

Financial toxicity and its psychological sequelae in modern cancer care

Mohammad-Salar Hosseini^{1,2*}

¹ Hematology and Oncology Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

² Resuscitation and Critical Care Medicine Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

* Corresponding author: Mohammad-Salar Hosseini, hosseini.msalar@gmail.com, hosseinim@tbzmed.ac.ir

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Abstract: Financial toxicity has emerged as one of the key challenges in modern cancer care. Although traditionally regarded as an economic consequence of cancer diagnosis and treatment, growing evidence indicates that financial distress is also a major determinant of psychological well-being among people with cancer. Financial toxicity extends beyond objective aspects, and includes subjective financial distress, anxiety, uncertainty, employment disruption, debt, isolation, and care-compromising behaviors. Despite well-established associations, financial toxicity remains insufficiently integrated into psycho-oncology frameworks, where it is often viewed as a socioeconomic determinant rather than a core psychosocial outcome. This editorial argues that financial toxicity should be acknowledged as a core component of modern cancer care with direct clinical implications, while reframed as an integral psycho-oncological construct, requiring routine assessment, multidisciplinary management, and regular provider-patient discussions.

Keywords: financial stress; financial toxicity; neoplasms; patient-centered care; psychological distress; psycho-oncology

1. Introduction

The remarkable advances in cancer diagnosis and treatment over the past two decades have transformed the landscape of cancer care. With advances in molecular diagnostics, targeted therapies, and precision medicine, survival and quality of life have improved significantly. However, the improved outcomes have been accompanied by an equally important, yet often underappreciated, consequence: the escalating financial burden imposed on patients [1]. As cancer increasingly becomes a chronic condition requiring prolonged treatment, surveillance, and supportive care, the economic implications of the disease extend far beyond healthcare expenditures and have emerged as a major determinant of patients' long-term well-being [2, 3].

Financial toxicity refers to the subjective distress and objective financial burden that patients experience as a result of the high out-of-pocket and indirect costs of medical care, which often leads to depleted resources, compromised adherence to clinical treatments, and decreased quality of life [4, 5]. The concept of financial toxicity was initially discussed within the context of health economics and health services research, focusing primarily on treatment costs, insurance coverage, healthcare utilization, and economic outcomes [6, 7]. Although this perspective is backed up by valuable evidence regarding the magnitude of financial hardship associated with cancer care, it inadequately captures the profound psychological consequences of financial distress.

Studies have reported catastrophic health expenditures in over 50% of cancer patients [8]. The experience of financial toxicity is fundamentally more than an economic phenomenon; it is a persistent psychosocial stressor that shapes patients'

emotional responses to cancer, influences clinical decision-making, alters family dynamics, and ultimately affects treatment outcomes and quality of life.

2. Components and determinants

Financial toxicity includes both objective financial burden and subjective financial distress. The objective burden includes direct medical (such as out-of-pocket payments) and non-medical (such as transportation and accommodation) expenses, indirect costs of income loss, and financial depletion. Equally important, however, is the subjective dimension, which reflects the emotional and cognitive responses to these economic pressures [7, 9]. Financial anxiety, uncertainty regarding future financial stability, fear of becoming a burden to family members, and persistent concerns about employment and insurance occupy patients' thoughts throughout the cancer trajectory, often imposing a greater effect on psychological well-being than the absolute magnitude of financial loss itself. **Figure 1** presents a conceptual framework for classifying financial toxicities in cancer care.

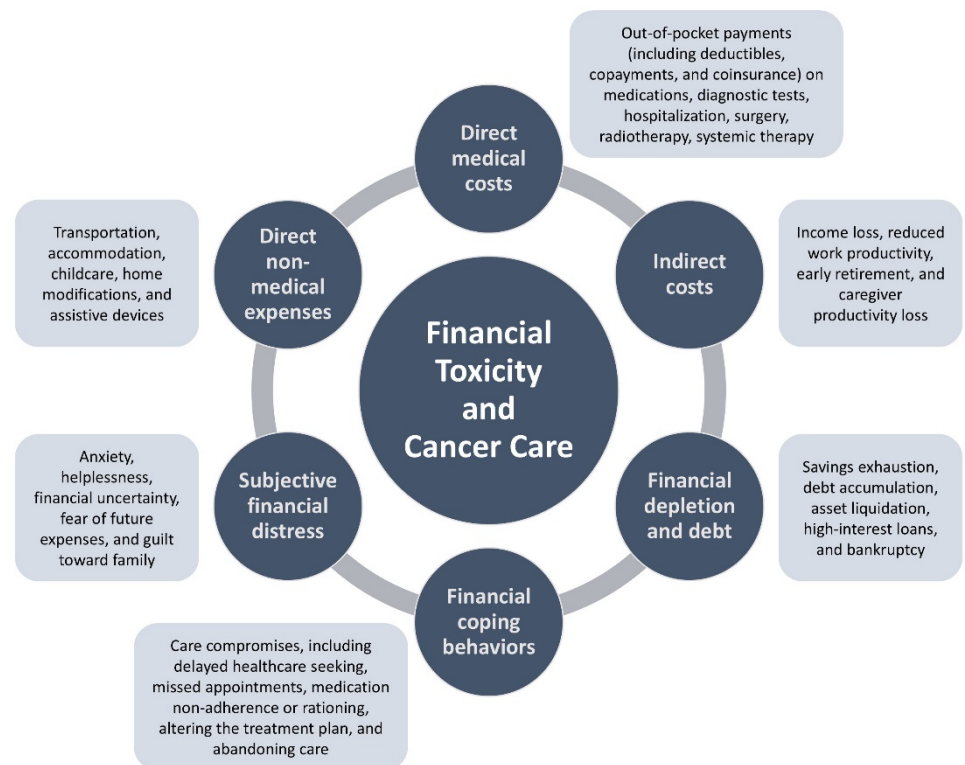


Figure 1. Conceptual framework for the classification of financial toxicities in cancer care. The objective and subjective components of financial toxicity include direct medical costs, direct non-medical expenses, indirect costs, financial depletion and debt, financial distress, and care-compromising behaviors.

The development and severity of financial toxicity are determined by a complex interplay of patient-, disease-, treatment-, healthcare system-, and societal-level factors [8-11]. Patient-related determinants include age, educational attainment, household income, employment status, insurance coverage, baseline financial reserves, health literacy, marital status, family size, and pre-existing comorbidities. Disease-related factors include cancer type, stage at diagnosis, disease recurrence, symptom burden, and treatment duration, all of which affect healthcare utilization

and productivity loss. Treatment-related determinants include the use of high-cost systemic therapies, multimodal treatment strategies, prolonged hospitalization, supportive care requirements, management of treatment-related toxicities, and participation in long-term surveillance programs. Healthcare system factors, such as reimbursement policies, insurance design, availability of financial assistance programs, accessibility of specialized oncology services, and geographic disparities in care delivery, further shape patients' financial experiences. Broader societal determinants, including national healthcare financing models, social welfare policies, labor protections, inflation, and regional economic conditions, also influence financial vulnerability. Financial toxicity is an individualized experience, independent of income level or healthcare expenditure alone, as it reflects the interaction between economic circumstances, personal expectations, social responsibilities, and psychological resilience. Thus, people with stable incomes may also experience it substantially.

3. Bidirectional relationship between financial distress and mental health

Financial toxicity could turn into a chronic psychological stressor, as the psychological effects of financial toxicity often extend beyond the completion of cancer treatment [12]. Unlike treatment-related adverse effects, financial hardship frequently persists for years, and financial recovery often lags considerably behind clinical recovery [13]. Survivors may continue to experience reduced earning capacity, employment instability, debt, and ongoing medical expenses. This prolonged uncertainty transforms financial toxicity into a chronic source of psychological stress. Persistent financial concerns contribute to anxiety, depression, sleep disturbance, impaired concentration, emotional exhaustion, and hopelessness [14, 15].

The relationship between financial toxicity and psychological health is bidirectional and complex. Financial hardship contributes to emotional distress in several ways, including uncertainty regarding treatment affordability, disruption of social roles, and reduced autonomy. At the same time, psychological distress may impair cognitive functioning, reduce problem-solving capacity, and affect the patients' ability to seek financial assistance, navigate insurance systems, maintain employment, or engage effectively in shared decision-making [16]. Consequently, financial and psychological distress often reinforce one another, creating a self-perpetuating cycle that adversely affects both emotional well-being and clinical outcomes. Moreover, these interactions extend beyond mental health and directly influence cancer care.

4. Implications for clinical practice

The recognition of financial toxicity as a psycho-oncological outcome has important implications for clinical practice. Studies have highlighted how patients compromise cancer care due to financial concerns, and delay diagnostic investigations, decline recommended therapies, skip medications, reduce supportive care utilization, or miss follow-up appointments [1, 17]. These decisions are not based solely on objective affordability. Anticipatory anxiety, uncertainty regarding future expenses, and fear of financial catastrophe frequently influence patients' choices even before substantial financial hardship has occurred. Equally concerning is the reluctance of many patients to discuss financial concerns with their healthcare professionals [18]. Feelings of embarrassment or stigmatization, and the perception that financial matters fall outside the scope of clinical care, often prevent open

communication. Consequently, clinicians may remain unaware of a major determinant of treatment adherence and psychological well-being. In addition, certain patient populations experience disproportionate vulnerability to financial toxicity and its clinical and psychological consequences [19]. Adolescents and young adults may encounter interruptions in education, unstable employment, and limited financial reserves during critical stages of personal development. Older adults often face fixed incomes while managing multiple chronic illnesses. Individuals with disabilities, those residing in rural or underserved regions, migrants, refugees, and patients living in low- and middle-income countries frequently experience cumulative disadvantages that increase financial hardship, psychological distress, and lack of access to novel anticancer treatments. Hence, financial toxicity should be considered within broader frameworks of health equity and social determinants of health.

Comprehensive cancer care should include routine assessment of financial concerns alongside established measures of psychological distress [20, 21]. Screening for financial vulnerability should not be limited to objective indicators such as income or insurance status but should also evaluate patients' perceptions of financial security, employment concerns, caregiving responsibilities, and uncertainties regarding future affordability. Integrating these assessments into routine oncology practice would facilitate earlier referrals to social workers, financial navigators, psychologists, and community support services, thereby reducing both economic and emotional suffering. Furthermore, conversations regarding financial concerns should be normalized within the cancer care community. Financial discussions should not be viewed as administrative tasks or matters solely for social services. Rather, they represent opportunities to strengthen therapeutic relationships, improve shared decision-making, reduce uncertainty, and validate patients' experiences. A clinician's willingness to inquire about financial concerns may itself reduce psychological distress by acknowledging that economic hardship is a legitimate component of the cancer experience rather than a personal failure.

5. Future directions

Ongoing and future research should move beyond describing the prevalence of financial toxicity toward understanding its underlying psychological mechanisms. Greater attention should be directed toward elucidating how financial distress influences resilience, coping strategies, illness perceptions, treatment adherence, family functioning, and survivorship outcomes. Longitudinal studies examining the reciprocal relationship between financial hardship, mental health, and clinical outcomes across the entire cancer continuum would provide valuable insights into potential intervention points. Likewise, interventional research should evaluate multidisciplinary models that combine financial navigation, psychosocial support, patient education, and policy-level strategies rather than addressing each domain independently.

The continued expansion of innovative but increasingly expensive cancer therapies makes financial toxicity an unavoidable component of modern oncology. However, the psychological burden associated with financial hardship should not be regarded as an inevitable consequence of therapeutic progress. Rather, it represents a modifiable determinant of patient well-being that deserves systematic attention. Ultimately, the quality of cancer care should be judged not only by improvements in survival but also by the extent to which it preserves dignity and reduces suffering for both patients and their families throughout the cancer journey. Advances in

cancer treatment and improved cancer survival should not come at the expense of psychological well-being. In modern oncology, economic security and mental health are inseparable aspects of high-quality, person-centered cancer care.

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