Cancer Control in the 21st Century: Global Challenges Demand Collective Solutions

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O Controle do Câncer no Século XXI: Desafios Globais Exigem Soluções Coletivas

El Control del Cáncer en el Siglo XXI: Desafíos Globales Exigen Soluciones Colectivas

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Cancer emerges as one of the most urgent global health threats in the 21st century, manifesting not as one disease, but as a spectrum of more than 100 malignant neoplasms, each one with their particularities[1]. Global incidence is alarming, an increase of 20% was seen in the last decade and over 35 million new cases are predicted in 2050 – a rise of 77% compared to 2022, suggesting an underestimation of the actual scale of the problem[2]. Approximately one in each five individuals will develop cancer in a lifetime and the disease is already one of the leading causes of death worldwide[3]. This scenario with 50.6 million individuals living with cancer post-diagnosis in 2020 shows the rising necessity of continuous care and multifaceted challenge that impact any country[3]. The disease burden, however, is unfairly distributed: while high income countries present high incidence, low- and middle-income countries as Brazil bear a disproportional burden of mortality – nearly 70% of the global deaths – revealing the inefficiency of health systems in least developed regions[2].

The complexity of cancer control comprehends technical, assistance, scientific, social and economic aspects[4]. One of the greatest social challenges lies on the rising treatment costs boosted by the incorporation of new antineoplastic drugs and technologies[5]. Although promising, these innovations are not an "universal solution" due to budgetary restrictions, high cost and cancer adaptive nature that frequently develops resistance[5]. This reality pushes an increasingly expensive drugs spiral targeted to a limited number of patients and reinforces the inexistence of a "magic bullet"[5,6]. The global economic impact of premature death and disabilities by cancer can reach US$ 1.16 trillion per year[4]. Therefore, it is crucial to rethink the business model of the pharmaceutical industry demanding policy decision-makers and industry to align their drugs development agenda with the scientific knowledge and the global economic reality. Expand the participation of scholars to create more effective public-private partnerships is essential to speed up the delivery of cost-effective and accessible new therapies worldwide[7].

In view of this scenario, there is a rising demand to redesign the logic of health care focused to the patients' needs since diagnosis up to rehabilitation and palliative care[8]. Service providers are investing in structuring approaches that encompass the entire cycle of care, including slow medicine or slow oncology and other modalities of transitional care to add value to the attention network[9]. Strategies as Accountable Care Organizations (ACO) focused to costs control and improvement of quality are tools to implement a more comprehensive model of payment and assistance redesign[4,6,10]. In Brazil, it is even more urgent. Analyses and events on the theme concur that, in despite of a good structure, effective access is yet a major challenge[11,12]. It is emphasized that the problem lies in the funding structure of the National Health System (SUS) and how the services are organized, advocating an integrated plan of oncologic attention undeterred by the high complexity, utilizing robust management data and optimizing basic attention and professional training[12,13].

The complexity and magnitude of the problem demand realistic decisions based on scientific evidences and economic facts, not neglecting the human reality and the values it imposes. As suggested by Callahan[14] and Sullivan[15], the discussion about the right ratio of investment in educative, preventive and treatment actions goes beyond the technical competence, involving management and bioethical decisions that should follow an interdisciplinary, consensual and conscious perspective by all social players involved in cancer control[14,15]. Szklo[16], in a timely reflection highlights and brings up that the interests of the companies of the Health Social, Economic and Industrial Complex and the predominance of etiologic studies, created distortions in the application of epidemiologic knowledge, influencing

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public policies and interventions. This also indicates the necessity of a cultural change among health professionals, political leaders and citizens to regulate the processes of production of knowledge and intervention[16]. Santini and Temporão[11-13] also reinforce and complement this vision, highlighting the issue of external technologic dependence and necessity of a clear management policy of incorporation of innovations, with criteria of efficacy and cost-benefit and a revision of the prices practiced[17]. The relevance of the socioeconomic factors and ethnic and cultural diversities is constantly underlined as crucial elements that impact the access and results of the treatment[18]. The complexity of this trajectory and the challenges are persistent in the Brazilian heath system and must be widely emphasized, investigated and reflected upon[19,20].

Therefore, cancer, in terms of lives lost and impact on health system persists as a problem of public health of magnitude well above many other chronic conditions[4]. It is a clear calling for action and collaborative reflection[21]. The "aporia" of cancer control – its contradictions and standoffs – require significant investments in infrastructure, work force, technology and integral care networks[21]. The persistence of risk factors associated with lifestyle and environmental aspects underlines the urgency of multifaceted primary prevention programs[1,21,22]. Global inequalities demand improved access to early detection and quality treatment, matched to local realities as in Brazil, prioritizing equity[1,21,22]. Continuous epidemiologic surveillance and robust research and socially applied are vital just like improvements in collecting and disclosing data for a more accurate evidence-based planning[2]. It is imperative that health systems, investigators, public policies formulators and the civil society redouble their efforts to fight against this multifaceted disease, prioritizing prevention, early detection and equity access to effective treatments to mitigate its rising impact[21,23].

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