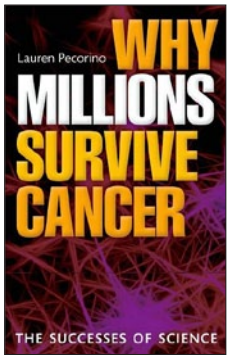
Surviving cancer



Why Millions Survive Cancer: The Successes of Science

Lauren Pecorino

Oxford University Press, 2011
256 pp., hardcover, $29.95
ISBN: 0199580553

Reviewed by Bruce Zetter

Imagine someone you know has been diagnosed with cancer. Most probably, your friend will immediately go online to search for information. He or she will find thousands of pages of notes, blogs, tweets, statistics and probabilities, as well as lists of clinical trial sites and experimental drugs. He or she may even pick up a textbook on cancer but quickly put it down, overwhelmed and confused. Where can your friend find descriptions of the disease, explanations of its biology and information about recent progress in a manageable compendium? Lauren Pecorino hopes that this book will provide the answers.

Pecorino has excellent credentials to write a book on cancer. She has a PhD in cell and developmental biology, conducted postdoctoral research at the Ludwig Institute for Cancer Research in London, lectures on cancer at the University of Greenwich in London and is the author of a textbook entitled *The Molecular Biology of Cancer*. She is clearly qualified to analyze current data on cancer incidence, outcome and prevention. She presents her analysis here, in a book aimed not at her research colleagues or even at readers of *Nature Medicine*, but squarely at the general public.

There is an openly optimistic tone to the writing, and every chapter ends with a section called "The Good News." In these sections, she tells the reader that cancer research has made many advances, that mortality rates are going down for many cancers and that individuals can take steps to reduce their cancer risk. I find all of these conclusions reasonable. Pecorino has taken on the worthy goal of promoting the positive impact of cancer research, something the cancer research community doesn't always do effectively.

Although the title may seem provocative, the writing is more nuanced, and Pecorino presents current data such that it can be digested by a casual reader. The book is short, although it could benefit from a few more pages on cancer biology. The writing is direct and concise. Documentation is provided for many of the statements, and a bibliography accompanies each chapter. The data presented are not, however, always analyzed in a critical manner that includes all possible interpretations; thus it would be possible for a nonscientist to overinterpret or misinterpret the research.

Many readers will open this book in the hope that they will discover new tests that detect cancers much earlier and new treatments that extend the lives of patients. What they will learn is that modern research has successfully unveiled more of the cancer cell's secrets and that certain lifestyle changes, especially those involving smoking cessation, have led to decreases in cancer incidence and mortality. New cancer drugs are appearing in clinical trials at an accelerating pace, and many extend patient survival by months or, less commonly, by years. We still await the truly effective drugs that will allow patients to live indefinitely with their disease.

In a very condensed format, Pecorino attempts to explain what cancer is, how carcinogens work and what the most important environmental risk factors are. Of the last of these, Pecorino focuses on the potential risks of radiation, chemical carcinogens, alcohol, environmental estrogen and viruses such as HPV. She devotes a relatively long and successful chapter to the risks of tobacco. I found her treatment of risks and prevention to be understandable and intriguing. The book is less successful in making the complex issues of cellular and molecular biology understandable to a general audience, and it frequently seems to dart from one subject to another without sufficient integration. Perhaps it would have benefited from a few case studies that could have combined discussions of risk factors, diagnosis, treatment, resistance and clinical trials for individual patients.

One nice touch is that the book highlights the work of "heroes," notable scientists who have made a particular impact on the understanding and treatment of cancer. This adds a human dimension and focuses attention on the enormous effort and persistence that have given rise to the advances she documents.

The author's intention is to not make her readers feel complacent about cancer. Rather, she wishes to educate the public on the biology of cancer, explain the scientific advancements of the last few decades and, most importantly, encourage individuals to take steps to reduce their likelihood of developing serious malignancies. This goal would succeed best if the book were to be read by young people who could take preventive measures early in life. It is more likely that it will be ordered by people with cancer and their friends and families. They would be wise to pass it down to their children, who might benefit from the cogent presentation of risk factors and behavioral changes that could lessen their chances of getting the disease.

Scientists often recount the difficulty of explaining their work to their friends and families: the concepts, techniques and conclusions aren't always accessible to the general public. This book approaches accessibility for the lay reader, although it will be a challenge for some. I would like to have been able to give it to my mother, who succumbed to colon cancer 40 years ago. I do believe that if she had undergone regular colonoscopies, been exposed to less tobacco smoke and had access to all of the drugs available today, she might have survived longer. The treatments and knowledge just weren't available then. But they are today, and efforts by a variety of cancer organizations to popularize this information, along with well-intentioned books such as this one, may make extended life spans a reality for many more individuals with cancer.

Bruce Zetter is at Children's Hospital Boston and Harvard Medical School, Boston, Massachusetts, USA. e-mail: Bruce.Zetter@childrens.harvard.edu

COMPETING FINANCIAL INTERESTS
The author declares no competing financial interests.

© 2012 Nature America, Inc. All rights reserved.