

Book review: *Therapeutic Revolution: The History of Medical Oncology From Early Days to the Creation of the Subspecialty*

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Therapeutic Revolution: The History of Medical Oncology From Early Days to the Creation of the Subspecialty

by Pierre R. Band MD

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Therapeutic Revolution: The History of Medical Oncology From Early Days to the Creation of the Subspecialty is a book about the history of medical oncology, the extraordinary turbulence that permeated the early years of the field, and the events that led to this subspecialty of internal medicine.

Dr. Pierre Band was born in Paris to Hungarian parents who subsequently immigrated to Canada. After a traumatic move, he dropped out of high school. However, a year later, he recommenced his education and persevered until attaining a medical degree from the University of Montreal.

During his internship (1961), Band decided to pursue a career in cancer medicine, but the American Cancer Society informed him that there was no special training for oncology and that “a ‘cancer specialist,’ was a non-entity.”

Oncology was clearly a new frontier, with endless possibilities—a perfect fit for Band. In 1966, he joined the Department of Medicine headed by Dr. James Holland, Chief of Medicine, at Roswell Park Cancer Institute, Buffalo, New York. Holland’s contributions to cancer medicine figure prominently in Band’s book.

Starting with a brief overview (“From Dinosaurs to the Dawn of Chemotherapy”), the book ambitiously covers ground from the Hippocratic school, through the Renaissance, to ground-breaking studies in hormonal therapies, providing an interesting historical perspective: “In the mid-sixties, at the time the author began his training in oncology, hormonal treatment whether surgical or medical, was the mainstay against advanced breast cancer. At the time, chemotherapy was offered as a last resort.”

The connection between warfare and cancer treatment is outlined superbly. Although the influence of mustard gas on the development of nitrogen mustard—marking the dawn of modern chemotherapy—is well documented, the connection between scientific efforts to combat malaria in World War II and the development of U.S. cancer programs is less well known. The success of the cooperative malarial

efforts led several American researchers to bring the same vision and organization to oncology at the U.S. National Institutes of Health.

Band describes the formation of cooperative oncology groups and clinical trials, and describes how Dr. Charles Gordon Zubrod advanced the concept of randomized trials, the importance of biostatistically relevant conclusions requiring adequate numbers of patients, and the evolution of phases I, II, and III.

Band describes major successes: cures in Hodgkin disease, testicular cancer, and Burkitt lymphoma and improved outcomes with combination chemotherapy in ovarian cancer, small-cell lung cancer, and osteogenic sarcoma. Insightful anecdotes about pioneering researchers and great experimentalists such as Drs. Sidney Farber, David A. Karnofsky, Vincent T. DeVita, Denis Parsons Burkitt, Lawrence Einhorn, Bernard Fisher, Gianni Bonadonna, Zubrod, Holland, Emil Frei, and Emil J. Freireich who worked side-by-side as colleagues and friends while they changed the face of oncology make for interesting reading.

Band spent time chairing the Eastern Cooperative Oncology Group breast cancer committee, and he does an outstanding job of reviewing the historical development of breast cancer treatment, covering topics such as hormonal procedures, the development of predictive tests (estrogen receptors), and tamoxifen. The five-drug “Cooper regimen” triggered a number of studies using quadruple and quintuple chemotherapeutic drug combinations that induced response rates leading to the integration of combination chemotherapy into a combined modality approach epitomized by modern “adjuvant” chemotherapy.

Innovations such as the Goldie–Coldman mathematical model and the Norton–Simon mathematical model that influenced the future development of medical oncology are described.

As is fitting, both Dame Cicely Saunders and Dr. Jimmie C. Holland are prominent in Band’s discussion of the concept of “total pain,” with its physical, emotional, social, and spiritual aspects, and the emergence of palliative care and psycho-oncology, an entirely new era of cancer care.

Band covers an enormous amount of information and offers the reader a glimpse into the inspiring ethos of the founders of medical oncology and their collective march toward better clinical research and outcomes for patients. He balances scientific content with anecdotes in

a well-constructed manner that captivates the reader, and he has included delightful photographs of many famous oncology pioneers.

Band ends his book with a description of how the specialty of medical oncology in the United States met with vigorous opposition from most hematologists, but how, despite the opposition, medical oncology prevailed.

In this remarkable book, Band has taken an overwhelming amount of information and condensed it into an enjoyable read, describing both his journey and that of medical oncology. As he notes in the closing paragraph, “The story of medical oncology was written by men and

women of courage, and conviction [and] above all passion, that led us to where we are today.”

CONFLICT OF INTEREST DISCLOSURES

I have read and understood *Current Oncology's* policy on disclosing conflicts of interest, and I declare that I have none. My institution receives funding from Oncocyte, Genentech, Roche, Amgen, and Pfizer for trials in which I am a co-investigator.

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