

Allocating Scarce Health Care Resources During Pandemics: Making the Case for Patients with Advanced and Metastatic Cancer

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ABSTRACT

The oncology community is concerned that patients with cancer will be unfairly classified in pandemic allocation guidance. Past guidance either excluded patients with metastatic cancer from consideration or categorized them as having a survival of less than 1 year. Given recent improvements in treatments, we recommend that the prognosis of an individual patient with cancer be determined with input from a cancer specialist or, if this is impractical, that the presence of active metastatic solid

cancer or relapsed hematologic malignancy is graded as a major comorbidity, with a likelihood that survival will be less than 5 years; severe limitation in physical functioning (3 or 4 on the Eastern Cooperative Oncology Group performance status) would define a patient with advanced cancer as having a severe comorbidity, with a likelihood of less than 1 year of survival. Cancer may be the “Emperor of all Maladies,” but it is no longer a certain death sentence. *The Oncologist* 2020;25:e1586–e1588

As the COVID-19 pandemic sweeps across the U.S. and the world, health care institutions are looking for guidance on the most equitable steps to follow in the emergency allocation of critical care resources. In reviewing past guidance, we found that the words “cancer,” “metastatic cancer,” or “advanced cancer” invoked judgments of a poor prognosis with a limited number of life-years to save [1], lessening the chance of receiving critical care resources. It is extremely concerning that some guidance viewed cancer as a categorical exclusion from consideration for receiving critical care resources [2]. It is particularly important to treat patients with cancer fairly in this pandemic, because both the Italian and Chinese experiences have shown that patients with cancer are at high risk of being infected with SARS-CoV-2 and of needing critical care resources [3]. The recent American Society of Clinical Oncology guidance on caring for patients with cancer in a pandemic calls for a tailored approach: “All cancer diagnoses and prognoses should be considered individually, with input from the treating oncologist. Cancer diagnosis alone should not be considered terminal, even for patients living with advanced or metastatic disease. Consideration of cancer as either a major or severely life-limiting comorbidity should reflect evidence-based factors, including the individual patient’s clinical status and prognosis.” [4].

Emanuel et al. have outlined four domains to consider in the allocation of scarce resources—maximizing the benefits produced by scarce resources (saving the most lives and most life-years), treating people equally, promoting and rewarding instrumental value (e.g., research participants and health care workers), and giving priority to the worst off [5]. The maximizing benefit domain is often calculated using scoring systems such as the Sequential Organ Failure Assessment (SOFA) or modified SOFA to determine how to save the most lives or to maximize survival to discharge. Saving the most life-years is often judged based on the patient’s pre-existing comorbidities, with common grading systems categorizing comorbidities as *major* (less than 5 years of survival) or *severe* (less than 1 year of survival) based on the prognosis of the underlying illnesses.

A major concern in the cancer care community is the categorization of advanced or metastatic cancer—“metastatic cancer receiving only palliative treatments” [1] and “metastatic malignant disease or high grade primary brain tumors” [6]—as severe comorbidities, making it likely that patients with advanced or metastatic malignant disease would be denied access to critical care resources in the event of scarcity. Imagine facing two 40-year-old patients, each functional in all activities of daily living, one with end-

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stage renal disease not eligible for transplant and on dialysis for the last 3 years and another with newly diagnosed metastatic pancreatic neuroendocrine tumor. How might we achieve equal prognostic consideration? What factors might be considered? Could there be cognitive bias and therapeutic nihilism at play once “metastatic cancer” has been identified and broadly included under exclusion criteria of official triage guidelines?

The landscape of cancer therapies has changed dramatically over the past decade, which has impacted the prognosis of patients with advanced cancer and metastatic disease. Many patients receiving noncurative palliative therapies may achieve longer survival through the use of molecularly targeted therapies and/or immunotherapies along with comprehensive supportive care focused on pain and nonpain symptoms and quality of life. In addition, better supportive care for patients with hematologic malignancies has resulted in better outcomes, particularly with regard to infectious complications. Indeed, significant improvements have been recorded in the overall prognosis for U.S. patients with cancer over the last 25 years, due in part to early diagnosis but also to therapeutic advances. The 5-year relative survival rates for all cancer sites improved from 48.9% between 1975 and 1977 to 69.2% between 2008 and 2014 [7]. During the period between 1990 and 2016, there was a 48% and 23% decline in lung cancer death rates among U.S. men and women, respectively. Perhaps the most impressive advance in therapeutics is in patients with chronic myelogenous leukemia, who can now be expected to have a near-normal life expectancy when treated with tyrosine kinase inhibitors [8]. As with adult cancer, improved treatments have increased survival for children with cancer, with overall survival increasing from 10% in 1980 to 84% today [9]. This improvement is particularly impressive for hematologic malignancies, with 5-year survival rates for children 0–14 years who have acute lymphocytic leukemia increasing from 57% in 1975 to 92% in 2012 and for those with non-Hodgkin lymphoma increasing from 43% in 1975 to 91% in 2012 [10]. “Advanced cancer” is a term with limited meaning given these advances.

The previous examples are not exhaustive but highlight advances already made in cancer care during the last several decades. A blanket approach to categorize all patients with advanced-stage solid and hematologic malignancies as having severe comorbidity, as proposed in some of the scoring algorithms to guide resource allocation, would be erroneous. Indeed, such an approach is fraught with a high risk that a large proportion of patients with cancer will suffer major inequity in periods of resource exhaustion. The adjudication of prognosis of an individual patient with cancer requires a tailored approach and input from a cancer

specialist capable of individualized assessment of patient prognosis as informed by treatment history and current state of disease control.

A detailed oncologic assessment may not always be practical in the event of overwhelming scarcity with the need for rapid decision making. In preparing for such scenarios, we propose several measures to assist with fair allocation of resources to patients with cancer. As a first principle, as oncologists we should be counseling patients regarding risk mitigation in the face of the infectious pandemic, and for patients nearing the end of life from their cancer and/or other comorbidities, we should be encouraging pre-emptive discussion of goals of care in the event of severe illness. Second, although there may be perceived or actual barriers to direct communication with the patient’s primary oncologist, the possibility of this communication should be explored in the development stages of allocation protocols before being automatically bypassed or deemed not feasible or impractical. Third, oncologists should be included on hospital triage committees, as they are best suited to assess prognosis of individual patients when the primary oncologist cannot be consulted.

In the event that an oncologic assessment by a cancer specialist is completely impractical, we would propose a simple assessment tool that a trained medical professional can deploy without specialized oncology training: (a) the presence of active metastatic solid cancer or relapsed hematologic malignancy would be graded as a *major* comorbidity, with a high likelihood that survival will be less than 5 years; (b) severe limitations in physical functioning measured using the Eastern Cooperative Oncology Group performance status of 3 or 4, which is a validated independent predictor of life expectancy and poor tolerance of active anticancer therapy [11, 12], would define a patient with advanced cancer as having a *severe* comorbidity, with a high likelihood of less than 1 year of survival. This scoring could be easily incorporated into existing systems for handling other medical comorbidities in situations of scarcity. Of note, by proposing this scoring system, we are treating cancer as a comorbidity and not as a disability, as suggested by some disability rights groups [13].

We urge those health care systems that are developing allocation guidelines for this and future stressors on health care resources to think carefully about how patients with cancer are categorized. Cancer may be the “Emperor of all Maladies” [14], but it is no longer a certain or immediate death sentence.

DISCLOSURES

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