Strategies And Tactics In The War On Cancer: A Review

by Richard A. Rettig

Cancer-Gate: How to Win the Losing Cancer War
by Samuel S. Epstein
(Amityville, N.Y.: Baywood, 2005), 396 pp., $70 (cloth), $24.95 (paper)

The War on Cancer: An Anatomy of Failure, a Blueprint for the Future
by Guy B. Faguet
(New York: Springer, 2005), 227 pp., $59.95

The “war on cancer,” born of hurt, hope, and hype, was inadvertently launched in 1969 when President Richard M. Nixon proposed to reduce the budget of the National Cancer Institute (NCI). He later embraced the National Cancer Act of 1971 as his own, even though Sen. Edward M. Kennedy (D-MA) and Rep. Paul G. Rogers (D-FL) did most of the heavy lifting in Congress.

Over the past three and a half decades, various commentators have argued that the nation is losing this war, despite spending substantial sums on cancer research. The two books reviewed here continue this critique but offer quite contrasting analyses of failure and different prescriptions for success.

Samuel Epstein, professor emeritus of environmental and occupational medicine at the University of Illinois, argued in The Politics of Cancer (1978) that the war on cancer was being lost largely because it was directed at the wrong target. The primary cause of cancer was chemical and physical environmental agents; controlling those agents was the primary route to prevention, but prevention depended on political action. The war on cancer was being lost because the cancer establishment, in league with industry, had ignored these environmental causes of cancer, especially industrial carcinogens. In Cancer-Gate, Epstein does not extend his earlier writing but instead has collected a number of essays written over a fifteen-year period, many in 1990 and seven since 2000. The argument about the carcinogenicity of industrial agents is important. But Epstein does not establish its importance because he doesn’t develop his analysis of the intertwined scientific, economic, and political factors historically or analytically. Moreover, the shrillness and polemical nature of the essays and their reliance on good guys versus bad guys and on guilt by association thwart any effort by a serious reader to reach judgment on environmental carcinogens.

Guy Faguet, professor emeritus of medicine at the Medical College of Georgia, presents a much more sober analysis. He is also a critic of how the campaign against cancer has been waged but an optimist about the future. In The War on Cancer, Faguet agrees with Epstein on the importance of prevention but focuses more on tobacco than on industrial agents. His case is reasonable, not a jeremiad.

For Faguet, the failure of the war on cancer stems in large measure from a limited understanding of cancer, one that has evolved from an erroneous view of the disease as “uncontrolled cell proliferation” to one that views as causal the alterations in DNA sequences that promote cancer cell growth or confer a sur-

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vival advantage on them. Another source of failure, Faguet says, has been the preoccupation of the NCI with the flawed cell-kill hypothesis that undergirds chemotherapy. Chemotherapy has depended on the anticancer activity of “non-specific and inherently inefficacious” cytotoxic drugs and has reached “a low efficacy plateau” that cannot be breached by dose escalation, combination drugs, timing of administration, or other manipulations.

Faguet deplores the disconnect between cancer research and cancer treatment. Treatment outcomes have been dismal, whether measured by cure rates, prolongation of survival, or quality of life. This reflects “an unbalanced focus on treatment of inoperable cancer to the detriment of prevention and early detection,” he writes (p. 93). Treatment successes have stemmed, he argues, more from “prevention and early stage detection, to food refrigeration, to improved infection control and transfusion therapy, to enhanced nursing, social and rehabilitation services, and to better medical support,” rather than to advances in cancer treatment” (p. xiv).

Although Faguet credits the NCI with “the nation’s advances in molecular biology and genetics of cancer,” he also criticizes the agency for “three decades of stagnation in cancer treatment” (p. 100). He concludes that treatment progress has been slow not because of the methods of clinical trial evaluation but because of continued reliance on drugs “with no relevance to the cancerous process” (p. 108).

In the book’s final section, Faguet asks, “Where do we go from here?” He argues for “a fundamental paradigm shift” toward cancer control based on prevention, early diagnosis, and, when these fail, “controlling the aberrant molecular genetic pathways underlying the development, growth, and dissemination of cancer” (p. 145). He writes: “The inability of the old cell-kill paradigm to explain most of the recent scientific tenets regarding the nature of cancer and its inadequacy as a foundation for spawning efficacious treatments can be neither redeemed, redressed, nor improved by any future discoveries potentially on its path” (p. 146). But it appears that the success of Gleevec, a genetically targeted cancer treatment for chronic myelogenous leukemia, has already prompted the paradigm shift for which Faguet calls.

Faguet’s critique acknowledges that the old hypotheses might have “seemed cogent when first proposed” and revealed to be flawed “only in retrospect.” But beyond the National Cancer Act itself, the book does not identify the key decision points that shaped cancer research policy over the past three decades, the arguments that surrounded these key decisions regarding the allocation of massive amounts of public resources, and the extent to which strong alternative policies were advocated at those critical times. Nor is it clear whether the author’s critical views were as clear prospectively as they are in retrospect. The reader is left with the question of whether we had to pursue the “old paradigm” to the extent that we did to arrive at “the blueprint for the future.” Were there options other than those pursued; or was it necessary, given the limited understanding of cancer, that several decades of basic research be done to bring us to the point where cancer genetics opens up the prospect for more effective treatment?

At a more fundamental policy level, “blueprints for the future” might address themselves more to the Congress than to the NCI bureaucracy and the cancer research establishment. Articulating the questions that Congress should ask in the annual appropriations hearings for NCI, which would reduce its dependence on establishment expertise, could itself be a powerful force for change.

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