

Book Review: The Emperor of All Maladies: A Biography of Cancer

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Abstract

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Siddhartha Mukherjee
Scribner, 571 pp.

THE EMPEROR OF ALL MALADIES: A BIOGRAPHY OF CANCER

The Emperor of All Maladies: A Biography of Cancer by
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BOOK REVIEW

What is it about cancer that betrays us so? Like a heavy rain that washes the soil from a tree's roots, cancer has a way of revealing our most basic and heretofore unexamined beliefs. It betrays our most primal fears and leaves us vulnerable, embarrassed. No other disease seems as powerful in this regard. In another era tuberculosis or leprosy might have ruled, but in its ability to evoke unmediated responses to our own mortality, cancer reigns supreme over the modern western world.

In her landmark book, *Illness as Metaphor*, Susan Sontag decried the ubiquitous metaphors we use about cancer. We employ metaphor, she noted, to express our prejudices toward cancer and toward those afflicted with the disease. But some metaphors—particularly those of battle, with the inevitable outcome of either triumph or failure—are harmful to those living with cancer. Instead, she wrote, “the most truthful way of regarding illness—and the healthiest way of being ill—is one most purified of, most resistant to, metaphoric thinking.” In seeking to liberate us from this way of thinking, Sontag illuminated something important about us, something that was there all along but that we might not otherwise have seen. Great books always do that.

Siddhartha Mukherjee's Pulitzer Prize winning book, *The Emperor of All Maladies*, does this too, though not always in the way its author intends. Mukherjee is a cancer researcher

and a medical oncologist (a physician who treats cancer with chemotherapy), and *The Emperor of All Maladies* is, more than anything else, a history of chemotherapy research. From Sidney Farber's earliest experiments treating childhood leukemia with compounds developed in his basement laboratory in the late 1940's, through recent developments in gene-based cancer therapy, Mukherjee conveys his passion for the subject while artfully weaving his narrative. He explains important scientific innovations using language that is accessible for most lay readers, though he occasionally does so with tedious detail.

Understandably, Mukherjee spends relatively little of his book discussing cancer treatments other than chemotherapy. There is no mention of alternative and complementary therapies, for example. And by page eighty he has all but dispensed with cancer surgery and radiation treatment. In fact, as a historian Mukherjee is rather hard on oncologic surgeons. He repeatedly remarks on their “hubris” and their zeal for what they proudly called “radical surgery,” which endeavors to cut out as much tissue as possible and which has, since the late nineteenth century, been associated with the American surgeon William Halsted. “‘Radicalism’,” Mukherjee writes, “became a psychological obsession, burrowing its way deeply into cancer surgery.”

The problem with radical surgery is that, despite its extreme disfigurement of patients, it doesn't work. If a cancer is small and has not spread, it can be cured by removal, but this can be done through a relatively simple procedure. If, on the other hand, the cancer has spread, then no amount of surgery will cure it. But Halsted and his brethren seemed not to bother with this fact, and it wasn't until 1981 that the procedure Halsted pioneered—a “grotesque and disfiguring

mastectomy, foisted indiscriminately on women”—was tested and found to be of no benefit compared to a simpler procedure.

In rushing headlong into radicalism without scientific evidence of its benefit, cancer surgeons are portrayed as unscientific and cavalier, at least compared to their chemotherapist colleagues who employ “a more discriminating therapy.” Of course, Mukherjee is not naïve. He knows chemotherapy is a more recent development, born and raised in the era of scientific medicine, and he does not ignore the consequences of too vigorously pursuing scientific innovation. In the 1970s cancer researchers too displayed hubris, testing ever higher doses of toxic drugs on cancer patients with more regard for data than for the patients themselves. During this time, Mukherjee points out, “hospital review boards that approved and coordinated human experimentation were revamped to allow researchers to bulldoze their way through institutional delays.” It is no small coincidence that the field of bioethics emerged during this time to protect the rights of patients and research subjects.

And by any measure, chemotherapy has been a remarkable innovation. For a therapy that has been around for only the last half-century or so, chemotherapy has helped countless people live longer, better lives, and has provided treatment options to people who previously had none. Of course, chemotherapy development could not have taken place without lots and lots of money. And one of the more interesting subplots of Mukherjee’s book is the marketing of cancer as a disease. The ubiquity of cancer marketing nowadays—when everything from breakfast cereal to garden tools seems to have turned pink—is the legacy of a dynamic partnership between Sidney Farber and Mary Lasker. Farber was a dedicated cancer researcher and physician with the energy and intellect to develop the idea of treating cancer with medications, while Lasker was a New York socialite with political connections and passion for a cause. Together, they brought cancer from a basement laboratory into “the glaring light of publicity.” For her part, Lasker created “a well-oiled fundraising machine,” by taking over an ineffective group of doctors and scientists and rechristening the organization as the American Cancer Society. The partnership continued for decades, culminating in the Nixon’s declaration of a “war on cancer” and the establishment of the National Cancer Institute. But for all its scientific innovation and output, the war on cancer also engendered a paternalistic and physician-centered attitude within cancer medicine. As Mukherjee

relates, during the heyday of chemotherapy development in the 1970s, intoxicated by the prospect of curing cancer, chemotherapists virtually ignored the people who actually had cancer. Chemotherapy’s side effects, “however revolting, were considered minor dues to pay,” a sentiment often expressed by doctors but rarely by patients. As one chemotherapist said in 1979, “There is no cancer that is not potentially curable. The chances in some cases are infinitesimal, but the potential is still there. This is about all that patients need to know and it is about all that patients want to know.”

In the ensuing decades, chemotherapists were possessed by their own brand of radicalism as they attempted to push “megadose” therapy. In general, chemotherapy doses are limited by the fatal side effect of destroying the patient’s bone marrow. So it was thought higher doses could be given if followed by a bone marrow transplant. This therapy was a source of intense struggle in the United States, where patients lobbied and sued for access to what was considered an experimental therapy. Meanwhile in South Africa, Werner Bezwoda was claiming remarkable success with high dose chemotherapy followed by bone marrow transplant for metastatic breast cancer. Bezwoda treated women with this regimen throughout the 1990s, claiming that more than 90 percent of his patients achieved a complete response. But no one else could replicate his results. And in 2000 the world discovered why. Bezwoda had made the whole thing up.

In Mukherjee’s narrative, the Bezwoda scandal was a final, fatal blow to the persistent hope, nay belief, that cancer could be cured with chemotherapy. “An era of oncology was coming to a close,” he writes. As a result, “the quest to combat cancer turned inward, toward basic biology, toward fundamental mechanisms.” Cancer researchers turned toward the genetic machinery of the cancer cell itself, designing drugs that specifically target the mutations that turn an ordinary cell into a cancer cell. And their labors have been fruitful, yielding dozens of new cancer-targeted chemotherapies, some of which have been remarkably safe and effective. The war marches on.

But in turning toward the cancer cell, to its genes and proteins, to its mechanisms of growth within the lab, have we turned even further away from cancer patients? I think yes and no, and here my own biases come into play. As a palliative care physician, when I think of cancer I do not think of cells in a lab, of genetic mutations, or of chemotherapy doses. I think of a young father suffering from untreated pain and nausea; mourning the loss of his

independence, his job, and his manhood; wondering how to tell his kids he has cancer and that he may soon die; grieving the loss of his wife, his brother, his children, his own life; cursing God and wondering “Why me?”. I think of him wondering what his chances are to be cured, wondering what he can expect to go through, and fearing that if he does die from his cancer that he’ll suffer alone and without control. I think of him being afraid to ask his doctor any of this, and of his doctor who is afraid to be asked.

To his credit, Mukherjee is forthright about his own struggles with patients’ suffering. He admits he is not comfortable with patients who cannot be cured, for example. Relating an encounter with a patient for whom no more chemotherapy was possible, he writes, “There was nothing left to try. I stared down at my feet, unable to confront the obvious questions. The attending physician shifted uncomfortably in his chair.” It is the patient who finally broke the silence and said, “I’m sorry...I know we have reached an end.” Mukherjee goes on, “we hung our heads, ashamed.” Even for Carla, the patient whose narrative runs throughout his book, Mukherjee admits his feelings “bordered on sympathy but never quite achieved it.”

The personal narrative that Mukherjee weaves throughout *The Emperor of All Maladies*, although it is secondary to the scientific/historical narrative, displays remarkable courage, compassion and self-awareness. And perhaps the most important lesson of his book is that Mukherjee’s struggles are not just his, but all of ours. In the end Mukherjee is right: the history of cancer is one of scientific discovery, medical experimentation, philanthropy, and socio-political maneuvering. It is not the story of the people living and dying with the disease. At first, I thought the subtitle his book, *A Biography of Cancer*, was a gimmick. After all,

cancer does not have any life of its own. It has no life outside of the individual person whose body harbors cancer, and the only meaning cancer can have depends entirely on the life of that individual. There is no cancer to speak of, then, but only individuals whose lives are affected by disease. But in reading Mukherjee’s book I realize I was wrong about this. Cancer exists in two other places: in the laboratory, and in our imaginations.

Virtually everyone diagnosed with cancer suffers, as do their loved ones. The suffering may be physical, emotional, existential, spiritual. And the medical community is just learning how to treat this suffering. Sadly, the history of efforts to address the personal and total suffering of those affected by cancer would be a slim volume. And perhaps the experience of living and dying with cancer is best left to the many pathographies, plays, poems and other media on the subject. Mukherjee’s wonderful history shows us both how far we’ve come in our struggles with cancer, and how far we have not come. *Illness as Metaphor* ends optimistically, with the hope that science would deliver us from our prejudices about cancer, that science would show us cancer as it truly is. *The Emperor of All Maladies* shows that this has not come to pass. But perhaps we have come far enough to realize the need to turn our gaze not just toward the cancer cell, but also toward one another. Perhaps we are ready to admit that science can never say all that is important to say about cancer. Perhaps we are ready to attend to the suffering of those among us living lives forever altered by a diagnosis of cancer and its treatment. Sontag predicted that science would de-mythicize cancer. I’m not sure that’s even possible, but perhaps in the near future cancer will at least be dethroned.

References

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