
“We must never feel disarmed: nature is immense and complex, but it is not impermeable to intelligence; we must circle around it, pierce and probe it, looking for the opening or making it.” – Primo Levi, The Periodic Table.

“That is how it is with cancer,” George Johnson explains in “The Cancer Chronicles: Unlocking Medicine’s Deepest Mystery,” his new book that explores one of humanity’s most enduring and sinister unsolved mysteries. “Given a large enough group of people, we can predict what percentage of them will be stricken, but we cannot know who they will be. In the future, genomic and proteomic scans and technologies not yet known may allow the pools to be narrowed further still. But there is only so far we can go. Whether any one person gets cancer or does not will always remain mostly random.”

With regard to why some people develop cancer while others do not suffer the same fate, Johnson is quick to point out that when it’s all said and done, we still don’t have a clear answer to a question most of us have wrestled with at some point.

“With so many checks and balances, a person must be extraordinarily unlucky to get cancer,” he explains in reference to the body’s natural defenses against disease-causing mutations. “Then again, with so many things that can go wrong, it is amazing that cancer doesn’t happen all the time.”

Johnson is a regular contributor to The New York Times; he has also had his work published in National Geographic, Slate, Discover, Scientific American, Wired and The Atlantic. His previous books include “A Shortcut Through Time: The Path to the Quantum Computer,” “The Ten Most Beautiful Experiments,” “Fire in the Mind: Science, Faith and the Search for Order” and “Architects of Fear: Conspiracy Theories and Paranoia in American Politics.”

Two events that hit very close to home with the author serve as suitable bookends for “The Cancer Chronicles.” The first is described in “Nancy’s Story,” the second chapter in the book, which tells the story of his wife’s fight against uterine cancer – a fight she ultimately won. The second is “Joe’s Cancer,” the epilogue to the book, which deals with the struggle his younger brother had against squamous cell cancer of the head and neck – a struggle he ultimately lost.
His wife’s experience with cancer obviously served as the primary impetus for writing this book: “It had been seven years almost to the day since Nancy, the woman I was married to, was diagnosed with a rabid cancer that sprouted for no good reason in her uterus and burned like a flame ... She lived to tell the tale, but ever since, I have been wondering how a single cell minding its own business can transmogrify into a science fiction alien, a monster growing within.”

I was mesmerized by how well the author was able to balance the technical challenges with the personal realities often associated with this horrible disease. In one paragraph, for example, he is explaining how we think mutations occur at the cellular level giving birth to what eventually grows into a full-fledged tumor. In the next paragraph, he seamlessly transitions into how something so abstract and removed from everyday experience can have such an overpowering and emotional impact on the trajectory of one’s life. The reader is simultaneously enlightened on both an intellectual as well as an empathetic level.

The following excerpt describes the scene when his brother eventually succumbed to his cancer, which had metastasized throughout his body. It was hard to read passages like the following and not be touched by the sadness inherent in these kinds of moments: “He spent Christmas at home with his family. The chemo now was doing as much harm as the cancer, so the doctors had stopped all of his medications except for those to control pain. He was lethargic and having convulsions, but just after Christmas he woke up clearheaded and feeling better than he had for days. It was like a movie, she (his wife) later said. He reawoke and his daughters came into the room. They were all laughing together and he was telling them he loved them. He was Joe again. And then before they knew it he was gone.”

Johnson’s literary style is a wonderful blend of scientific exposition and personal narrative. The book is extensively researched, with 63 pages of source notes at the conclusion of the 13 chapters that comprise the main text.

The author provides a relatively concise yet surprisingly compelling history of how the ongoing fight to eradicate this insidious malady has progressed over the last few decades. He then infuses this with how researchers are currently approaching such an elusive and daunting task.

As Johnson makes clear, most predictions of where we would be by this time in the war against cancer have not been realized.

He gets to the essence of the challenge when recalling a speech he heard at a Stand Up to Cancer rally he attended with his wife: “Comparisons were made to Jonas Salk and the March of Dimes, yet polio had been a vastly simpler problem – a disease with a single cause that could be isolated and vaccinated against,” Johnson explains.

In the final analysis, Johnson is realistic and somewhat somber about where this journey has taken him. I found the book hard to put down; my sense is that you would, too.

— Reviewed by Aaron W. Hughey, Department of Counseling and Student Affairs, Western Kentucky University.

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