



## Value: The Next Frontier in Cancer Care

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Value has become a central topic in any debate regarding cancer care in the U.S. and abroad, for a simple reason: reality has caught up with us. Costs and treatment innovations are conflicting realities that force the oncology community to adopt value-based solutions to a system in crisis [1]. Although the oncology landscape is complex, we can try to depict the cancer crisis as the clash of conflicting forces. On one side, the pace of innovation in oncology is tremendous and unprecedented: newly approved drugs abound; precision oncology and immunotherapy are gradually becoming a reality; and patients are having access to an increasing number of treatment options that help them live longer with better quality of life [2–4]. On the other side, the costs to treat cancer are astronomical and continue to increase, threatening our own ability to provide cancer care and causing financial harm to patients [5–7]. The reasons for rising cancer care costs are multiple and system-specific. In the U.S., important factors include an aging population, an increasing number of cancer survivors, perverse incentives for overuse of medical resources, industry monopoly power over drug pricing, overly aggressive end-of-life care, and a fragmented health care system that lacks patient-centeredness [8–10].

Given the urgency to balance the delivery of high-quality cancer care with costs, stakeholders are developing new models of care delivery and reimbursement that emphasize value [11, 12]. The implications for oncologists are clear: we have no choice but to understand and embrace the concept of value; we have to reshape our practices to prioritize high-value cancer care and proactively engage society in discussions about what constitutes valuable care [13, 14].

The Value in Cancer Care series is a collection of 11 opinion-based articles that jointly aim to inform practicing oncologists about the pertinent facets of the value debate. The editorial board believes that informative discussions about value need to include the views of multiple stakeholders. To this end, the contributing authors represent expert members from academia, health care payers, the biopharmaceutical industry, and physicians. The topics covered are broad and include propositions for defining and measuring value in cancer care, assessments of oncology drug pricing and reimbursement policies, and suggestions for changes in oncologists' practice behaviors that promote value, including early adoption of palliative care. Given the number and variety of topics, the

series format will consist of articles published in consecutive issues of the journal. Whenever possible, articles covering similar topics will appear in the same issue. We hope that the series will encourage oncologists to champion the efforts that will transform cancer care from a high-cost to a high-value enterprise.

The definition and metrics of value in cancer care are the first topics covered by the series. Value is a multidimensional concept that is not necessarily intuitive to oncologists. Central to the definition of value is the link between the costs of cancer interventions and the final product generated by these interventions, namely, improvement in patient outcomes [15, 16]. This definition implies that a value metric needs to include costs and outcomes in a single composite measure [17, 18]. Although cost measures are relatively straightforward, what constitutes meaningful patient outcome measures deserves discussion [19]. Quality-adjusted life years (QALYs) represent the standard outcome metric used in cost-effectiveness analysis to inform coverage decisions of cancer treatments in countries like the U.K. and Canada. Schrag discusses the potential applications of QALYs and incremental cost-effectiveness ratios as metrics of patient outcomes and value in the U.S., respectively. Pertinent to this discussion are several unsettled issues: Do QALYs appropriately summarize the experience of cancer patients? If so, should U.S. policymakers consider applying an explicit willingness-to-pay threshold for cancer drugs based on the magnitude of QALY benefits at the time of coverage decisions? Can alternative outcome metrics substitute QALYs for the assessment of value in cancer care? The article by Schrag provides important insights about the complexities of measuring value and highlights the advantages and limitations of adopting QALYs as an outcome metric in the U.S. health care system.

More recently, expert groups have proposed frameworks to assess the value of oncology drug regimens with the goal of assisting oncologists and patients to make treatment decisions while explicitly accounting for drug efficacy, toxicity, and costs [12, 20]. Schnipper and Bastian [21] elaborate on the process of developing these frameworks, their applicability for health care payers and other stakeholders, and limitations such as the arbitrary aspect of assigning weighted scores to characterize drug value.

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The subsequent two articles address the role of communication and the physician-patient relationship as channels for improving value in cancer care. Zafar explores oncologists' levels of confidence in discussing the financial impacts of treatment decisions with patients and whether honest conversations about costs can prioritize the choice of higher-value regimens. Wong et al. analyzes patients' perceptions of value, the elements of cancer care that patients value most, and ways to incorporate patients' views in the definition and measurement of value. The article also reflects on how oncologists can provide high-value care by honoring patients' wishes and goals whenever possible.

Drug pricing and reimbursement policy is arguably the most contentious topic related to value, because drugs account for the fastest growing fraction of health care expenditures [22]. Many new cancer drugs, and some older drugs, cost more than \$10,000 per month, a finding that has caused public outcry [23, 24]. Because of the multiple and often conflicting views from stakeholders about drug pricing, the series will address this topic in five articles written by academics, payers, and manufacturers.

Goldstein et al. review oncology drug pricing policies across several international health care systems that explicitly consider costs for coverage decisions and contrast them with the U.S. legislation that prohibits cost considerations during the regulatory approval process and forbids Medicare from negotiating drug prices with manufacturers. This comparison will give oncologists a better understanding of why the same drug may cost substantially less in other countries and dissects the elements of pricing policies that can make cancer care more affordable. Saltz challenges the current notion that oncologists should be price takers (i.e., mere observers of pricing policies) by proposing a proactive role of cancer professionals in influencing the initial cost of drugs. The author deliberates on how oncologists can stimulate the adoption of value-based drug-pricing policies by demanding changes in legislation and reviewing their institutions' drug formulary to emphasize lower-cost drugs among alternatives of similar efficacy. In a point and counterpoint format, Newcomer [25] and Kolodziej debate whether and how health care payers can influence drug pricing, reimbursement, and value. Newcomer [25] proposes that payers be allowed to negotiate oncology drug prices as a strategy to improve value and decrease the financial burden on patients. Kolodziej discusses the political feasibility of this proposition and suggests alternative care delivery models that emphasize value, such as cancer

care pathways. Reilly et al. brings the perspectives of drug manufacturers on drug pricing, highlighting the scientific contributions made by the biopharmaceutical industry and calling attention to the theoretical concern that price regulation could stifle innovation in oncology.

The series continues with reflections on wasteful use of medical resources, overly aggressive end-of-life care, their impact on value, and recommendations for changes in oncology practices that maintain or improve patient outcomes at lower costs. In 2011 alone, the U.S. health care system spent an estimated \$158 billion to \$226 billion in overtreatment, or interventions that had no evidence to result in favorable outcomes or could have resulted in harm [26]. The data point toward the enormous opportunity that oncologists have to improve value in cancer care by changing practice behaviors and conveying to patients the message that doing more does not always mean doing better. Eaton et al. [27] exemplify non-small cell lung cancer as a disease for which substantial variation in diagnostic and therapeutic practices exist, many of which can be considered wasteful. The authors make several evidence-based recommendations that could curtail costs while improving quality of care, including a limit on the number of chemotherapy lines delivered in the metastatic setting, avoidance of positron emission tomography as a strategy of assessing tumor responses to therapy, and early inclusion of palliative care measures in the plan of care. Bruera concludes the series by analyzing patterns of end-of-life care in cancer patients and the excessive costs associated with overly aggressive care, including hospital admissions and use of chemotherapy in the last months before death. The author evaluates the potential for early palliative care to improve value by helping patients and oncologists align end-of-life care goals with practices, including timely referral to hospice and discussions about when to stop aggressive treatments that are likely futile.

The series does not exhaust the debate around value in cancer care, nor does it consider all perspectives on this subject. Despite these limitations, we hope that the discussions will incite oncologists to act as catalysts of changes that will transform cancer care from a high-tech, expensive, and exclusivist system to an affordable, high-quality, value-based system. The series is a call to oncologists for action. Paradoxically, we endorse Newcomer [25] in his statement: "It is time to stop writing articles and begin doing something different."

#### DISCLOSURES

The author indicated no financial relationships.

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**EDITOR'S NOTE:** See the related article, “New Frameworks to Assess Value of Cancer Care: Strengths and Limitations,” by Lowell E. Schnipper and Alex Bastian on page 654 of this issue.

**Watch for the Next Articles in the Series:**

Value-Based Care in Lung Cancer (Keith D. Eaton, Barbara Jagels, Renato G. Martins)

Those Who Pay Have a Say: Insurers' Views on Oncology Drug Pricing and Reimbursement (Lee N. Newcomer)

Getting Past No in Cancer Care (Michael Kolodziej)