T. C. Hsu, speaks in support of Dr. Gartler. Other researchers begin questioning Gartler’s work, implying that he must have done something wrong.

Once again, denial or accusation is easier than accepting an inconvenient truth.

Stevenson and several other cell culturists decide to go back to their labs and test for the genetic marker. They find that even labs that never housed **HeLa** cells have experienced contamination, not realizing that this phenomenon is occurring worldwide. Most scientists, however, continue to live in denial, despite the fact that Gartler has dropped “the HeLa bomb.”

Although the phenomenon of HeLa contamination is even more widespread than Gartler implied—it has spread to labs worldwide—scientists continue to ignore it, despite the fact that all contaminated results they find in the future will be utterly useless.

CHAPTER 21: NIGHT DOCTORS

Two months after unsuccessfully trying to meet with Sonny Lacks, Rebecca waits for him on New Year’s Day. Just as she begins to give up, Sonny appears. He tells her that he’s taking her to see Lawrence, who will decide whether or not to talk to Rebecca.

Skloot juxtaposes one of the largest scientific setbacks within her own book with a personal success: at last, she is beginning to make some progress with the Lackses.

Apprehensive, Rebecca walks into the house where Lawrence appears in the kitchen and offers her a pork chop. Rebecca accepts, and Lawrence talks as he cooks, reminiscing “about life down in the country.” When Rebecca asks about Henrietta, Lawrence only says, “She was pretty,” before moving on. Rebecca asks about her several more times, until Lawrence finally admits that he doesn’t really remember his mother.

This passage reveals a tragic truth: that even Lawrence, the oldest of the Lacks siblings, does not remember his mother. Henrietta’s legacy here seems wholly defined by HeLa, since even her children have only the vaguest recollections of who she was as a person.

Lawrence tears up as he describes Henrietta’scells growing all over the world. He asks Rebecca to explain what exactly Henrietta’s cells did: “I know they did something important, but nobody tells us nothing.” Rebecca goes over the basics of cell culture, and shows him articles about scientists growing corneas using technology developed from **HeLa**.

Once again, Skloot emphasizes how in the dark the Lacks family is about why their mother’s cells are actually important. Despite the amazing contribution Henrietta made to science, they do not know that they should be proud of her; it becomes up to Rebecca to tell the Lackses the story of their own mother.

Sonny comes back, and Lawrence tells him that Rebecca's been explaining **HeLa**'s legacy. The brothers are exhilarated by a speech thatPresident Clintonhas given about the importance of the polio vaccine; they know that HeLa was involved in this too. Sonny reveals that he's brought Day with him. At eighty-four, their father is fragile, with terrible gangrene in his feet. The doctors have recommended amputation, but Day is still spooked by the procedures that Henrietta experienced, so he's refused. Sonny, who needs an angioplasty, feels the same.

Here the narrative juxtaposes the fierce pride the Lackses feel about Henrietta's legacy (despite the fact that they don't fully understand it) with the fear that her mistreatment at the hands of Hopkins physicians has instilled in them. By refusing surgery, Day and Sonny are essentially putting their lives at risk; yet after being betrayed by the medical establishment, they feel fully justified in doing so.

Rebecca gets ready to record an interview with Day, but first asks if Deborah might want to come over. The Lacks men say that Deborah doesn't want to talk to anyone. When the interview begins, Day only discusses Henrietta's death, insisting that he never gave permission for doctors to keep her cells, and that doctors had promised that studying Henrietta's tissues would help his children and grandchildren. Bobbette chimes in, asserting that **Hopkins** can't be trusted when it comes to "black folks." Sonny agrees, and the family grows more and more angry about the idea of Hopkins' experiments on black people.

The theme of African-American mistrust in the medical system grows stronger as the Lacks family begins discussing the ways in which Hopkins has mistreated them. Their mistrust and anger expands outwards, emblematic of a deeper and broader rage at the white medical establishment as a whole. It is clear that the whole family remains traumatized by Henrietta's treatment.

Rebecca explains that many African Americans have believed for centuries that white scientists are kidnapping and experimenting on them, and that there are "disturbing truths behind those stories." Doctors tested surgical procedures on slaves, and in the 1900s, medical schools would dig up black bodies for research. Black residents of Baltimore believed that **Hopkins** was built close to poor black families in order to have easy access to research subjects.

Skloot acknowledges that, as disturbing as the Lacks' stories sound, there is truth behind them. She recounts the years of racist and cruel experiments that researchers performed on black subjects, taking care to remind us of why exactly racism and discrimination are such important focuses within the story of Henrietta.

In fact, **Johns Hopkins** was originally founded in order to create a medical school and charity hospital "without regard to sex, age, or color." Its founder and namesake especially hoped to help black children. Hopkins' friends and family went on to found one of the best medical schools in the U.S., and a hospital with millions of dollars worth of free health care, much of which went to poor black residents of Baltimore.

The narrative also takes this opportunity to explore the origins of Johns Hopkins, which in fact was built on a belief in charity and equality. It is tragic, Skloot implies, that Hopkins should have become a symbol for racism to so many, considering its altruistic beginnings.

However, **Hopkins** also betrayed its original mission to help black patients. In 1969, a Hopkins researcher tested the blood of 7,000 children, many of them poor and black, "to look for a genetic predisposition to criminal behavior." In the 1990s, two women sued Hopkins because researchers had purposefully exposed their children to lead. It turned out that scientists had been testing lead exposure on black families.

Skloot then reveals that Hopkins has in fact funded and supported highly racist studies, despite the good intentions upon which it was founded. Little by little, she is showing that the Lacks family's fear of the medical system may not be as self-destructive or paranoid as it originally appeared.

At Lawrence'shouse, Sonny and Bobbette continue to trade conspiracy theories about **Hopkins**. Eventually, Sonny and Lawrence begin to complain about all the money that Hopkins has made off of them. Lawrence asks, "If our mother so important to science, why can't we get health insurance?" Bobbette adds that Hopkins took Henrietta's cells without her consent, and expresses anger at Dr. Gey.

This is one of the crucial points Skloot and the Lackses make—shouldn't Henrietta's family be compensated in some way for Henrietta's contribution to science, or receive some kind of royalties from the billions of dollars made off of her still-living cells?

CHAPTER 22: "THE FAME SHE SO RICHLY DESERVES"

In 1970, George Gey finds out that he has a deadly form of pancreatic cancer. Before surgery, he asks his surgeons to take samples of his tumor, so that they can grow a cell line from his pancreas. He begs his staff to help make the cells immortal. When Gey is anesthetized, his doctors find that his cancer has spread to cover many different organs. Worried that cutting into the tumors might kill Gey, they do not take samples. Gey begins seeking researchers who would be willing to test experimental treatments on him, but his health continues to decline. Not long before death, he tells Margaret Gey that she can release Henrietta'sname, but she never does. He dies in November 1970.

While the Lackses are justifiably angry, Dr. Gey seems like the wrong scapegoat for this anger, despite the fact that he was the one who first took the HeLa sample (and that he assumes it's his decision to release Henrietta's name). Even when dying, Gey still remains committed to the scientific principles to which he has dedicated his life. He also, as he dies, still clearly carries some guilt and doubt about HeLa.

A few months after George Gey dies, Howard Jones and several other **Hopkins** doctors, including a geneticist named Victor McKusick, start writing an article about the history of **HeLa** in order to pay homage to Gey. They write that HeLa has ensured immortality for Henrietta, and praise George Gey for his legacy. This is the fist time that Henrietta's real name is printed. It also means that the Lackses and their DNA will always be linked to the HeLa cells.

The Hopkins doctors who praise Gey continue his legacy of good intentions but bad judgment—they mean to write an article praising Gey and honoring Henrietta, but also forever link the Lackses to HeLa without their knowledge or consent. Even in this time, decades after Henrietta died, doctors are still making the same mistakes.

Three weeks after the article is published, President Richard Nixon announces the War on Cancer, pledging $1.5 billion and promising to cure cancer within five years. Researchers believe that they can develop a vaccine for a supposed cancer virus.

Of course, present-day readers know that there is still no cancer vaccine—a sign of how overly optimistic researchers can be about their own findings.

In 1972, Russian scientists assert that they've discovered the cancer virus; it turns out, however, that the cells they've found actually originated from Henrietta. This finding comes from a scientist named Walter Nelson-Rees, the director of cell culture at the Naval laboratory, who has been hired by the National Cancer Institute to combat contamination.

The contamination problem once again rears its head, but now it is also connected to the question of Henrietta's identity.

After news of the Russian cell contamination breaks, newspapers begin reporting on the problem. Interest in Henrietta reemerges, but she is always misidentified as Helen Larsen or Helen Lane. People begin to speculate that she was Gey's secretary or mistress, or perhaps a prostitute.

The press, too, comes back into play, once again spreading misinformation and writing ill-informed stories. Despite interest in scientific breakthroughs, reporters don't seem to have any real desire to find out the truth about Henrietta before publishing.

CHAPTER 23: "IT'S ALIVE"

In 1973, Bobbette is visiting with her friend Gardenia and Gardenia's brother-in-law, who lives in DC. Bobbette tells the brother-in-law that she works at Baltimore City Hospital, and he replies that he works at the National Cancer Institute. Upon hearing her last name, he explains that he's been working with a cell culture in his lab originating from a woman named Henrietta Lacks. Bobbette replies that Henrietta Lacks was her mother-in-law, but that she's been dead for twenty-five years. The brother-in-law, however, says that the cells in question come from a woman named Henrietta who died of cervical cancer in the fifties at **Johns Hopkins**.

This is a huge turning point in the narrative: the moment at which the Lackses finally become fully aware of what has happened to Henrietta's cells. It is ironicthat the news should come through Bobbette, the only member of the Lacks clan not related by blood to Henrietta (and whom Henrietta never met).

Bobbette is shocked and appalled; she flashes back to the **Tuskegee** syphilis study, and begins to panic, thinking that researchers will soon come for Henrietta's children and grandchildren. Bobbette returns home, yelling to Lawrence that part of Henrietta is still alive. Lawrence contacts **Hopkins**, and he explains that he's Henrietta's son, and says that they still have "some of her alive in there."

Bobbette's panic, though dramatic, makes sense considering the history of racist medical experiments, and all we know about the Lackses' mistrust of the medical system. Lawrence, meanwhile, demonstrates how difficult it still is for the Lackses to get any information out of Hopkins.

In June 1973, a group of researchers gathers at Yale to begin a project that will lead to the Human Genome Project. As they discuss how to stop **HeLa** contamination, they realize that if they find genetic markers specific to Henrietta, they will be able to find out which cells are Henrietta's, and which are not. Doing so will necessitate collecting DNA from Henrietta's children and husband. Victor McKusick is present, and says that he can help. Since the Lackses are still patients at **Hopkins**, they will be easy to find.

As the Lackses begin to learn more about the medical establishment and HeLa, the medical establishment, in turn, begins to become more interested in the Lackses. The scientists involved seem to display no awareness that the news of HeLa might come as a shock to the Lackses—they are thinking only about their own research, rather than the human cost.

McKusick deputizes this task to a doctoral fellow named Susan Hsu. When she gets home from the conference, Hsu calls Day to see if she can draw blood from the Lackses. Day believes that they want to test the children for the cancer that killed Henrietta. Hsu, however, says that she didn't promise any such thing. Instead, McKusick and Hsu want to test the Lacks family for different genetic markers in order to eventually develop a test to identify Henrietta's cells.

Once again, a fundamental misunderstanding develops between the Lacks family and the medical establishment. The Lackses believe—understandably—that they might be susceptible to the illness that killed their mother. The researchers, meanwhile, are thinking not at all about helping the Lacks family, but primarily about getting the samples they want.

In the present day, Rebecca asks McKusick whether anyone ever attempted to get informed consent from the Lackses. He responds that it's unlikely that much effort was expended. Susan Hsu adds that they never gave the family a consent form, because you don't need that to draw blood.

Even in the present day, the doctorsSkloot seeks out seem to demonstrate a complete lack of understanding about how used and betrayed the Lacks family feels.

Rebecca explains that during this time period, research oversight was changing quickly. In response to several unethical studies, the Department of Health, Education, and Welfare had recommended "new Protection of Human Subjects regulations that would require, among other things, informed consent."

Once more, HeLa's journey is incredibly relevant to the medical history of the day—this time, because of the issue of informed consent, which is increasingly becoming a hot topic in the medical community.

After Day talks with Susan Hsu, he calls his children, telling them to gather at the house so that **Hopkins** doctors can test their blood for cancer. Deborah, now twenty-four, is terrified, believing that she may die like her mother, leaving behind two young children.

We again see the real human costs of the Hopkins doctors' failure to adequately inform the Lacks family—Deborah, who already suffers from anxiety, becomes convinced that she will die of cancer.

A few days later, the family allows Susan Hsu and her colleagues to draw blood from them. Afterwards, Deborah repeatedly calls **Hopkins** to ask about her "cancer results," but no one knows what she is talking about. A short while after, Hsu writes to Lawrence asking if someone can go to Zakariyya's prison to collect blood from him. Along with her letter, she encloses a copy of the article about George Gey and **HeLa** written by McKusick and Howard Jones, but no one in the family remembers ever seeing such a piece.

The misunderstandings continue, as Hopkins seems interested only in collecting Lacks family blood, rather than expending any effort to inform the family about what they are actually trying to do. As the stories of the Lackses and the doctors diverge, it is impossible to know whom to believe.

Deborah becomes obsessed with the idea that she has cancer, and she can't stop picturing researchers doing terrible things to her mother; the legacy of researchers abusing African Americans only makes her more fearful. When she learns about Southam's experiments, she begins worrying that McKusick and Susan Hsu are trying to give the Lackses cancer. She begins asking Day questions about Henrietta's death, and his answers only make her more suspicious. Eventually, a researcher from McKusick's office calls Deborah to ask if she will give more blood. She agrees, thinking that she can get more information about her mother.

Skloot here begins to give readers evidence of Deborah's deep paranoia and fear—it is vital, however, that we understand how these feelings come from a deep-seated of anxiety, exacerbated by having been lied to and ignored by the medical establishment for years. Although Deborah attempts to inform herself through research, the very real evidence of medical racism only makes her more fearful about what fate the doctors at Hopkins have planned for her.

Deborah arrives in McKusick'soffice in June 1974, four days before a new federal law goes into effect requiring informed consent for all federally funded research. Many researchers, have complained that collecting blood and tissue should be exempt from the law, but their requests are denied. Rebecca explains that McKusick's contact with the Lacks family "coincided with the beginning of a new era of genetic research, in which the concept of risk to patients would change completely." Suddenly, a single needle stick could expose patients' genetic information—their privacy was at stake.

The story of HeLa now coincides with another groundbreaking field of science: that of genetic research, which brings up entirely new fears about medical privacy. The careless way that the researchers in question treat the Lacks family's genetic information makes clear what little attention doctors were giving to these vital ethical issues.

Deborah meets McKusick when she goes to **Hopkins** to give blood. McKusick tells her that "Henrietta has made an important contribution to science." Deborah begins to ask him questions, wanting to know whether she is "going to die young like her mother." McKusick instead explains some of the innovations derived from Henrietta's cells, from space missions to atomic bomb testing. Deborah begins to imagine "her mother on the moon and being blown up by bombs." She wonders whether her mother can still feel pain. When she asks McKusick for more explanation, he gives Deborah a genetics textbook and his phone number, and tells her to call him to give more blood. Then he shows Deborah a picture of Henrietta in the textbook, and shows her a paragraph about **HeLa**.

At last, it seems as if Deborah will get some answers, as she directly confronts Victor McCusick at Hopkins. Even during this face-to-face meeting, however, McCusick seems to fundamentally misunderstand how terrified Deborah is about getting cancer, and how little she knows about medical ideas that he takes for granted. By failing to see beyond his own educated worldview, McCusick fails Deborah as well. He does not lessen her fears, but only heightens them.

Deborah finds the book impossible to understand, but fixates on the photograph within it, wondering how McKusick got a hold of it. When Rebecca talks to him years later, McKusick doesn't remember the photo's origin, but supposes that the Lackses must have given it to a doctor at **Hopkins**, like Howard Jones. He also doesn't remember speaking to Deborah—he says that only Susan Hsu did.

Another mystery emerges: how exactly doctors got hold of the fateful picture of Henrietta (the same one that Rebecca stares at during the book's beginning). Like many other episodes, this one shows how little many doctors cared about their patients' privacy or consent not so long ago.

Susan Hsu is shocked when Rebecca tells her that the Lackses believed that they were being tested for cancer. She wants Rebecca to tell the Lackses that she is grateful to Henrietta, and that they should be proud. She adds that she could learn even more today by testing the family's blood. She wants Rebecca to ask them if they'd be willing to donate some more.

Dr. Susan Hsu at least shows some remorse about how misinformed she left the Lackses in the fifties. At the same time, though, she displays a shockingly tone-deaf response when she asks to take more Lacks blood.

CHAPTER 24: "LEAST THEY CAN DO"

The Lackses know nothing about **HeLa** contamination until they meet Michal Rogers, the *Rolling Stone* reporter. During his initial research, he gets Henrietta'sname from Walter Nelson-Rees. Soon after, Rogers is sitting in the same Baltimore hotel in which Rebecca will later find herself. Years later, he recounts to Rebecca how he got into a car accident on the way. Deborah claims that Henrietta was acting from the grave, warning Rogers to leave.

The Lackses meeting Michael Rogers will become an important event in the book, because it will last connect them to HeLa in the public eye. Deborah's belief that Henrietta caused Michael's car accident, meanwhile, adds a note of foreboding to the proceedings, while also demonstrating Deborah's deep belief in the supernatural.

Rogers tries to interview the Lackses about Henrietta, but instead they begin to ask him questions of their own. They ask Rogers what it means for them that Henrietta's cells are stronger than normal—whether they will live longer than normal people when they get sick, or whether they'll die of cancer. Rogers tries to explain that the cells won't affect them at all, but he doesn't know if the Lackses believe him.

The Lackses are so in the dark that they turn to Rogers, a reporter, for facts about their mother. His story only emphasizes how misinformed they are—although they've tried to learn more about Henrietta, they just can't seem to get straight answers.

At this point in time, only Deborah is upset about **HeLa**. This changes when the brothers learn from Rogers'article that researchers and scientists are making money off of the cells. They become certain that George Gey and **Johns Hopkins** stole Henrietta's cells for profit. Rebecca reveals that George Gey never made money off of HeLa. In the present day, however, biotech companies sell HeLa products for anywhere from $100 to $10,000. Seventeen thousand patents have involved HeLa cells. The American Type Culture Collection sells HeLa cells at $256 per vial.

This episode is at the root of the Lackses' anger and embitterment towards the medical establishment—the belief that they have been cheated out of riches and prestige by doctors and researchers who pulled the wool over their eyes. Considering the poverty in which the Lackses live, and how misinformed they have been by Hopkins, it is easy to understand their deep anger.

Infuriated, Lawrence and Sonny begin making handouts about what the medical establishment owes to the Lacks family and giving them out to customers at Lawrence's store. Deborah, meanwhile, doesn't want to fight **Hopkins**; instead, she is trying to educate herself about **HeLa**. As she painstakingly reads science textbooks, she also keeps diary entries, where she expresses despair and frustration about the terrible things that she believes happened to Henrietta.

Henrietta's children have vastly different responses to the news about their mother—Lawrence and Sonny are far more commercial, while Deborah reacts in a deeply emotional way. Her diary entries speak to the depth of her pain, and her fears about what the scientific community did to her mother.

March 1976, when Mike Rogers's article is published, is the first time that the general population learns about Henrietta's identity, let alone that she was black. Many different magazines, some of them with a largely black readership, begin publishing articles about Henrietta.

Henrietta's identity as a black woman who saved literally millions of lives was a huge news story in the 70s. She's finally getting some credit for her contributions, and shaking up the white medical establishment.

On the scientific side of things, Victor McKusick and Susan Hsu publish their research on the Lacks family, creating a map of Henrietta's DNA that will identify **HeLa** cells in culture. In the present day, Rebecca explains, a scientist would never connect a person's identity with their genetic information, because of all the things that can be deduced from DNA.

Once again, well-meaning scientists committed a huge ethical lapse as they published the Lacks family DNA without their consent. As we see over and over again, scientists on the forefront of discovery often forget about personal issues of privacy or consent—nothing is more important than their research.

Meanwhile Deborah still thinks she is waiting to learn if she has cancer, while Sonny and Lawrence are trying to strategize ways to get money from **Hopkins**. Rebecca then introduces the story of John Moore, a man who sued for the profits made off of his harvested tissues.

The story of HeLa and the Lackses continues to parallel trends in the medical community—scientific advances, ideas of consent, and now the trend of monetary compensation for malpractice.

CHAPTER 25: "WHO TOLD YOU YOU COULD SELL MY SPLEEN?"

In 1976, John Moore, a surveyor, contracts a form of leukemia: his spleen is filled with malignant blood cells. He comes under the treatment of David Golde, a researcher at UCLA, who removes the spleen. Moore goes back to his regular life, but visits Golde every few months for follow-ups, during which he gives the doctor tissue samples. When he tells Golde that he wants to do follow-ups closer to his home, however, Golde tries to bribe him to keep coming.

We now enter a new phase of the narrative: patients, no longer intimidated by the medical establishment, now attempt to take back the rights and the profits that doctors had previously taken from them. The story of Golde and Moore is only the first of many such stories in which medicine and law come into conflict.

Seven years later, a nurse hands Moore a form: he must choose whether or not to give UCLA rights over a cell line developed from his tissue. Moore asks whether his tissue has any "commercial value." Golde denies this, but Moore still refuses to sign the agreement. Almost immediately after, Golde begins hounding him to sign the consent form. Eventually Moore sends the form to a lawyer and discovers that Golde has been developing and selling a cell line called "Mo."

The Moore story is significant not only for its legal precedent, but also for the similarities and differences it has to Henrietta's story. Like Henrietta, Moore comes in with a medical problem, and is utterly unaware that his tissues might be valuable. Unlike Henrietta, however, Moore is asked to sign a form (and eventually refuses to do so), and also has the resources and the knowledge to hire a lawyer.

Moore describes the experience as "dehumanizing." He finds that "Golde has filed for a patent on Moore's cells, and several extremely valuable proteins those cells produced." In fact, the market value of Mo, at this point, is "estimated to be $3 billion."

As modern science moved closer to being able to manipulate and create organisms like bacteria, the question of ownership and profit became more important, but also more complicated. These concerns, taken for granted in science today, weren't even present in the minds of researchers like Gey.

The idea of biological materials being patentable only came into being in 1980, when the Supreme Court heard the case of Ananda Mohan Chakrabarty. A GE scientist, he created a bacterium that could metabolize oil and clean up oil spills, and filed a patent for it. His application was denied because "no living organism could be considered an invention." Chakrabarty and his lawyers argued that the bacterium wasn't naturally occurring, and the Court agreed.

Although patenting ensures that inventors get the profits from their inventions, it also allows researchers such as Golde to claim ownership of tissues that in fact come from another human—an ethically tricky dilemma which has become increasingly common in the modern scientific age.

Suddenly it was possible to patent biological discoveries, "including genetically modified animals and cell lines," without getting permission. Moore's cells produce extremely valuable proteins that can actually treat infections and cancer. They also carry a virus called HTLV, a cousin of HIV, which researchers hope to use to create an HIV vaccine.

It's certainly easy to relate to Moore's frustration, but Golde isn't just using his cells for his own gain—he's also potentially saving thousands or millions of other lives with them, and this research could be hindered by Moore's resistance.

Rebecca gives background on a man named Ted Slavin—a hemophiliac in the 1950s who is repeatedly exposed to hepatitis B from his blood transfusions. As a result, he has a high amount of antibodies for the virus in his bloodstream, just as researchers worldwide are attempting to develop a hepatitis B vaccine. Slavin begins selling his blood, but also gets in touch with virologist Baruch Blumberg. Slavin offers Blumberg "free use of his blood and tissues," and eventually Blumberg creates the first hepatitis B vaccine, while Slavin founds a company called Essential Biologicals, which provides labs with valuable blood and tissue.

Skloot doesn't take sides on the issue, but here offers an example of a more harmonious "middle way"—an instance in which a researcher and a patient work together for both discovery and profit. As we can see, this mutually beneficial partnership leads to innovation without the legal struggle—an ideal but unfortunately rare situation.

Since Golde has already patented the Mo cell line, Moore cannot sell his own cells. In 1984, he sues Golde and UCLA. He also claims his tissues as property, and sues Golde for theft. Scientists all over the world begin to panic, worried that researchers will be vulnerable to lawsuits from everyone from whom they ever took a tissue sample.

Despite the evidence of the beneficial partnership of Slavin and Blumberg, researchers still become convinced that giving patients control over their own tissues will ruin or hinder scientific research. As usual, Skloot gives both sides of the argument due time.

As this goes on, various researchers, universities, and biotech companies are also suing each other over who owns various cell lines. Only two suits mention the originators of these cells. Meanwhile, the judge in Moore's case throws out his suit, saying that the fact that no one has sued for ownership of the **HeLa** line shows that patients don't mind when doctors employ their cells for commercial uses. Moore appeals, and in 1988 the California Court of Appeals rules in his favor. Next Golde appeals and wins. Seven years after the original suit, the California Supreme Court rules against Moore, stating that once tissues are removed from your body, you no longer own them.

As legal and medical disputes come together, the question of HeLa comes into play—incorrectly—as a judge assumes that the Lacks family does not mind the existence of HeLa. In fact, the Lacks family was never even consulted, and simply does not have the means to sue Hopkins (or the hundreds of other institutions, companies, and labs that use HeLa). Even as a debate over patients' rights rages, the Lackses are still ignored.

The Supreme Court judge does agree with Moore on two counts, however: first, Golde did not obtain his consent, and second, Golde didn't disclose the profit he was making, thus violating the doctor/patient relationship. The court states, "researchers should disclose financial interests in patient tissues," and criticizes the lack of effort to protect patients in tissue research. It adds that giving patients rights might severely damage the field of tissue research. Scientists react with triumph.

This legal case is a setback for patients' rights, even though the judge does criticize researchers' practices and gives some (non-legally-binding) advice for the future. In response, scientists act as if they have won a victory over the very patients whom they are sworn to help and protect—it's a complicated situation all around.

The Lackses have no idea about this national debate, although they are still attempting to publicize what they believe to be **Johns Hopkins**'crimes.

Left out in the cold, the Lackses continue to speak about the injustice they've experienced, but no one will listen.

CHAPTER 26: BREACH OF PRIVACY

Deborah passes her thirtieth birthday with no health crisis and continues to work several jobs. In 1980, she marries a mechanic called James Pullum. Eventually, Deborah tells him about Henrietta. He replies that the family should hire a lawyer.	*Yet again Skloot juxtaposes the personal struggles of the Lacks family members with the sweeping scientific changes HeLa is involved in.*
Zakariyya, meanwhile, is paroled after seven years in prison. He continues to have problems with anger and alcohol, and can't hold down a job; most nights, he ends up homeless. When Day tries to help Zakariyya, however, his son refuses him. He hates his father for burying Henrietta in an unmarked grave and for leaving the Lacks children with Ethel.	*The fractures within the Lacks family continue to show, especially when it comes to Zakariyya. It's important to note, however, that Zakariyya's anger at Day still revolves around Henrietta, as the tragedy of her loss continues to ripple outward.*
Day and his fellow workers participate in a class-action lawsuit because of asbestos exposure at Bethlehem Steel. Awarded $12,000, Day gives $2,000 to each of his children. Deborah buys a piece of land in Clover. Sonny has fallen on hard times, and ends up in jail for dealing drugs. Deborah's son Alfred Jr., too, begins getting arrested. He joins the Marines but then goes AWOL to continue his criminal behavior, at which point Deborah disowns him.	*Another pattern becomes clear by this point: the way that poverty, mistreatment,and lack of access to education leads to a cycle of crime and despair. Despite Deborah's best efforts, both her brother (Sonny) and her son (Alfred) continue to live on the wrong side of the law.*
Deborah learns that she can request Henrietta's medical records from **Hopkins**, but she delays doing so out of fear. In 1985, a university publishes a book from a science reporter called Michael Gold about HeLa contamination and Walter Nelson-Rees. It is called *A Conspiracy of Cells: One Woman's Immortal Legacy and the Medical Scandal it Caused*.	*The world of HeLa and the world of the Lacks family slowly starts to converge, but there is still a huge disconnect between what the Lackses actually know about their mother and what the scientific community is actually doing.*
Deborah buys a copy of the book and begins to read about her mother. Gold has gotten access to Henrietta's medical records and the famous photo of her, despite the fact that no one from the family ever gave permission for them to be released. Gold describes the pain and suffering surrounding Henrietta's death, devastating Deborah.	*The press and the medical establishment continue to work together—however unknowingly—to disempower the Lackses. Now better aware of her mother's role in history, Deborah is incredibly sensitive to any and all press about Henrietta. The book in question only adds to her upset and fear, without really helping her better understand her mother's legacy.*
When asked, Michael Gold cannot recall how he got the records; he remembers speaking with Victor McKusick and Howard Jones, and believes that Jones gave him the picture of Henrietta that he used in the book. Jones, however, doesn't remember speaking to Gold, and denies that he or McKusick would ever release medical records.	*The story grows muddy as no one steps up to take responsibility for violating Henrietta's privacy. It is clear, though, that yet again, the medical establishment has paid no attention to the Lackses, and has made no effort to gain their consent.*

Rebecca explains that it isn't illegal for a journalist to publish medical records, but wonders why Gold didn't attempt to speak to Henrietta's family. When she asks, he says that he tried to get in touch, but was never able to do so. Rebecca goes on to discuss the history of patient confidentiality, which is even mentioned in the Hippocratic Oath. In the eighties, however, this stricture was a moral limit, not a legal one.

Rather than condemn her fellow reporter, Skloot takes a more measured approach, discussing the history of patient privacy. Although she acknowledges that no one has violated any laws, she does hold the scientists in question to moral standards as well, implying that they have undoubtedly violated some of those.

CHAPTER 27: THE SECRET OF IMMORTALITY

In 1984, researchers begin to understand why Henrietta's cells are immortal. A virologist named Harald zur Hausen discovers an STI called Human Papilloma Virus (HPV), some strains of which may cause cervical cancer. **HeLa** tests positive for a strain called HPV-18. Rebecca explains that there are over one hundred strains of HPV, and that thirteen of these cause cancer. HPV-18 is one of the most virulent. This research eventually leads to an HPV vaccine.

At last, the secret of Henrietta's immortality begins to unravel; at its heart sits HPV, a cancer-causing virus for which scientists have since developed a vaccine—thanks in large part to HeLa. It is tragic, and yet appropriate, that HeLa would help provide a vaccine for the very virus that caused Henrietta's tumors and eventually killed her.

In Henrietta's case, HPV inserted itself into her DNA and turned off a gene that suppresses tumors. Scientists still don't understand, however, why she then produced such virulent cells. Rebecca speaks to other researchers, none of whom can fully explain the growth of Henrietta's cells.

Even now, though, a mystery remains as to why these cells in particular are so strong—leaving room in the narrative for some spiritual or metaphysical explanation.

Henrietta's family, on the other hand, has many theories. Her sister Gladys believes that the cancer was an affliction to punish Henrietta for leaving Gladys to care for their elderly father. Cootie believes that spirits caused the disease. Sadie, meanwhile, wonders whether water from Turner Stationmight have infected Henrietta.

Skloot presents the Lacks family's theories without comment or skepticism—she has a deep respect for the Lackses' opinions when it comes to Henrietta, particularly considering how mistreated and misinformed they have been.

Rebecca recalls that every decade has made innovations due to **HeLa**. In the eighties, a molecular biologist named Richard Axel alters HeLa cells in order to make them susceptible to HIV, determining how exactly the virus attacks cells. This research attracts the eye of Jeremy Rifkin, an activist who believes that scientists should not be allowed to alter DNA. Rifkin eventually sues to stop Axel's research, but the suit is dismissed.

As science develops, HeLa continues to prove relevant and useful—but wherever it goes, it seems, controversy follows. In the eighties, this controversy takes the form of whether or not scientists should alter DNA—a debate that continues on to the present day.

Two other scientists begin to theorize that **HeLa** cells may no longer be human, arguing that they have gone through millions and billions of generations of cells since the first sample was taken. During this time, they assert, the cells have evolved.

The many different theories about HeLa—even among the scientific community—prove how little we know, even now, about the mechanisms of cell culturing. Despite having been cultured in the 50s, HeLa still contains mysteries.

Researchers begin to wonder whether **HeLa** cells may indeed contain clues about immortal life. Rebecca explains that normal human cells cannot grow indefinitely; they divide a set number of times and then die. From their HeLa research, scientists know that cancer cells can divide indefinitely. They connect this phenomenon to a section of the chromosome called the telomere, which shortens each time a cell divides. As cells become older, the telomeres become shorter, and the cell stops dividing. There is an enzyme called telomerase that rebuilds telomeres, however, and in the case of HeLa, telomerase constantly regenerates the telomeres of Henrietta's chromosomes, enabling HeLa to outlive almost all other cells.

Skloot means to remind us of just how vital HeLa has proved in the role of scientific discovery, even up to the present day. The idea of extending human life by manipulating DNA sounds like something out of science fiction; and yet when it comes to HeLa, it appears that the possible may well become possible.

CHAPTER 28: AFTER LONDON

A producer at the BBC named Adam Curtis decides to make a documentary about Henrietta in 1996—the same documentary that Rebecca eventually watches. Deborah believes that Curtis will make the world understand what her family went through. He and his crew coach Deborah through many interviews, and take footage of the whole family. They even follow the Lackses to a conference in Atlanta organized by Roland Pattillo in Henrietta's honor.

Like Michael Rogers before him, Adam Curtis seems like a huge opportunity to the Lackses: if they can just get their story told, then they may be able to get credit and money for all that their mother went through.

Pattillo, Rebecca explains, grew up in a segregated town in Louisiana. After becoming the first in his family to attend school, he learned about Henrietta while working for George Gey. Finally, in October 1996 at the Morehouse School of Medicine, Pattillo organizes the first **HeLa** Cancer Control Symposium. Researchers present papers about "cancer in minorities," and Pattillo calls for Atlanta to name October 11th Henrietta Lacks Day. Howard Jones even pens an article, lamenting Henrietta's illness but praising her sacrifice in the name of science.

Within the story of Henrietta Lacks, Roland Pattillo emerges as a hero—educated as a scientist, he also understands the pain and suspicion that the Lackses feel towards the medical establishment. He tries to show the family that not all scientists are out to get them, while also giving Henrietta the honor and respect that she deserves. He also makes sure to give Deborah a voice, something that even her own brothers fail to do.

The entire Lacks family travels to Atlanta for the conference, along with the BBC crew. When they arrive, the Lackses are "treated like celebrities." Deborah speaks at the conference, saying that it is a dream come true, and expressing how much she still misses her mother.

The tide finally begins to turn as more people start trying to get Henrietta the recognition and honor that she deserves. With these efforts comes some degree of comfort for Deborah, who is happy that her mother has helped so many.

The BBC crew begins interviewing residents of Turner Station as well, and news reaches Courtney Speed, who has just founded the Turner Station Heritage Committee. After learning about **HeLa**, Speed, along with a sociologist named Barbara Wyche, begins agitating for recognition for Henrietta. They contact multiple branches of government, as well as Terry Sharrer, a Smithsonian Museum curator. The museum arranges a small event, and attendees tell Deborah "that her mother's cells had helped them overcome cancer."

The Lackses now get some real allies on the home front, as Barbara Wyche and Courtney Speed also become advocates for Henrietta and Deborah's cause.

After the event, Sharrer writes to Wyche and recommends that she and Courtney Speed found an "African-American health museum in Turner Station." The two begin to create "the Henrietta Lacks Health History Museum Foundation, Inc.," and attempt to publicize their organization. At first, Deborah is furious, saying that the money the women are trying to raise should go to the Lacks family. But she eventually agrees to help when Speed and Wyche offer to aid her in finding out more about her mother.

Even when people like Courtney Speed and Barbara Wyche try to help her, Deborah remains deeply suspicious. This is unsurprising; after all, considering how much the Lackses have been taken advantage of, it makes sense that they should be suspicious of any and all people who show an interest in Henrietta.

Speed and Wyche invite Mary Kubicek to speak at an event, and attendees question her about who's profited from the cells, and whether George Gey had patented them. As Mary tries to respond, the crowd grows angrier, falling silent only when Deborah asks Mary to tell the story about Henrietta's**toenail polish**.

We must admire Mary for her scientific skill and her empathy towards Henrietta, but on the other hand, she now represents the scientific establishment that swindled the Lackses. This is exactly the kind of unresolvable conflict that Skloot means to display.

Wyche tries to get the state to acknowledge Henrietta, and her efforts pay off. The Maryland State Senate thanks Henrietta, and Representative Robert Ehrlich Jr. honors her in front of the House of Representatives. Wyche next writes to the president of **Johns Hopkins**, William Brody, asking for acknowledgement of the ethical questions surrounding Hopkins' treatment of Henrietta. An assistant named Ross Jones eventually replies, and asserts that Hopkins never profited in any way from **HeLa**.

Despite the many official recognitions of Henrietta, Hopkins still stubbornly refuses to accept any responsibility for its mistreatment of her. This mixed bag of recognition and refusal shows just how difficult it is to get the medical establishment to admit that it has made a mistake.

Rebecca introduces a new character into the narrative: Sir Lord Keenan Kester Cofield: "the cousin of Deborah's husband's former stepdaughter, or something like that." Cofield contacts Deborah, asserting that she needs a lawyer, that she should copyright the name of Henrietta Lacks, and that she should sue **Hopkins**. Cofield begins researching Henrietta's records at Hopkins, telling the Lackses that Henrietta's doctors are guilty of various medical malpractices. Cofield tries to manipulate Deborah into getting him Henrietta's medical records, but a Hopkins lawyer named Richard Kidwell becomes suspicious, and starts investigating Cofield.

The story of the Lacks family now gets one of its first real villains: Cofield, whose memory terrifies the Lackses up until the day they meet Rebecca. Like others before him, he intends to manipulate the Lackses in order to turn a profit for himself. Of course, his con scheme comes directly from all the publicity that has cropped up around HeLa, Henrietta, and her family—proof of the double-edged nature of the press, and of the consequences that come from having one's privacy taken away.

Cofield is a fraud who has spent "years in various prisons." He has brought many frivolous lawsuits over the years, and is notorious within the legal system. When Kidwell learns about Cofield's background, he contacts Deborah and gets her to "sign a document forbidding Cofield access to her family's records." Cofield throws a fit, and then files "a lawsuit against Deborah, Lawrence, Courtney Speed, the Henrietta Lacks Health History Museum Foundation, and a long list of **Hopkins** officials."Cofield begins intimidating the Lackses. Deborah panics and breaks down in Speed's store, saying that Speed has allied with Cofield. Speed, however, is terrified of Cofield too.

Cofield intends to prey on the vulnerable, people like Deborah and Courtney who have no knowledge of the legal system and no access to a lawyer. Although he is a con man and a fraud, his behavior (Skloot implies) is not that different from researchers and doctors who take advantage of their patients' ignorance and fear in order to get what they want.

As these events unfold, the BBC documentary comes out, and reporters begin contacting Deborah. Deborah doesn't have answers, and decides to request a copy of Henrietta's medical records from **Hopkins**—as well as records for Elsie. She also meets with Kidwell, who pledges that Hopkins will fight off Cofield. They do, and the case is dismissed, but Hopkins still refuses to honor or acknowledge Henrietta in any way.

For once, Hopkins does right by the Lackses, protecting them against Cofield's lawsuits and giving Henrietta her family's medical records. By the same token, however, they still refuse to admit any wrongdoing of their own.

Deborah remains deeply paranoid, convinced that Cofield is going to steal her mother's possessions or records, or even her own cells. Soon, she is only leaving her house to work as a bus driver. A freak accident occurs, however: a boy on the bus attacks her twice, leaving Deborah with a permanent injury. Deborah then stops leaving the house or even answering the phone. She reads her mother's records, and learns that Elsie ended up in **Crownsville**. Deborah is afraid that Elsie was experimented on, and grows more suspicious after learning that many of Crownsville's records have been destroyed. She becomes so distraught that she breaks out in hives. After going to the hospital, she's told that she almost had a stroke. A few weeks later, Roland Pattillo gets in touch with Deborah to tell her that a reporter—Rebecca—wants to write about Henrietta.

The combination of Cofield, the tragic story of the medical records, and various other stressors in her life make Deborah break down completely, both physically and mentally. Once again, Skloot recounts this episode in order for us to fully understand the human cost of HeLa. Between her troubled family life, her dead mother and sister, and the controversies around HeLa, Deborah has had to deal with far more stress than any one human being should. That she continues to live and to love her family is a testament to her strong moral compass and her personal fortitude—positive attributes that place her at the core of Skloot's narrative.

CHAPTER 29: A VILLAGE OF HENRIETTAS

For almost a year, Deborah refuses to talk to Rebecca, and so Rebecca conducts other research, periodically calling Deborah. One day, Reverend James Pullum picks up the phone and screams at Rebecca that the family wants to receive "monetary satisfaction." At last Deborah calls Rebecca: she demands that Rebecca get Henrietta's name right, that she mention Elsie, and that she help Deborah find out "what happened to my mother and my sister."

Another turning point emerges, as Rebecca at last reaches Deborah in the present day narrative. At this point at least, Deborah's curiosity and love for her mother and sister prove stronger than her paranoia.

Deborah and Rebecca meet in July 2000 in Baltimore. Rebecca shows Deborah a gift from a Hopkins cancer researcher named Christoph Lengauer. Having heard about Rebecca's research, and having worked with **HeLa** for years, Lengauer has expressed remorse about the fate of the Lackses.

At last, Deborah and Rebecca—whose relationship sits at the heart of the book's conclusion—meet.

Lengauer has been working with **HeLa** for his entire career. As a student, he helped develop a technique to artificially color chromosomes in order to obtain info about a person's DNA; the technique also "creates a beautiful mosaic of colored chromosomes." Lengauer has done this with Henrietta's chromosomes, and has framed a large print for the Lackses, in order to express how grateful he is to them.

This brief tale of Christoph Lengauer is an inspiring one, and in many ways a parallel to Skloot's own journey—becoming independently fascinated with Henrietta during the course of his own research, and then seeking out the Lackses in order to tell their story and offer thanks.

Deborah is surprised by how beautiful the chromosomes look, and expresses a desire to learn more about what **HeLa** helped to create. Rebecca invites Deborah to Lengauer's lab, but Deborah says that she's not ready yet. She once again expresses dismay that "white folks" got rich off of Henrietta's cells while the Lackses remain poor.

The picture has symbolic as well as aesthetic meaning for Deborah, as it shows that at last someone in the scientific community—even if it's only one person—is expressing gratitude and remorse for what happened to her mother. This picture will continue to be an important artifact as the narrative continues.

Deborah then shows Rebecca all of the research that she's done on Henrietta. Within the papers is a Mother's Day card that Deborah has written to Henrietta, as well as many articles. Deborah expresses suspicion that **Hopkins** is still experimenting on "black folks," and wonders if they have cloned Henrietta without telling her family. Rebecca tries to explain that scientists have only cloned Henrietta's cells, but Deborah doesn't believe her. Rebecca explains that Deborah's conception of science fiction versus reality has blurred.

Deborah's muddled research, which includes newspaper articles, records, and the Mother's Day cards, emblemizes how much Deborah's grief and sense of loss is mixed in with her curiosity about HeLa. Skloot also begins to discover just how much misinformation Deborah has received over the years, and how little she knows about the actual scientific facts surrounding HeLa.

Deborah visits Rebecca for the next three days, but Rebecca is constantly worried that Deborah is going to change her mind and stop talking. Instead, Deborah speaks endlessly, and Rebecca describes her various eccentricities. She explains to Deborah why Victor McKusick wanted her blood, and Deborah expresses frustration that he didn't tell her in the first place. The two women grow friendly, but when Rebecca reaches for a file containing Henrietta's medical records, Deborah becomes paranoid and hostile.

As Rebecca learns more about Deborah, she comes to see just how deep Deborah's paranoia and anxiety goes. Unlike the doctors and reporters who have come before her, however, Rebecca shows real compassion in dealing with Deborah. Whenever the other woman grows overly suspicious, Rebecca always displays openness and honesty in order to regain her trust. It seems that it's just openness and honesty that the Lackses have wanted, and been denied, this whole time.

CHAPTER 30: ZAKARIYYA

The next day, Deborah takes the apprehensive Rebecca to meet Zakariyya. They travel to his apartment along with Deborah's two grandsons. Deborah assures Rebecca that she can "handle" Zakariyya's rage. Old before his time at fifty, Zakariyya comes to meet them and immediately begins scolding Deborah. After ignoring the group, he asks to read the article that Rebecca has written about Henrietta. He tells Rebecca that he believes his birth during Henrietta's illness to be a miracle, and then expresses rage at the doctors who "stole" his mother's cells.

As paranoid and suspicious as Deborah may be, she is nothing compared to the still-angry and unstable Zakariyya. When Rebecca meets him in person, readers at last witness for themselves how quickly he swings between calmness and anger, evidence of deep psychological issues that are still unresolved. We again see how the general feeling among the Lackses is that something has been forcefully taken from them, and from Henrietta.

Rebecca describes Zakariyya's tiny apartment, in which he's hung pictures of Henrietta and Elsie. He expresses a belief that Henrietta's cancer damaged him mentally, while Deborah holds that it was Ethel's fault. Zakariyya wonders whether he'd be a better person if Henrietta hadn't been "sacrificed." At the end of the session, Deborah shows Zakariyya the picture of Henrietta's chromosomes from Christoph Lengauer. Zakariyya is amazed by the picture, so Deborah gives it to him to keep, a gesture that makes Zakariyya cry. The two embrace. Rebecca explains that Lengauer wants to meet the Lackses, and Zakariyya agrees.

Rebecca begins to see that her presence can actually have a positive effect on the Lackses, as her present from Christoph Lengauer actually makes the hardened Zakariyya cry. At the same time, it is tragic to see how much hardship and trauma Deborah and Zakariyya attribute to Henrietta's death, and to imagine what their lives would have been like otherwise.

CHAPTER 31: HELA, GODDESS OF DEATH

The day after meeting with Zakariyya, Deborah receives a mysterious call telling her not to trust any white people asking about Henrietta. Panicked, she tells Rebecca that they can't speak anymore, but then quickly changes her mind. The two women continue interacting like this for the next year, visiting and talking on the phone for hours, although Deborah still doesn't show Rebecca the medical records. She is continually suspicious that Rebecca is getting money to write the book, but each time, Rebecca promises to use the book's profits to set up a scholarship fund for Henrietta's descendants.

The question of money is a deeply charged one for Deborah. Believing that the white medical establishment has cheated her, she finds it difficult to believe that Rebecca isn't out to make a profit as well. The fact that Skloot is able to earn back Deborah's trust, though, is a tribute to her skills as a reporter and her integrity as a person (at least as she portrays herself).

In an effort to gain Deborah's trust, Rebecca begins sending Deborah every article she can find about Henrietta. Deborah begins to feel maternal towards Rebecca, and even dresses in "reporter clothes" when they go on trips together in order to match Rebecca. Eventually Deborah lets Rebecca visit her house. Rebecca shows Deborah how to surf the internet, and Deborah stays up late every night Googling her mother after taking Ambien.

The relationship between the two women tentatively grows stronger, based in honesty and openness. For the first time Deborah has someone who will not only tell her the truth about her mother, but also explain those truths to her; a deeply meaningful development in the life of this too-often victimized woman.

Rebecca recounts the many different things that "**HeLa**" denotes, including a Marvel comic book character who is "a seven-foot-tall, half-black, half-white goddess." Deborah believes that the character must be based on her mother.

This is a significant moment both within the narrative and for Deborah. Rather than seeing Henrietta as a victim or a patient, Deborah instead gets to view her as an all-powerful goddess.

Rebecca lists Deborah's various medical problems, for which she takes around fourteen pills a day. She has many insurance problems, and has been diagnosed with a variety of physical and mental issues. Deborah is upset that she has to pay "for drugs my mother cells probably helped make."

Deborah's health problems come directly from her life of poverty—and, ironically enough, that same life now does not allow her to pay for her medication. Deborah is indeed right to feel cheated by the medical establishment that her mother helped evolve.

Deborah begins using the internet to research experiments done without patients' consent. One day the president of the National Foundation for Cancer Research, Franklin Salisbury Jr., calls Deborah to ask if she will accept a plaque in Henrietta's honor. Deborah is "ecstatic," but paranoid about the dangers her appearance may bring. She tells Rebecca that she wants to see her mother's cells before speaking. Only moments later, Deborah finds out that her son Alfred Jr. has been arrested for holding up five liquor stores.

Deborah's life is one of constant ups and downs. Although she sees danger around every corner, her paranoia is often justified, as when she discovers that her son has been arrested for armed robbery. Given the toughness of Deborah's life, it makes sense that she should be fearful and suspicious—this is the only way that she has learned to survive.

CHAPTER 32: "ALL THAT'S MY MOTHER"

When Deborah is finally ready to see Henrietta's cells, Day is too ill to come, Sonny has to work, and Lawrence refuses to go to **Johns Hopkins** (he is also convinced that Rebecca is being paid by Hopkins). On May 11, 2001, Rebecca escorts Deborah and Zakariyya to Johns Hopkins. They pass the **statue ofJesus** and head towards Christoph Lengauer'slab. An amiable man in his mid-thirties, Christoph takes the group down to the freezer room to show them where the **HeLa** cells are stored. He shows them a chamber stacked with thousands of HeLa vials, and Deborah reacts with awe. After Christoph hands her a vial, Deborah tries to warm it between her hands, before whispering, "You're famous."

The resonance of the statue of Jesus is clear—the Lacks children are passing the same statue that Henrietta walked by before she received her cancer diagnosis and before HeLa existed. Henrietta'slingering presence is palpable in this passage, especially when Deborah whispers "You're famous," reflecting a belief that Henrietta's spirit lives on in the cells—and indeed, in some ways Henrietta is, literally, immortal.

The group moves on to an incubator where **HeLa** cells are growing. Using a microscope, Christoph allows Deborah and Zakariyya to look at their mother's cells multiplying, before explaining basic cell biology to the two. He explains that DNA determined Henrietta'sappearance, as well as her cancer, but adds that Deborah has not inherited the disease from Henrietta. Deborah is shocked to learn that HeLa cells are all cancerous, rather than Henrietta's regular cells. She watches, amazed, as one of the cells divides. Zakariyya, meanwhile, wonders why Henrietta's cells aren't black. Deborah marvels at the cells' beauty.

In a deeply touching moment, the two Lacks children get to watch their mother's cells living and multiplying fifty years after their mother herself died. They also finally begin to understand the mechanics behind what has happened to HeLa, thanks to the patient and gentle Christoph Lengauer.

Christoph mentions that he believes **Hopkins** "screwed up" in the way it treated Henrietta. He tells the shocked Deborah that he believes Henrietta's story is deeply important, and adds that he understands Zakariyya'sanger. He asserts that the family should get money from HeLa-fueled research. When they leave, Zakariyya thanks both Christoph and Rebecca—Deborah calls it "a miracle."

Although the Lacks children still have not received an official apology, they both receive some closure in this moment because of Lengauer's gracious apology. To them, he represents the same medical establishment they have hated for decades—and so his apology means a great deal.

CHAPTER 33: THE HOSPITAL FOR THE NEGRO INSANE

Rebecca explains that she has promised to help Deborah find out what happened to Elsie. After visiting Christoph'slab, the two women travel to **Crownsville**. They plan to stop at **Clover** and Roanoke on the way back.

Rebecca has essentially promised to take a journey through the past with Deborah, visiting both Elsie's and Henrietta's final resting places.

The two arrive at **Crownsville**, which has a beautiful, 1200-acre campus. The main office is abandoned, and Rebecca feels that the place is ominous. Eventually they find an old man named Paul Lurz, who is the hospital's director of performance and improvement, but also has a passion for history. He asks Deborah to tell him about Elsie, and she shows him her sister's death certificate. Lurz takes the women to a room full of records, although most have been destroyed. He eventually finds documentation from 1955, the year that Elsie died, and even—to his surprise—discovers a photo of Elsie in the pages. She is in terrible physical condition, and looks desperately unhappy. The hands of a white woman are holding her head.

The entire journey to Crownsville has an eerie and ominous feel—appropriate, given the ghosts of Elsie and Henrietta that haunt this passage, as well as the terrible history of Crownsville as an institution. That Paul Lurz is even able to find Elsie's records, let alone a picture, is something of a miracle; but it's also not a very happy miracle, as it only confirms Deborah's fears about her sister's misery.

Along with the picture, the group also finds Elsie's autopsy report, which states that her mental challenges most likely were due to syphilis, and that she had been vomiting up blood for six months before her death. As they read, an administrator storms into the room and questions what the women are doing there. Lurz states that they are Elsie's family. He offers to give Deborah a copy of the autopsy report, and of Elsie's picture. He also gives her the two newspaper clippings about the terrible conditions at **Crownsville** during the time that Elsie lived there.

Even in the 21st century, medical officials are still trying to keep information away from the Lackses. This passage also offers confirmation that Elsie, as well as Henrietta, was mistreated by the medical establishment. As is often the case, the most vulnerable patients—a mentally challenged black girl—were also the most taken advantage of.

Rebecca describes the nightmare of 1950s **Crownsville**, which was packed full of black patients, who were kept in tiny, filthy cells. Violence and sexual abuse was rampant, and scientists often conducted experiments on inmates without consent. Deborah, meanwhile, worries that Elsie believed herself forgotten by her own family.

Sklootemphasizes how horrifically Elsie was treated in Crownsvilleso we can better understand the full Lacks family saga, and the trauma that they have endured, from multiple fronts. Crownsville itself is also compared as an institution to Hopkins—the one for black patients having terrible facilities, and the one for primarily white patients being a state-of-the-art hospital.

Deborah thanks Paul Lurz before she and Rebecca leave. The pair decide to go to the Maryland State Archives in Annapolis to find more records, although Rebecca worries that Deborah needs a break. They arrive to learn that the archives have no record of Elsie. They then move on to **Clover**, where an excited Deborah repeatedly shows passersby her new picture of Elsie. She grows increasingly distraught about her sister's fate, to Rebecca's dismay.

Deborah seems to be in a kind of shock as the two women leave Crownsville, and doesn't have time to process what she has just learned. For readers who are themselves horrified by Elsie's treatment there, it is nearly unthinkable to imagine the pain that Deborah is facing.

Deborah begins telling Rebecca repeatedly that when they stop for the night, the reporter may finally look at Henrietta's medical records. That night, she drops the records off in Rebecca's hotel room, adding, "Knock yourself out."

After a fairly traumatic day, it seems that the bond between Deborah and Rebecca has at last been cemented, and that Deborah finally believes that Rebecca is not trying to steal from her.

CHAPTER 34: THE MEDICAL RECORDS

Moments later, a panicked Deborah—still clutching her photo of Elsie—knocks on Rebecca's door and asks to read the records along with her. Rebecca offers to photocopy the records she'll need for the book, but Deborah insists that they read everything in the hotel room. Rebecca sorts through decades of Lacks papers, eventually finding records from when Deborah was born, and when Henrietta was first admitted to the hospital for her cancer treatments. Deborah alternates among joy, despair, and paranoia. She is especially upset to find that Elsie was diagnosed with "idiocy." When Rebecca tries to make a joke, Deborah grows furious, calling Rebecca a liar and attacking her. Rebecca loses her patience and curses at Deborah, causing Deborah to relent.

Despite the previous touching moment of friendship between Rebecca and Deborah, it quickly becomes clear that Deborah's paranoia has not disappeared overnight. Rebecca at last loses her cool, however, and this, surprisingly, makes Deborah relent. It is important to remember that this book is not just about HeLa and Henrietta, but also about the friendship between these two women, and so this night is a crucial turning point in that story.

At last, Deborah tells Rebecca the story of Cofield, explaining how he betrayed her trust by trying to take "the only things I really got from my mother." She decides, however, to allow Rebecca to type notes for her book. She remains paranoid, however, checking up on Rebecca every fifteen minutes, and eventually breaking out in hives.

Directly after rebuking Deborah for her paranoia, Rebecca begins to learn more about its origins. Deborah feels possessive of Henrietta's records because they're all she has left of her mother—a tragic but understandable confession.

Exhausted from staying up with the records, Rebecca eats breakfast with Deborah, who has painted her **fingernails** red (just like her mother's). Deborah reassures Rebecca that, "We're okay."

The symbolism of the fingernails is unmistakable. Even without having been raised by Henrietta, Deborah is clearly her mother's daughter, and carrying one her legacy.

CHAPTER 35: SOUL CLEANSING

As the day progresses, Deborah grows covered with hives, and Rebecca becomes concerned. The two finally get to **Clover**, where Deborah asks Rebecca to take a photo of her with the two pictures of Elsie in front of Henrietta's grave. They then go to visit the elderly Gladys's house, where Deborah announces that she is going to start a Henrietta museum.

This moment and photo are filled with pathos in the narrative—for the first and only time, the Lacks women are together. This shows how lonely Deborah is, and how intensely she longs for the relatives whom she'll never know.

Gladys's son Gary comes in, and Deborah shows him the new picture of Elsie. He and Rebecca are both worried about the over-emotional Deborah, who's still covered in hives. Deborah grows increasingly hysterical as Gary tries to calm her, telling her that she must "relax" and quoting scripture. Gary eventually begins channeling the holy spirit, praying and singing to God for Deborah, and begging that the "burden" of Henrietta's cells be lifted from her daughter's shoulders. Deborah sobs, and Rebecca feels incredibly guilty for the grief she believes she has caused. Gary, however, thanks God for sending Rebecca to them and prays for Him to give the burden of the cells to her.

We return to the theme of spirituality, an uncomfortable topic for Skloot, but an immensely comforting one for the Lackses. By thanking God for Rebecca, Gary generously includes her in this family tradition, while also highlighting one of the deepest themes of the book—the way in which Skloot has taken on the "burden" of Henrietta's cells and story as her own, or least has offered some relief for the Lacks family.

CHAPTER 36: HEAVENLY BODIES

Still swollen with hives, Deborah goes home to a doctor, while Rebecca visits Gary again. Gary has her read a passage in the Bible out loud, telling her that Henrietta was chosen to do the Lord's work, and that **HeLa** is her "spiritual body." For the first time, Rebecca understands why the Lackses believe that Henrietta was selected for immortality.

To the Lackses, the existence of HeLa is the work of God—and for the first time, Skloot fully understands this. She sees now why the Lacks children believe that their mother's spirit lives on in her cells, and comprehends why this is such an emotional and personal issue to them.

Rebecca contemplates the division between religion and science, realizing that for the Lackses, a religious explanation of Henrietta'simmortality makes much more sense than a scientific one. She and Gary continue to read Bible passages.

The Lacks family also believes that the existence of HeLa confirms the existence of the afterlife—that, essentially, Henrietta is living out her eternal life as HeLa.

CHAPTER 37: "NOTHING TO BE SCARED ABOUT"

A doctor tells Deborah that her blood pressure and blood sugar were so high during her trip that she could have had a stroke or heart attack at any moment. Rebecca wonders whether this might be a medical explanation for Deborah's strange behavior. To avoid stress, Deborah stops going on road trips with Rebecca, but continues to receive frequent reports as Rebecca researches.

Once again we witness the toll that emotional turmoil takes on Deborah's health. She clearly has a strong mind/body connection, as her anxiety, stress, and depression directly affect her physical health, and vice versa.

Deborah begins spending all of her time planning her speech to the National Foundation for Cancer Research, although she is terrified of getting up on stage. She tells Rebecca one day that she wants to go back to school in order to learn more about what happened to her mother and sister, and she even contemplates becoming a dental assistant or radiation technologist, so she can help cancer patients.

Despite all her problems, Deborah still remains optimistic and altruistic, hoping to help the very patients who are being treated thanks to innovations made possible by HeLa.

Rebecca becomes apprehensive as the conference approaches, worried that Deborah will become ill. Deborah's brothers, meanwhile, begin telling her not to speak at all and demanding Henrietta's records. Alfred Jr., Deborah's son, is charged with attempted murder, and one of Deborah's nephews ends up in jail as well. Then September 11th strikes. The conference is canceled, and Deborah is distraught.

As happens so often in the Lacks family, catastrophe piles on catastrophe. They seem unable to escape near-constant misfortune, which is made only worse by their poverty.

A few days later, Deborah has a stroke while at church. Her grandson Davon is the first to notice—he starts the engine of her car in order to take her to a fire station down the road, and he keeps her awake in the backseat. The firemen tell him that he saved Deborah's life.

Skloot's fears for Deborah's health, as it turns out, were completely correct. Part of being Henrietta's daughter also means inheriting some health issues.

The doctors tell Deborah that she will probably recover completely, and Deborah calls Rebecca to let her know what has happened, telling her not to worry and to keep reporting, while also wishing her a happy birthday. Doctors try to educate Deborah about how to become healthier, and she plans to take classes on nutrition and diabetes as well.

Deborah has faced many setbacks, but at this point has hope for the future—a future in which her family gets what it deserves, and in which she herself can work towards being healthier and more successful. At this point it's clear that the friendship between Rebecca and Deborah is something more lasting than just a work-related relationship.

Deborah's stroke seems "to ease tension in the family," and her brothers begin calling her every day. Deborah plans to rest so that she can continue researching with Rebecca, telling the reporter that she's learned not to be "scared" anymore, and that she wants to learn. Rebecca explains, however, that Deborah simply does not have enough money to go back to school, and indeed she eventually gives up, focusing instead on getting the next generation of Lacks children educated.

Despite Deborah's can-do attitude, she is simply limited by her circumstances; she cannot even pay her medical bills, let alone for classes. Once again Skloot shows how difficult it is to escape the cycle of poverty, even for those who try their utmost to escape it. Although Skloot does not say this directly, these events yet again make us contemplate how different the Lacks family's life would have been if they had profited from HeLa.

Two months after Deborah's stroke, Rebecca goes with the Lackses to see Reverend Pullum baptize Sonny's granddaughter, JaBrea. Pullum calls on Rebecca to stand by him, and when she refuses, he begins speaking directly to her in front of the congregation, asking her to come up and tell the story of Henrietta. The nervous Rebecca does so, talking about Henrietta as Deborah weeps. Pullum explains that he and Deborah used to be angry at Rebecca, but that they now know that Rebecca will help Lacks children like JaBrea know who their great-grandmother was. He ends his speech with prayer.

This is a vital moment within the narrative, as the Lacks family fully and generously includes Rebecca not only in their celebration, but also in their story. It is a significant episode for Rebecca too, in that it is the first time she has been asked to tell Henrietta's narrative to outsiders. A melding of both faith and science, the passage is one of the high points of the narrative.

CHAPTER 38: THE LONG ROAD TO CLOVER

In January 2009, Rebecca pulls into the town of **Clover** to realize that all of Clover is gone—the businesses have all closed. She fills her pockets with dirt in order to hold on to what remains of the town. She recounts that in 2002, Gary died of a heart attack, and that a few months later, Fred Garret died as well. Next Day passed, and then Cootie committed suicide. Deborah calls Rebecca after every death and cries.

After the joy of JaBrea's christening, the inevitable hardships once again strike the Lackses, and all these deaths are inherently contrasted with Henrietta's "immortality." Also, in a hugely symbolic moment, Clover itself is now gone—the symbol of Henrietta's childhood, and of Deborah's lost past.

After the baptism, "not much changed for the Lackses." Lawrence and Zakariyya occasionally think about suing **Johns Hopkins**, Sonny has a quintuple bypass and ends up hundreds of thousands of dollars in debt, Zakariyya attacks a woman and is kicked out of his housing, and Deborah leaves her husband. She works for her daughter LaTonya at an assisted-living facility, but soon quits because her body can't take it. She lives on nothing but Social Security Disability payments and food stamps.

The fact that Sonny can't pay for his lifesaving bypass procedure is particularly infuriating; the medical establishment owes his family a great deal, and yet he is the one in debt. Henrietta has finally been getting some recognition and credit, but this hasn't translated into any real, tangible success for the Lacks children.

When Rebecca finds the remains of **Clover**, she has not spoken to Deborah for several months. The book is done, but Deborah has not been returning her calls. Even after the visit to Clover, Deborah does not respond. At last, in May, Rebecca calls Sonny to see where Deborah is. Sonny tells Rebecca that he has been trying to reach her, but has not been able to find her number. He says that only a week and a half ago, after a celebratory Mother's Day, Deborah died of a heart attack. Sonny has cut off a lock of her hair to keep with Henrietta's and Elsie's. He tells Rebecca that his sister is with the two of them now.

We now come to one of the book's most tragic truths: that Deborah dies before Skloot publishes her story. In order to soften this blow, however, Skloot recounts the peaceful, even joyous circumstances surrounding Deborah's death. Rebecca is now carrying on the Lacks family story not just for the absent Henrietta, but for the absent Deborah as well. Her responsibility to these women is heightened since they are no longer here to tell their own narratives.

Rebecca explains that at the time of her death, Deborah was happy. Her grandsons, grandnieces, and grandnephews were getting an education, even going to college and grad school. After learning about Deborah's death, Rebecca looks at a picture of Deborah that she has, and listens to the hours of tape that she's collected from interviewing Deborah. She remembers an old BBC interview with Deborah, in which she said that she would be glad once she died because she would get to see Henrietta. After watching the interview herself, Deborah had told Rebecca that, "Heaven looks just like **Clover**, Virginia. My mother and I always loved it down there more than anywhere else in the world." She also wondered if she would one day "come back as some **HeLa** cells like my mother, that way we can do good together out there in the world."

At the end of her story, Skloot relies not on science, but on spirituality—the language of the Lackses, and of Henrietta. She increases the symbolism of the long-lost Clover, comparing it to Heaven, and recounts the Lacks family belief that Henrietta (and Deborah too) might be reincarnated or immortalized as HeLa—something used to save countless other lives. Ultimately Skloot cements the idea in our minds that this book is as much Deborah's as Henrietta's, and that the story of the human Lacks family is just as important as the story of an immortal cell culture.

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