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EDITORIAL

“No patient left behind”: an alternative to “the War on Cancer” metaphor

Bryan T. Oronsky[1] · Corey A. Carter[2] · Arnold L. Oronsky[3] · Michael E. Salacz[4] · Tony Reid[5]

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Abstract The War on Cancer began with President Nixon’s National Cancer Act of 1971. Treatment-related ‘collateral damage’ to healthy cells and tissues that reduces quality of life is an unfortunate but inevitable consequence of the overriding imperative to “win the war.” In the face of a quality of life decrement, patients are encouraged with militaristic turns-of-phrases to “soldier on,” “fight it,” and “never say die.” Rather than this dysfunctional imagery, which relegates patients to the status of mere cogs in the ever-grinding wheel of the clinical war machine and encourages the practice of disease-centered medicine, we propose an alternate analogy/organizing principle borrowed from the realm of education: No patient left behind.

Keywords War on Cancer · No patient left behind · Chemotherapy · Maximally tolerated dose · Resistance · Toxicity

What is our aim?… Victory, victory at all costs, victory in spite of all terror; victory, however long and hard the road may be; for without victory, there is no survival.
Winston Churchill, Speeches to Parliament, 1940.

✉ Bryan T. Oronsky
boronsky@epicentrx.com

1 EpicentRx, Inc., 800 W El Camino Real, Suite 180, Mountain View, CA 94040, USA

2 Walter Reed National Military Medical Center, 8901 Wisconsin Ave, Bethesda, MD 20889, USA

3 InterWest Partners, 2710 Sand Hill Rd #200, Menlo Park, CA 94025, USA

4 University of Kansas Medical Center, 3901 Rainbow Boulevard, Kansas City, KS 66160, USA

5 University of California San Diego (UCSD), Moores Cancer Center, 3855 Health Sciences Dr, La Jolla, CA 92093, USA

It is much more important to know what sort of a patient has a disease than what sort of a disease a patient has.
William Osler.

All wars no matter how well intentioned result in collateral damage. The War on Cancer, which began with President Nixon’s National Cancer Act of 1971, is no exception. A war metaphor suggests the possibility of rapid dominance through aggression, which justifies the use of maximum tolerated doses (MTD) of chemotherapy in the same way that high dose antibiotic treatment is prescribed for the eradication of bacterial infections. However, unlike bacterial infections, the administration of MTD of chemotherapy to metastatic cancer cells is more likely to result in resistance than eradication, as the less treatment susceptible clones take over the tumor population, leading to a backlash of disease progression and shortened survival. It is our contention that the “orthodoxy of aggressive chemotherapy,” a phrase coined by Read et al. [1], which is paradoxically responsible for the treatment resistance that it purports to prevent, derives from the military metaphor and the immediate expectation, and demand, that it creates to strike back hard and annihilate the tumor. In a 2009 Nature manuscript entitled “A change of strategy in the war on cancer” [2], the mathematical oncologist, Robert Gatenby, refutes the more-is-better rationale that has held sway in oncology for almost half a century. His premise, based on mathematical modeling, is that “treatment-for-stability” to maintain steady-state levels of proliferation is more conducive to long-term survival than “treatment-for-cure.”

Treatment-related ‘collateral damage’ to healthy cells and tissues that reduces quality of life is an unfortunate but inevitable consequence of the overriding imperative to “win the war.” In the face of a quality of life decrement,

patients are encouraged with militaristic turns-of-phrases to "soldier on," "fight it," and "never say die."

Rather than this dysfunctional imagery, which relegates patients to the status of mere cogs in the ever-grinding wheel of the clinical war machine and encourages the practice of disease-centered medicine, we propose an alternate analogy/organizing principle borrowed from the realm of education: No Patient Left Behind (NPLB).

In 2002, President George W. Bush signed the education reform bill, No Child Left Behind (NCLB), to improve equal educational opportunities for disadvantaged students. Whether or not No Child Left Behind reform initiatives have failed in a larger sense to meet their objectives, as its many detractors like former Assistant Secretary of Education, Diane Ravitch, claim [3, 4], is almost beside the point: NPLB should stand on its own merits, unencumbered by any negative baggage from its predecessor, as a message of inclusion and an implicit promise to improve access and outcomes for all oncology patients. In particular, despite dramatic responses in 20–30 % of metastatic melanoma and non-small cell lung cancers with the PD-1 checkpoint inhibitors, the remaining 70–80 % of non-responding patients have been, for all intents and purposes, and by analogy with the disadvantaged students in NCLB, left behind.

It is time to reclaim these patients with minimally toxic combination regimens and strategies, leaving the War On Cancer behind both as metaphor and a mentality that is antediluvian, anti-Oslerian, anti-strategic, and antithetical to long-term survival. An example of a minimally toxic regimen might include the epigenetic immune-, chemo-, and immunotherapy priming agent, RRx-001 [5], with no systemic adverse effects, or dose-limiting toxicities, under investigation in several Phase II clinical trials as a single agent and with nivolumab and radiotherapy, in combination with 'armed' oncolytic viruses and PD-1 inhibitors.

Let us carry forward instead the determination to improve clinical outcomes for all patients with cancer, regardless of ethnicity, gender, social and economic status, insurance provider, geographic location, or genetic background.

Now that is a legacy worth fighting for.

Compliance with ethical standards

Conflict of interest None.

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