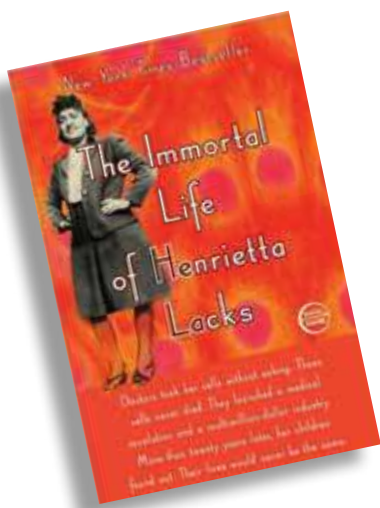


Reviews and reflections

David A. Bennahum, MD, and Jack Coulehan, MD, Book Review Editors



The Immortal Life of Henrietta Lacks

Rebecca Skloot
Crown Publishing Group, New York, 2010

Reviewed by R. Stephen Griffith,
MD (ΑΩΑ, University of Missouri-
Columbia, 1977)

I remember lectures in medical school in which HeLa cells were discussed. The professor named the source of the cells: a cancer from a woman named Helen Lang. The cell line was unique: the cells grew well in culture—the first human cells to do so—and had been used in countless experiments as a model for the biology of human cells. My professor was not alone in using the wrong name—others called the woman

Helen Lane or Helen Larson. These misattributions are among the many injustices associated with this invaluable cell line and the woman from whom it was taken. The story of Henrietta Lacks

and the cell line rising from a single tissue sample is wonderfully explained in *The Immortal Life of Henrietta Lacks* by Rebecca Skloot. A book about science and a biography of Ms. Lacks and her family, it is also a memoir by the author, who spent over a decade in untangling the story and gaining the trust of the skeptical family.

Henrietta Lacks's life was tragically brief. She was born in 1920 in a shack in rural Virginia. Her mother died four years later and Henrietta was raised by her grandfather, a poor sharecropper. Raised with her cousin, David Lacks, they had their first child when she was fourteen. In 1941, they moved to Baltimore. After the birth of her fifth child, Ms. Lacks began bleeding. She went to John Hopkins, the only hospital in the region that accepted black patients, where a physician found a mass on her cervix that had not been present three months earlier. A biopsy showed carcinoma of the cervix. She had the standard treatment at the time—a tube of radium was twice sewn into the cervix, followed by a month of external beam radiation. She was declared free of disease, but pain soon returned, the tumor spread, and she died seven months after the cancer was first discovered. It was a tragic ending for this young woman who was reputed to be beautiful and vibrant. Her cousin Sadie expressed it well: "Hennie made life come alive—bein' with her was like bein' with fun."⁴³ She was buried in an unmarked grave near her original home.

Before the doctors placed the radium, samples of the tumor had been taken without Ms. Lacks's permission and given to Dr. George Gey, who had been trying unsuccessfully to grow human cells *in vitro*. The tissue was placed in tubes with media, labeled "HeLa" (for

Henrietta and Lacks), and incubated. Unlike any previous attempts, these cells grew with "mythological intensity," becoming the first "immortal" cell line. Soon Dr. Gey proclaimed that cures for cancer and other illnesses were imminent, that the HeLa cells were to be the keys to unlocking the mysteries of the cell. The amazingly resilient cells were distributed around the world. Skloot writes,

Her cells were part of research into the genes that cause cancer and those that suppress it; they helped develop drugs for treating herpes, leukemia, influenza, hemophilia, and Parkinson's disease; and they've been used to study lactose digestion, sexually transmitted diseases, appendicitis, human longevity, mosquito mating, and the negative cellular effects of working in sewers.⁴⁴

By 2009 over 60,000 scientific articles had been published about research using HeLa cells. It is estimated that over 50 million metric tons of her cells have been produced over the decades.

The story of the Lacks family is one of poverty and mental and physical illness, made worse by the mental torment the family suffered because of their fragmentary understanding of what the cell line was and how it was used. Henrietta's youngest daughter Deborah felt a part of her mother's spirit was in each cell, and thus the experiments done with them could cause her mother perpetual pain.

The more Deborah struggled to understand her mother's cells, the more HeLa research terrified her. . . . When she found out scientists had been using HeLa cells to study viruses like AIDS and Ebola, Deborah



imagined her mother eternally suffering the symptoms of each disease.
p196

The family's religious background also influenced how they were able to perceive the "immortality" of the HeLa cell line.

In that moment, reading those passages [in the Bible], 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. . . .

For Deborah and her family—and surely many others in the world—that answer was so much more concrete than the explanation offered by science: that the immortality of Henrietta's cells had something to do with her telomeres and how HPV interacted with her DNA. The idea that God chose Henrietta as an angel who would be reborn as immortal cells made a lot more sense to them than the explanation Deborah had read years earlier in Victor McKusick's genetics book.^{p296}

Ms. Skloot wrote the book for the lay public and integrates the science with the stories so that, while basic, it is never tedious.

The book underscores the contradictions inherent in the benefits derived from a cell line developed from an uninformed patient without her consent. Even more reprehensible, HeLa was used in many further experiments on uninformed subjects. Like many doctors of his era, Henrietta's surgeon, Dr. TeLinde, often used patients from the public wards for research, usually without their knowledge. Many scientists believed that since patients were treated for free in the public wards, it was fair to use them as research subjects as a form of payment. Most subjects, in keeping with the accepted racism of the time, were African American. In one notorious example out of many others,

Chester Southam of Sloan-Kettering Institute for Cancer Research performed a number of studies to find out whether investigators of the cell line were at risk themselves of developing cancer from working with HeLa:

In February 1954, Southam loaded a syringe with saline solution mixed with HeLa. He slid the needle into the forearm of a woman who'd recently been hospitalized for leukemia, then pushed the plunger, injecting about five million of Henrietta's cells into her arm. Using a second needle, Southam tattooed a tiny speck of India ink next to the small bump that formed at the HeLa injection site. That way, he'd know where to look when he reexamined the woman days, weeks, and months later, to see if Henrietta's cancer was growing on her arm. He repeated this process with about a dozen other cancer patients. He told them he was testing their immune systems; he said nothing about injecting them with someone else's malignant cells.

Such blatant ethical breaches contributed to efforts to create the requirements for informed consent and research oversight that now protect experimental subjects.

The story of the author's involvement with the family is a saga of incredible dedication. Skloot learned about HeLa at age sixteen in a community college biology class. Years later, when she contacted the family, she encountered great resistance. Once the identity of the donor of the HeLa cells had been revealed (twenty years after Ms. Lacks' death), the family was bombarded by requests for family details, blood samples, and information that could contribute to a good story. They had been victimized by some, and felt that someone had made a fortune from their mother's cells and that they should have a share. Skloot's perseverance and personal sacrifice eventually won their trust.

Read this book. It is a riveting story, a reminder of how far we have come and how far we have to go. It is not just about science or the life of a woman who died at such a young age. It is about truth and trust and breaches in professional responsibility. Deborah summarizes the conflict:

"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! . . . 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."^{p256}

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A CELEBRATION OF POETS

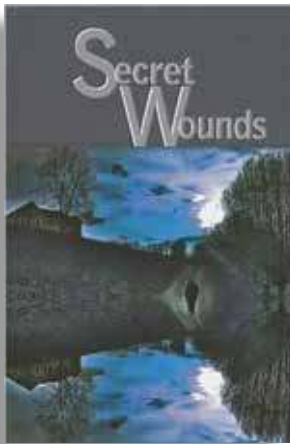
Reviewed by Jack Coulehan, MD
(AQA, University of Pittsburgh, 1969)

Everyone is aware of the dramatic advances in medical science that have occurred over the last few decades, but relatively few people realize that the medical profession has also experienced a parallel explosion of poetic creativity. Medicine has a long tradition of distinguished physician-poets, including, for example, Thomas Campion, Tobias Smollett, Oliver Goldsmith, John Keats, Oliver Wendell Holmes, Silas Weir Mitchell, Robert Bridges, and William Carlos Williams, the early twentieth-century bard of Rutherford, New Jersey. Today's American medical poets generally look to Williams as their godfather. His no-nonsense language, accurate observation, and privileging of experience over ideas meshes well with the ethos of

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contemporary medicine.

A number of superb post-Williams poets (e.g., Drs. Robert Coles and John Stone) established themselves in the 1970s, but it was only in the late 1980s and 1990s that doctor poets began springing up like wildflowers in an Alpine meadow. By now they blanket the continent. Why has this phenomenon occurred? An interesting question, but one I can't attempt to answer here. For whatever reasons, we now have a whole new cadre of medical "specialists," who, for all their differences in focus and style, bring a medical sensibility to their ancient art. A number of recent anthologies celebrate this burgeoning poetic movement.¹⁻⁵ For this review I've selected a handful of books published in the last few years just to suggest the range of contemporary physician-poets.



Secret Wounds

Richard M. Berlin
BkMk Press, University of Missouri—
Kansas City, Kansas City, Missouri,
2011

Psychiatrist Richard Berlin's *Secret Wounds*, which won the John Ciardi Prize for Poetry in 2011, acknowledges the woundedness of a medical life, while affirming the possibility of healing. In "How a Psychiatrist Writes a Poem," Dr. Berlin relates his method:

I begin by remembering
my hours as a patient
and Freud's "Fundamental Rule":

Say Whatever Comes to Mind^{p18}

In "Wounds," he shows that he understands that "Each wound contains/its own beauty" and "speaks/its own language."^{p38}

In an accessible narrative style, Berlin discovers revelatory moments in his life, from the drudgery of internship ("Interned") to a seemingly rash act with a dialysis patient: "It was a headlong act of love/when I kissed her."^{p23}

"Medical Education" summarizes the irony of our curriculum,

What they taught
in school was not
what we needed
and what we needed
(they said)
could not be conveyed.^{p31}

In "Whores" the poet turns his ironic eye toward health insurance.

But every month,
when we devour
another round
of sessions,
I fill out forms
for insurance pimps
who won't pay
unless I reveal
the private parts.^{p66}

Richard Berlin transforms the wounds of a life in medicine, a life on the line, so to speak, into affirmation, not with fancy language or heroic gestures, but with the eloquence of directness and honesty.



Poems from Both Sides of the Fence: A Disabled Physician's Experiences in Medicine

Beryl Lawn
Texas Review Press, Huntsville, Texas,
2011

Another psychiatrist, Beryl Lawn, writes from the perspective of a physician whose wounds are not so secret. Paraplegic as a result of a childhood accident, Dr. Lawn, in *Poems from Both Sides of the Fence*, offers tough wisdom from the perspective of both patient and healer. Unlike Richard Berlin's poems, Dr. Lawn's are very short, explicit, anecdotal, and sometimes gnomic. They resemble clinical "pearls." Far from being limited by her seeming disability, the poet proclaims,

I believe
I am
set free
by my wheelchair.^{p5}

In one poem she reveals the secret of generating patient satisfaction:

For the patient
it was
time spent,
attention given
(not experience)
for which
he was most
grateful.^{p17}

Beryl Lawn's work also contains a strong element of social commentary. A friend is batted back and forth among several specialists without

an accurate diagnosis.
In frustration,
he went to
his veterinarian,
described his symptoms,
gave a
urine specimen,
and was
promptly diagnosed
as having
diabetes.^{p19}

In "Assumptions IV" another friend, an African American psychiatrist, is asked for his Medicaid card when he shows up at an Emergency Room. With great insight, Dr. Lawn concludes,

As often as I sweep,
the garage never stays
swept and clean
for long.

Like my inner life.^{p79}

Six Rivers

Jenna Le
NYQ Books, The New York Quarterly
Foundation, Inc., New York, New York,
2011

Six Rivers is Jenna Le's first collection. Dr. Le, the youngest in this group of physician-poets, is also the most devoted to traditional poetic forms, ranging from the European sonnet and villanelle to the Japanese tanka and haibun. The poet divides her book into six sections, each named for a river important in her life, beginning with the Perfume River, near her family's home in central Vietnam. The fifth "river" is the human aorta, around which are clustered her medical poems. Among these are the lovely villanelle, "Caesarian Section," which celebrates a healthy



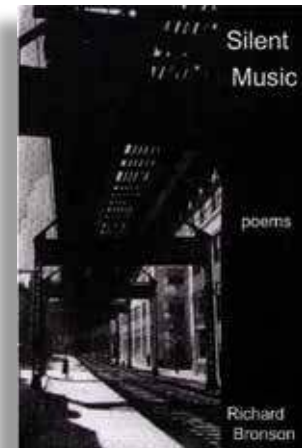
new life, and "Elegy," which mourns the death of an elderly Nepalese woman. The latter poem also reveals how physicians can become hardened and detached, as the radiologist comments on the difficulty in visualizing the woman's intestinal parasites—since they "have no bones,"^{p55}—seemingly unconcerned about the patient herself. The ultimate river is the Styx, where the book ends appropriately with poems that celebrate characters from myth and history.

Silent Music

Richard Bronson
Padishah Press, Cold Spring Harbor,
New York, 2009

In *Silent Music* Richard Bronson reminds us that, although we live in a world of ambiguity, we can discover beauty and meaning in our lives by becoming aware of "notes/at the edge of perception—/. . . a new sensibility/. . . a silent music."^{p26}

Dr. Bronson, a reproductive endocrinologist, brings a medical sensibility to memories of childhood, especially in such poems as "Father's Day," "Imperfect Knowledge," and "The Pill Closet," poignant tributes to his father, a general practitioner who worked himself, "black bag in hand,"^{p20} to an early death. Having become a facilitator of life, Richard Bronson celebrates its mystery, as he writes in "Laboratory-Assisted



Reproduction":

I have often probed that fecund place,
And in the dark vista of my sonic vision,
Sought the motion of a nascent heart

Bearing witness to life^{p51}

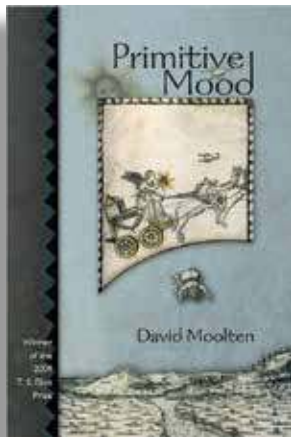
But Dr. Bronson's narratives also cry out for justice and deplore violence and cruelty, as in his eloquent "Cry, Oh Cry Darfur!" and the touching "Terminal Velocity."

Primitive Mood

David Moolten
Truman State University Press, Kirksville,
Missouri, 2009

The last selection is the T. S. Eliot Award-winning *Primitive Mood* by David Moolten, a Philadelphia transfusion medicine specialist. Moolten's distinctive style presents the reader with finely wrought narratives, each telling a small human story with deep empathy and compassion, and often with a palpable sense of gratitude. Whether he writes of his Jewish grandfather's response to Wagner's music on the radio, or observing "The Girl Without Hands," or about a Native American activist who "drank herself out/Of a smashed marriage,"^{p50} Moolten transforms our world by evoking theirs.

Dr. Moolten's poems are, in a



sense, metaphors for clinical practice. Elegantly constructed like the human body, they require a close reading, which reveals their beauty, but also reveals compassion, anger, irony, outrage, and determination. Dr. Moolten knows the facts. He knows that when a home-

less woman enters “one long swoon/Into loathsomeness,” suffers a cardiac arrest, and someone “saves” her, “the story’s still not over.”^{p8} On observing a mass grave in Rwanda, he also knows that “It takes a year for a body to purge itself/Down to bones.”^{p29} Nonetheless, he approaches the human condition with tenderness and hope. The reader finishes *Primitive Mood* with the feeling, “Even now I’m greedy to hear more.”

Technology is thriving in medicine today and, fortunately, so is poetry. This situation is neither strange, nor paradoxical. Rather, it’s an affirmation that art and science are not only compatible, but inseparable, in the practice of healing.

References

1. McDonough ML. Poet Physicians: An Anthology of Medical Poetry Written by Physicians. Springfield (IL): Charles C. Thomas; 1945.

Thomas; 1945.

2. Belli A, Coulehan J. Blood & Bone: Poems by Physicians. Iowa City (IA): University of Iowa Press; 1998.

3. Breedlove C. Uncharted Lines: Poems from JAMA. Albany (CA): Boaz Publishing; 1998.

4. Belli A, Coulehan J. Primary Care: More Poems by Physicians. Iowa City (IA): University of Iowa Press; 2006.

5. Jain N, Coppock D, Brown Clark S. Body Language: Poems of the Medical Training Experience. Rochester (NY): Boa Editions; 2006.

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Letter to the editor

After reading the editorial in *The Pharos* on mentoring and coaching by R. L. Byyny (Winter 2012, pp. 1–3), mentors and coaches emerged from the shadows of my memory. First was grandfatherly John Jennings, who had a farm near our house where he kept six or eight horses. Mr. Jennings befriended our family and took a special interest in me, an only child. He taught me to ride and proudly followed my progress in medicine. Another mentor was a neighbor, Edward Cannon, who took me to Sunday school. I now mentor youth at church even as others mentor me spiritually.

In school, I was too introverted

and shy to actively seek mentors. Faculty during college and early medical training did not relate to me personally in the ways Byyny lists. But later I met Dr. Harold May in the Community Medicine unit at Brigham Hospital in Boston. Dr. May invited me to his home for dinner and starting me down the road to community medicine/public health. After joining the U.S. Public Health Service, I met Dr. Manning Feinleib in an evening statistics class. He gave me a job in his epidemiology unit at NIH, launching my career as a cardiovascular epidemiologist. Later in my career, I had the opportunity to work again with him and Jack Feldman in an ideal research job at the Centers for Disease Control and Prevention.

So thanks to Dr. Byyny for his sage

advice to mentors, coaches, and their protégés, and to my mentors, whom his editorial brought to mind. Perhaps others will find it useful to list their mentors and share their stories with friends and protégés. Now as I continue to mentor young people from second grade through assistant professor, I hope I can return with interest what my mentors have given to me.

Richard Frank Gillum, MD, MS
(ΑΩΑ, Northwestern University, 1969)
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