



# Treating the SARS-CoV-2–Positive Patient With Cancer: A Proposal for a Pragmatic and Transparent Ethical Process

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The treatment of patients with cancer who test positive for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) poses unique challenges. In this commentary, the authors describe the ethical rationale and implementation details for the creation of a novel, multidisciplinary treatment prioritization committee, including physicians, frontline staff, an ethicist, and an infectious disease expert. Organizational obligations to health care workers also are discussed. The treatment prioritization committee sets a threshold of acceptable harm to patients from decreased cancer control that is justified to reduce risk to staff. The creation of an ethical, consistent, and transparent decision-making process involving such frontline stakeholders is essential as departments across the country are faced with decisions regarding the treatment of SARS-CoV-2-positive patients with cancer. *Cancer* 2020;126:3896-3899. © 2020 American Cancer Society.

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## INTRODUCTION

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic has dramatically transformed the delivery of health care within the United States over the course of a few weeks. Hospitals across the nation are preparing to cope with a shortage of health care workers and scarcity of life-saving resources such as intensive care unit beds and ventilators.<sup>1,2</sup> This has prompted unprecedented, large-scale consideration of the rationing of such resources.

For those who care for patients with cancer, the decisions are equally stark. Cancer care rarely is deemed elective. Forgoing or delaying diagnosis or treatment often leads to decreased cancer control. This may result in reduced survival or, in some instances, loss of the potential for cure. However, patients with oncologic diagnoses who become infected with SARS-CoV-2 have an increased likelihood of severe events, including mortality.<sup>3,4</sup> Health care workers also have a high risk of infection and may have an increased risk of severe disease.<sup>5</sup> Therefore, there must be a careful balance weighing the harms of postponing or cancelling treatment against the risks of infection and morbidity for patients, health care workers, and larger communities.

In cancer care, resources may not currently be strictly lacking. In an initial phase, the values of rationing are applied as departments work to “flatten the curve” by decreasing their clinical volume. However, as the prevalence of SARS-CoV-2 increases, fewer skilled staff may be available to deliver treatments, thereby necessitating rationing based on scarcity. Emanuel et al have proposed a framework of 4 values that should guide the rationing of health resources such as ventilators during the SARS-CoV-2 pandemic, including: 1) maximizing benefits (saving more lives and years of lives); 2) treating people equally; 3) giving priority to the worst-off individuals; and 4) promoting and rewarding instrumental value (benefit to others).<sup>1</sup> This framework considers frontline health care workers, prioritizing them for critical resources due to their instrumental value and for the high risk of their work, and for the pragmatic reason of discouraging absenteeism. However, it does not consider the nature and severity of risks to health care workers as morally relevant to the treatment decisions themselves. Indeed, to the best

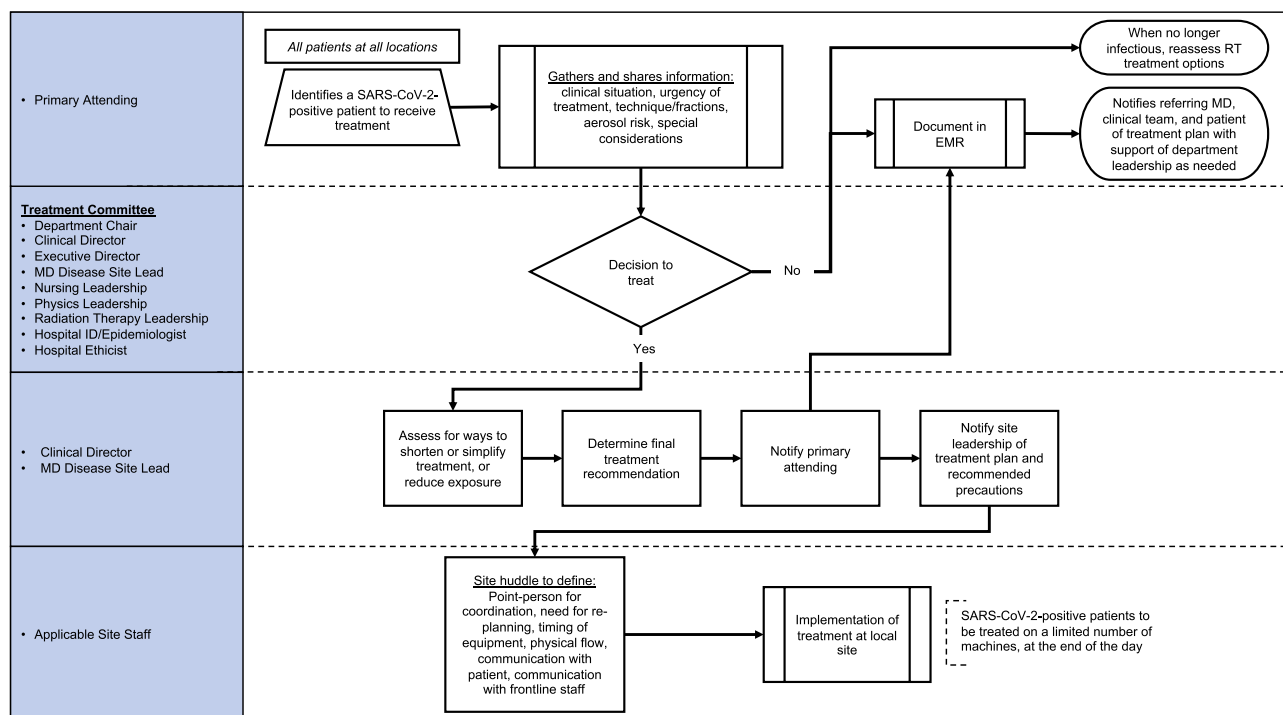
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**FIGURE 1.** Flowchart of the radiation oncology treatment prioritization committee process for patients who are positive for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and are undergoing active cancer treatment. EMR indicates electronic medical record; ID, infectious disease; RT, radiotherapy.

of our knowledge, there has been only limited discussion of these unique considerations in the literature to date.<sup>6</sup>

Similar to others, the department of radiation oncology at the study institution now is creating a formalized process for optimizing the management of these ethical considerations when determining how to treat patients who test positive for SARS-CoV-2. The American Society for Radiation Oncology and several institutions have published excellent evidence-based guidelines that aid clinicians in determining which patients to prioritize for oncologic treatments, including radiation.<sup>6-8</sup> There is a moral obligation to apply these guidelines equally to patients with SARS-CoV-2 so that the presence of infection is not used as justification for withholding needed cancer care. For example, a patient with a curable head and neck cancer who has tested positive for SARS-CoV-2 and is minimally symptomatic should be prioritized to proceed to care without delay in the same way that another patient with head and neck cancer with similar features and who is negative for SARS-CoV-2 might be.

However, the details are vitally important when determining how to provide such patients with the care they need while being cognizant of the community of

health care workers and the moral organizational duty to protect them. The “as low as reasonably achievable,” or ALARA, principle is the ethical principle that guides the minimization of radiation exposure. We would argue that an analogue ALARA principle exists with regard to the infection risks of health care workers within the context of this pandemic (ie, that infection risk should be minimized as much as reasonably achievable while respecting obligations to patients). In radiation oncology, frontline health care workers who are at high risk include the radiation therapists who treat patients daily. In medical or surgical oncology, frontline staff may include infusion nurses or scrub nurses. However, physicians are the ones who primarily make treatment decisions.

To address this gap, our institution has adopted a novel clinical process that includes frontline staff as ethical stakeholders in determining optimal treatment decisions for individual patients. A flow chart of our approach is shown in Figure 1. The process begins when an individual patient (currently on treatment or a new treatment initiation) tests positive for SARS-CoV-2 infection. The primary radiation oncologist then is prompted to complete a standard electronic form that aggregates pertinent data, including a brief description of the clinical scenario

and treatment urgency, current and/or proposed radiation course (including technique, fractionation, and positioning), and specific patient factors that might affect the delivery or risks of treatment. These data then are sent to the departmental SARS-CoV-2 radiation oncology treatment prioritization committee (TPC) for discussion.

The TPC was established for the sole purpose of discussing the competing risks and benefits of treatment for each individual patient who tests positive for SARS-CoV-2 and providing a decision regarding whether to provide, continue, and/or modify treatment. The TPC meets on an ad hoc basis as patient need dictates.

The challenge of balancing ethical values has led to specific priorities for the TPC, namely that the decision process should be transparent and include all affected parties. In this vein, membership in the TPC was made intentionally broad. In addition to the department chair, clinical director, and executive director, leaders from nursing, physics, and radiotherapy as well as the physician lead of the applicable disease site are invited. Furthermore, representatives from the hospital's infectious disease and ethics departments participate in the TPC and serve to provide context and clarification regarding the risks to and duties of our clinical staff. The primary radiation oncologist intentionally is left out of the TPC to reduce potential conflicts of interest and legal risk, as suggested in other guidelines.<sup>9</sup>

Conversation during TPC meetings is structured to elicit the perspectives of all parties. For example, the disease site lead physician discusses the expected impact of radiotherapy and the potential risks to the patient of delaying or missing treatment. Leaders from nursing and radiotherapy assess the practical considerations of treatment, including the number of staff required and their degree of likely patient exposure. For example, patients requiring ventilation or other oxygen supplementation may have an increased risk of virus aerosolization; those with limited functional status or a higher body mass index may require more staff to perform a transfer. Physics leadership considers whether special planning or patient positioning is needed. The TPC then seeks to synthesize all relevant information and come to a consensus decision regarding whether to treat the patient. If consensus is not achieved, the final decision ultimately rests with the department chair.

A guiding principal was adopted for initial conditions of accepting up to a 5% decrement in cancer outcome to reduce risk to staff by either treatment delay and/or altered fractionation. This transparent threshold for treatment decisions will be adjusted with changing conditions

such as the availability of personal protective equipment and other resources. There also may be patient-specific factors that result in an alteration of the risk threshold. In a setting with fewer resources available and more SARS-CoV-2-positive patients, a higher threshold may be set. Conversely, this threshold could be decreased if data are collected demonstrating that infection risks to our specific departmental staff are lower than initially estimated.

If the TPC decides against offering radiotherapy, the primary radiation oncologist is informed and is instructed to notify the patient and the rest of the clinical team of the decision. However, it is important to note that departmental leadership is available to support this communication as needed. If treatment is deemed appropriate, the clinical director and disease site lead physician discuss whether the treatment could be reasonably modified. Together, they determine a final treatment recommendation and inform the primary radiation oncologist of the decision, who then relays this information to the patient and clinical team.

Prior to initiating treatment, an on-site point person is tasked with ensuring that best practices are followed to reduce staff risk. Specific tasks include training frontline staff on the proper use of personal protective equipment, identifying a "super user" to ensure all infection control protocols are followed, planning the physical flow of personnel and equipment, and zoning contaminated areas. The point person also convenes a discussion with all frontline staff to elicit any additional information or concerns. Finally, once radiotherapy commences, all SARS-CoV-2-infected patients are batched on a single linear accelerator and treated at the end of each day so as to further minimize exposure to other patients. Patients remain in their vehicles until the time of treatment, and then are escorted to the treatment machine. A treatment checklist (see Supporting Fig. 1) and patient intake form (see Supporting Fig. 2) are used to standardize these processes.

This 2-pronged approach to a transparent process for reducing the number of fractions delivered to patients with cancer who test positive for SARS-CoV-2 and committing to best practices for reducing staff exposure during treatment reflects the ethical balance the department aims to achieve.

There are limitations to this approach. It is a deviation from the typical model of treatment decision making. There is considerable uncertainty in terms of quantifying possible harms to patients and staff members, both with regard to cancer-related outcomes and infection risks. This approach also requires an investment of time from several staff members, which might become

more cumbersome should the number of SARS-CoV-2-positive patients receiving treatment increase. Finally, the patient's voice is not independently represented by an advocate, which we potentially will incorporate as decisions with greater possible patient harm are considered. However, despite these caveats, we believe this approach allows us to efficiently optimize the competing risks and duties inherent in each treatment decision, and ensures that we are protecting staff and patients alike.

As stated by Emanuel et al, the “the questions is not whether to set priorities, but how to do so ethically and consistently, rather than basing decisions on individual institutions' approaches or a clinician's intuition in the heat of the moment.”<sup>1</sup> We have strived to create an ethical, consistent, and transparent decision-making process, and believe that our approach could be reasonably applied in many other oncologic settings in which there is disparity in risk between the physicians making the decisions and frontline staff. Our process accounts for the tremendous difficulty in balancing obligations to individual patients with the epidemiologic necessities of the moment. It enables frontline staff to be ethical stakeholders in treatment decisions, providing a rationale for treatment and the knowledge that it is not due to individual biases, and therefore improving morale and discouraging absenteeism. Furthermore, the TPC has become an accepted decision-making body within our department and stands ready to make potentially challenging recommendations if patient need increases or resources become even more constrained. Even in the midst of this pandemic emergency, we cannot abandon organizational and personal

ethical obligations to vulnerable patients with cancer and frontline health care workers.

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## CONFLICT OF INTEREST DISCLOSURES

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