The Impact of the COVID-19 Pandemic on Oncologist Burnout, Emotional Well-Being, & Moral Distress: Considerations for the Cancer Organization’s Response for Readiness, Mitigation, & Resilience

Fay J. Hlubocky PhD MA CCTP1, Banu E. Symington MD2, Daniel C. McFarland DO3 Colleen M. Gallagher PhD MA LCSW FACHE4, Konstantin H. Dragnev MD5, John M. Burke MD6, Richard T. Lee MD7, Areej El-Jawhari MD8, Beth Popp MD9, Abby R. Rosenberg MD MS MA10, Michael A. Thompson MD PhD FASCO11, Don S. Dizon MD FACP FASCO12, Piyush Srivastava MD13, Manali I. Patel, MD MPH MS14, Arif H. Kamal MD MBA MHS15, Christopher K. Daugherty MD16, Anthony L. Back MD17, Mehmet E. Dokucu MD18, Tait D. Shanafelt MD19

1. University of Chicago Medicine, Department of Medicine, Section Hematology/Oncology, Maclean Center for Clinical Medical Ethics, Chicago, IL
2. Sweetwater Regional Cancer Center, Rock Springs, WY
3. Memorial Sloan Kettering Cancer Center, Department of Psychiatry, New York, NY
4. MD Anderson Cancer Center, Section of Integrated Ethics in Cancer Care, Houston, TX
5. Dartmouth-Hitchcock Norris Cotton Cancer Center, Lebanon, NH
6. Rocky Mountain Cancer Center, Aurora, CO
7. Case Comprehensive Cancer Center, Department of Medicine, Division of Hematology/Oncology, School of Medicine, Cleveland OH
8. Massachusetts General Hospital, Cancer Center, Harvard Medical School, Boston MA
9. Ichan School of Medicine, Geriatrics and Palliative Medicine, Mount Sinai, New York, NY
10. Division of Hematology/Oncology, Department of Pediatrics, University of Washington School of Medicine; Seattle WA; Seattle Children’s Research Institute, Seattle, WA
11. Aurora Cancer Center, Advocate Aurora Health, Milwaukee, WI
12. Lifespan Cancer Institute, Rhode Island Hospital, Brown University Providence, RI
13. Kaisier Permanente, Walnut Creek Medical Center Walnut Creek, CA
14. Stanford University, VA Palo Alto Health Care System, Palo Alto, CA
15. Duke University, Duke Cancer Institute, Population Health Sciences, Durham, NC
16. University of Chicago Medicine, Department of Medicine, Section Hematology/Oncology, Maclean Center for Clinical Medical Ethics, Chicago, IL Chicago, IL
17. University of Washington, Department of Medicine/Oncology, Seattle, WA
18. Northwestern University, Feinberg School of Medicine, Department of Psychiatry and Behavioral Sciences, Chicago, IL
19. Stanford University, Department of Medicine, Med/Hematology, Chief Wellness Officer, Palo Alto, CA

* Authors are current, past, and select ASCO members of the Ethics Committee and Clinician Well-Being Task Force

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**Corresponding Author:**

Fay J Hlubocky, PhD MA
University of Chicago Medicine
5841 S. Maryland Avenue-MC2115
Chicago, Illinois 60637
Phone:773-702-4465
fhlubock@medicine.bsd.uchicago.edu
Introduction

In the face of the significant challenges created by the COVID-19 epidemic, prioritizing oncologist well-being is paramount. To date, over 10 million Americans have been diagnosed with COVID-19, with nearly 200,000 cases involving healthcare workers and more than 800 reported deaths. The burden is acutely experienced in oncology given the risk of infection, complications, and mortality are greater in older, immunocompromised cancer patients than the average COVID-19 patient. Oncologists encounter critical life-and-death patient decision-making, and sacrifice to bridge gaps in the healthcare system. COVID-19 stressors associated with the provision of compassionate cancer care reveal that oncologists must address their own needs to remain effective. Prior to COVID-19, burnout in oncology was a significant crisis. The realities of the COVID-19 cancer care era resulted in a multifold increase in oncologist distress due to: numerous practice changes, intensified burnout, heightened moral distress, and personal challenges (e.g. family stressors) produced by the pandemic. Moral distress arises as a direct consequence of both the ethical dilemmas and failure to practice according to one’s value and occupational commitment, largely due to perceived lack of professional support and/or organizational constraints. Consequently, organizations have a responsibility to support oncologists in living authentically to their intrinsic core values. These ethical obligations include: protection of staff, provision of truthful, transparent COVID-19 care information, and prevention of coercive situations which adversely impact oncologist autonomy, values, and duty of care. In this Editorial, the authors, with expertise in oncology, ethics, physician burnout/well-being, and psycho-oncology, describe the impact of the COVID-19 pandemic on: oncology care delivery, the workforce; oncologist emotional well-being; and ethical dilemmas encountered due to COVID-19 cancer care. Recommendations for programmatic implementation of evidence-based organizational interventions are proposed to address oncologist burnout, emotional well-being, and moral distress in the immediate period and long-term recovery during and after the COVID-19 pandemic.
Impact of COVID-19 on Oncology Care Delivery & Workforce

Precautions for the creation of surge capacity for COVID-19 patients and the need to protect patients in routine care from infection led to drastic healthcare delivery modifications.\textsuperscript{14--20} Oncologists were forced to: cease in-person visits, delay critical surgeries, delay/abbreviate chemotherapy administrations, substitute potentially inferior oral chemotherapy regimens for intravenous therapies, suspend clinical trial enrollment, and initiate telehealth visits delivering serious news, all as a means to protect patients.\textsuperscript{2,14-17} Decisions regarding which cancer patient should be prioritized for rationed treatment has become an everyday norm.\textsuperscript{3} Practices succeeded in implementation of new triage systems converting clinical visits to a virtual, distanced platform, expanding the role of telehealth with increased EHR administration for oncologists.\textsuperscript{14-17} Yet, this digital divide has compromised care for some patients due to lack of access to technology. An increased risk of COVID-19 infection for cancer patients was established revealing poor outcomes in several malignancies.\textsuperscript{18-20} Modifications in the business of oncology practice were described, including the weight of these decisions, and inevitable internal dilemmas at the core of decision-making.\textsuperscript{21} Oncologists contend with the same clinical issues, coupled with unique COVID-19 concerns and practice changes, while striving to provide comprehensive, cancer care. Several healthcare systems were unable to properly protect clinicians from personal vulnerability to COVID-19, economic instability, and other factors affected confidence in providing medical care.\textsuperscript{22} Clinical abilities, including \textbf{an ethical duty of care}, were undermined by pressures external to the oncologist’s control leading to the perception of compromised care, similar to consequences associated with burnout.\textsuperscript{22-24} These factors impact the oncologist’s emotional well-being and moral distress. Cancer leadership should recognize the importance of oncologist well-being to achieving its mission, and proactively engage leaders and physicians in \textbf{collaborative} action planning to improve the practice environment and culture during COVID-19 and beyond.\textsuperscript{25,26} Moreover, the future of the
oncology workforce may be in jeopardy due to shortages and early departures if the cancer community does not act to address COVID-19-related distress of oncologists, fellows, and other staff.\textsuperscript{8,27-33} Oncologists are trained to be stoic, with expectations of infallibility, as errors are viewed as unacceptable and costly.\textsuperscript{28,32-34} Furthermore, pre-pandemic, oncologists effectively multi-tasked work-life responsibilities, yet with physical distancing, quarantine, and homeschooling, balancing personal and professional responsibilities becomes difficult. Oncologists may leave the profession if they experience little support by their cancer organizations, or perceive their lives are at risk. The organization is called to actively prioritize well-being to protect the future of oncology care. Despite this evidence, little attention has centered on the oncologist’s emotional well-being and its relationship to moral distress.

**Impact of COVID-19 on Oncologist Emotional Well-being**

To date, the burnout syndrome, involving signs of emotional exhaustion, cynicism/depersonalization, and reduced professional efficacy, has been empirically described and highly applicable to oncology.\textsuperscript{4,5,35-37} Burnout illustrates a mismatch between employee and workplace, yet is distinct from depression, although overlapping symptoms exist.\textsuperscript{4,5,38-39} However, both lead to reduced work efficacy, medical errors, job dissatisfaction, and turnover.\textsuperscript{40-43} In fact, recent published recommendations encourage cancer organizations to address individual and system-level factors associated with burnout prior to the pandemic.\textsuperscript{6} Hence, COVID-19 evolved during a time of intensified occupational stress in oncology. Moreover, unique pandemic-related stressors further adversely compromise clinician well-being.\textsuperscript{44-51} Evidence from China, Italy, and past epidemics (e.g. SARS-2003, Ebola, MERS) suggest clinicians are at an increased risk of burnout and poor mental health (e.g. anxiety, depression, post-traumatic stress, sleep disturbance) due to immediate and long-term, delayed epidemic-related stressors.\textsuperscript{39,43-50} COVID-19 similarly affects all clinicians, regardless of whether or not they serve on the frontlines.\textsuperscript{47,51} This is distinct from other burnout sources in oncology where the
immediate work environment plays a prominent role. Furthermore, oncologists are at risk of developing a burnout subtype, compassion fatigue, due to repeated exposure of secondary COVID-19 traumatic experiences (e.g. caregiver to a dying isolated cancer patient). Intense emotional reactions manifest as fear, sadness, anger, and grief. Oncologists are at risk of developing a burnout subtype, compassion fatigue, due to repeated exposure of secondary COVID-19 traumatic experiences (e.g. caregiver to a dying isolated cancer patient). I

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Critical shortage of personal protective equipment/PPE evokes anxiety over safety, thus negatively impacting job performance. Address well-being is paramount, yet ethical dilemmas within practice arise further intensifying oncologist distress, and hindering immediate intervention.

COVID-19 Ethical Dilemmas: Moral Strain, Distributive Justice, Utilitarianism

The inescapable COVID-19 challenges to oncology placed clinicians at risk of burnout, and moral strain, in the forms of moral distress and moral injury. Oncologists are at high risk for developing moral distress given their role in delivery of serious news and end-of-life decision-making. Moral distress endures in oncologists if coupled with emotional distress. It results from dissonance created from recognition of the correct course of action (e.g., provision of equitable oncologic care addressing suffering) and its morally-bound foundation (e.g., physician-role bound to a professional standard), yet, unable to perform these actions due to organizational constraints. This mismatch between what moral actions ought to occur and reality creates a unique form of stress, especially for clinicians overseeing treatments. It is applicable to constraints associated with physician decision-making in response to systemic factors compromising care. For example, the question of who should be prioritized for treatment against a life-threatening disease-is a daily occurrence for the oncologist. Decisions to allocate scarce resources are informed by the principle of
utilitarianism, maximizing benefits for the largest number of individuals, to benefit society, rather than individual patient. Yet this decision-making is morally problematic for oncologists as such life-death decisions challenge their values, beliefs, and oath to meet the ethical principles of beneficence and nonmaleficence. Decisions, centering on which patient should receive life-saving treatment in the absence of available ventilators are those oncologists would never expect to engage in. Although some will accept uncertainty, others may develop tremendous guilt after the immediate pandemic given an inability to "do more" for patients. Herein lies the moral distress where oncologists recognize the morally responsible action to take yet are unable due to cancer care constraints.

Table 1 illustrates the primary sources of moral distress and their relevance to the pandemic. They center on: clinical situations, internal and external constraints. Clinical situations directly compromise care or respect for patient preferences (e.g. lack of truth-telling). Internal constraints undermine the oncologist's agency to change the clinical situation (e.g., powerlessness). External constraints involve working in a limited system (e.g., conflicting care policies, inadequate staffing). In oncology, COVID-19 produced four sources of moral distress: 1) lack of PPE access; 2) contagion risk to patient and family; 3) amplification of healthcare disparities; and 4) social disconnection between oncologist-patient. Infectious risk must be factored into care, forcing oncologists to reevaluate moral obligations to patient safety, while balancing the need to optimize cancer therapy to enhance outcomes. Morally distressing situations result from the collective experience of repeated events rather than an individual scenario. For example, repeated cancellations of cancer treatments for patients due to staffing and chemotherapy infusion unit space limitations may trigger moral distress and residue. Here, clinicians experience persistent negative thoughts regarding self, others (e.g., colleagues, patients), workplace, or healthcare system. This lingering 'moral residue' is deeply engrained in the clinician's belief system and if left unaddressed may produce harm.
‘crescendo’ evolves due to recurrence of morally distressing situations where residual distress increases despite the resolution of an acute situation yet the source remains unaddressed. If no change occurs, the oncologist becomes powerless as in past situations, intensifying moral residue.\textsuperscript{72} Moral injury, a related concept, well-described in the context of military trauma, results from actions (or lack of), which violate one’s moral, ethical code.\textsuperscript{59} It is not a mental health condition, yet produces similar detrimental consequences to burnout and poor mental health. Although no empirical evidence exists to date that moral injury is prevalent in oncology, as a concept, it has been widely presented given it resonates with the oncologist experience that burnout is a system issue driven by work characteristics.\textsuperscript{73}

**Violation of Physician Values Catalyzes Death Anxiety**

Chronic exposure to patient death, clinical uncertainty, and infectious risk intensifies oncologists’ beliefs regarding their own mortality. Awareness of inevitable death produces significant distress thereby undermining adaptive psychological functioning.\textsuperscript{74-76} This phenomenon, ‘mortality salience’, is challenging as the associated behaviors manifest as existential anxiety.\textsuperscript{74,75} For physicians, this form of death anxiety adversely impacts end-of-life communication and decision-making.\textsuperscript{76} Communication centered on patient mortality is distinct from clinician’s beliefs regarding self-mortality, though overlap exists.\textsuperscript{74-76} If cancer care professional values are violated, mortality salience intensifies. It deepens negative reactions thereby threatening one’s worldview; and, clinicians’ tolerance for patient differences dissipates.\textsuperscript{74-76} These consequences are antithetical to maintaining empathy and compassion further increasing oncologist pandemic-associated loneliness.\textsuperscript{75} Ultimately, if an individual’s occupation is a reminder of mortality, work becomes morally complicated. Physicians are bound to high standards of conduct prioritizing patient needs above their own to maintain professional standards. However, this approach is limited, and if not acknowledged, is detrimental for patients potentially impacted by unprofessional care. Personal and organizational care are
prerequisites for professional care. When the physician’s physical/emotional safety is threatened, moral conflict develops because, as humans, they hold obligations not only to patients but to self, family, colleagues, and society. If the environment undermines this protection, moral distress arises, impacting communication, and ultimately the oncologist-patient relationship.

**Impact On Oncologist-Patient Communication**

Oncologist-patient communication has been significantly compromised due to COVID-19 restrictions. Although technology facilitates communication through utilization of mobile phones, tablets, and video-conferencing, oncologists yearn for the in-person clinical encounter—the physical exam, “handshake”, non-verbal communication, and nuanced patient-caregiver interactions. Yet, mask-wearing during patient encounters, and an inability to touch due to physical distancing further impedes oncologist ability to provide compassionate support. Empirically-driven telemedicine research remains limited, thus long-term consequences remain unknown. Technology falls short when oncologists treat underserved advanced cancer patients nearing the end-of-life or engage in complicated modality discussions with survivors. Clinical situations require an individualized, humane approach devastatingly absent now due to COVID-19 restrictions. Under normal circumstances, humanistic cancer care provides supportive collaboration capitalizing on the benefits of human connection, yet the pandemic has compromised this treasured oncologist-patient relationship. Oncologists experience an imbalance between their values (e.g. execution of cancer care) and realities of COVID-19 cancer care delivery.

**Organizational Duty to the Oncologist: Supportive Culture, Communication, Flexible Work Schedules**

Organizations have an ethical obligation to provide essential information and resources oncologists require to fulfill their duty of providing quality COVID-19 oncology care.
Quality improvement devoted to enhancing clinician safety is key. Planning for future outbreaks is critical. Provision of PPE, designing flexible work schedules to promote physical resilience, prioritizing overall well-being (e.g. sleep, nutrition) is vital. Timely, trustworthy, open communication from leadership regarding infection, precaution, crisis, and patient management have proven beneficial in oncology in prior epidemics. Shanafelt proposed five key organizational considerations including requests to: ‘hear me’, ‘protect me’, ‘prepare me’, ‘support me’, and ‘care for me’ to provide a framework for responsiveness and flexibility. Organizations should understand unique staff needs during COVID-19 consistent with the quadruple aim elevating clinician well-being to an integral institutional mission coupled with the triple aim to prioritize patient outcomes, costs, and experience.

**Addressing Oncologist Well-being and Moral Distress During COVID-19: Implementation, Intervention, and Support**

The COVID-19 pandemic provides an opportunity for the cancer community to prioritize oncologist physical and emotional well-being. Consequently, the cancer organization, with leadership’s support, should prepare, plan, and implement interventions to build a supportive, ethical work climate to restore resilience utilizing optimal, evidence-based programmatic interventions. Table 2 describes key implementation strategies for institutional well-being programs including: assessment of oncologist needs; proactive engagement of leadership and mental health in collaborative action planning; establishment of oncology well-being programs; execution of empirically-based well-being interventions; needs reassessment; and modification of interventions as needs change. Prevention and mitigation are critical interventions to protect long-term resilience. Cancer leadership should establish a partnership with trained, trauma-informed mental/emotional support experts (e.g. psychologists, social workers, psychiatrists, chaplains) to determine these needs and provide empirically-driven, interventions in distinct phases. Table 3 illustrates these specific COVID-19 phases with
corresponding interventions including: prevention (e.g. education, mindfulness-based stress reduction/MBSR); real-time/immediate crisis (e.g. physician support hotlines/websites; internal crisis support); and recovery (e.g. peer support).88,89 For example, formal COVID-19 communication skills training provide oncologists tailored COVID-19 strategies to conduct patient-family discussions.79 Organizational resource investment in addressing COVID-19-related stressors empower clinicians in long-term coping. Table 4 depicts the Oncology Leader Toolkit designed to initiate and support well-being and professional fulfillment programs at the organizational and individual level.89 Commitment to normalizing intense emotions and destigmatizing the need for supportive assistance is vital for both oncologist and organizational success.89 Evidence-based interventions executed during current and past epidemics,43-49,89 should be considered by the cancer organization’s leadership for programmatic implementation to support immediate and long-term oncologist well-being during COVID-19 including the following (Table 3 & 4):

**Assessment of Ethical Work Climate and Moral Distress**

Addressing moral distress involves the cultivation of ethical compassionate work environments. This is measured using the Hospital Ethical Climate Survey to evaluate perceptions of the current workplace mechanism supporting ethical practice.90,91 Also, routine moral distress assessment is critical to ensure an ethical work climate exists in oncology.68-70 The Moral Distress Scale-Revised (MDS-R), a 21-item instrument, assesses the individual’s perceptions of hypothetical scenarios causing moral distress in 2 areas: 1. frequency of the encountered work situation; 2. intensity of moral distress.70 If moral distress is managed, oncologist introspection and team reflection arise yielding enhanced interpersonal understanding.64 Organizational commitments to oncologists are paramount in resolving moral distress.
Respect for Oncologist Values

The ethos of patient care requires physicians to foster core values, including a willingness to advocate for patients while respecting their autonomy. A threat to values arises when clinicians perceive barriers to offering the type of care they were trained for (e.g., cessation of chemotherapy during COVID-19). This quandary creates a unique moral environment where the physician compulsively strives to achieve internal and external moral standards in presence of organizational constraints. Oncologists may become susceptible to moral distress when expectations are not supported by the organization. Organizations should remain sensitive to upholding the universal values of oncologists in their obligations to patients underlying quality cancer care.

COVID-19 Prevention, Management, Education, Care Continuity for Oncologists

Oncologists should unequivocally understand required precautions implemented to mitigate potential and actual risk. Workflow procedures should delineate management strategies for patients with COVID-19, suspected cases, and follow-up care to enable communication with community partners and mechanism for feedback. Institutions should clarify reporting of infection (e.g., specific agency). If collaborative organizational commitment exists to learning from this crisis to establish goals for future improvement, moral distress can be mitigated. Although epidemics are unique, similarities exists regarding organizational communication, workflow processes, incident command, and commitment to prioritize oncologist well-being. Institutions should adopt effective interventions and policies for both immediate and long-term recovery. Learning from past events creates a culture of sustainability and renewed interest in preservation of the cancer organization’s priorities.

Trauma-Informed Supportive Oncology Collaboration

Trauma-informed mental health experts are critical to guiding comprehensive empirically-supported interventions (Table 4). Psycho-oncology and supportive/palliative care are disciplines that share in the mission to support oncology colleagues in their duty to
provide cancer care. Addressing oncologist traumatic stress, death anxiety, substance use, grief, and other mental health issues is within their professional expertise. Confidentiality should be diligently maintained given concerns over stigma that accompanies seeking assistance. Leadership should minimize any stigma in seeking mental health assistance by fostering a supportive environment. Priorities should simultaneously address oncologist psychological, cognitive, social well-being as well as protection from infection.

**Improving Oncologist Well-being**

Organizational interventions are critical mechanisms to addressing oncologist well-being and fostering resilience (Table 3 & 4). Professionally empowering the oncologist to thrive, overcome adversity, and positively adapt to pandemic-associated stressors within the clinical environment is essential for cultivating resilience, including moral resilience. Resilience promotes well-being by strengthening the oncologist’s vitality, self-efficacy, engagement and the ability to cope. Team-centered interventions reduce levels of burnout. Individual burnout interventions have been implemented at the organizational level. These train-the-trainer interventions should be strongly encouraged as an ethical response for clinician care. For example, well-accepted, empirically-validated, efficacious approaches such as MBSR and cognitive behavioral therapy address unhelpful thoughts and fears to foster self-compassion. Virtual, digital health/social media interventions support and bolster existing, on-going well-being interventions. Grief support is also critical to enable oncologist processing of grief, suffering, and compassion fatigue. Finally, tailored interventions should address underlying contributors of burnout and moral distress.

**Fostering Peer Relationships**

Cancer organizations should strive to support an enhanced, collaborative community (Table 3 & 4). Obtaining unique perspectives from peer colleagues alleviates moral distress. Peer support is an effective, meaningful resource designed to promote institutional resilience.
It enhances the oncologist’s professional development by enhancing mastery of clinical interactions. The value of peer support lies within the oncologist-oncologist camaraderie, acceptance, and compassionate understanding gained. A deeper connection to self, patients, colleagues develops from shared experiences explored through various perspectives centering on issues of dying, suffering, or grief. Organizations foster peer relationships through: community-building; prioritizing workplace factors (i.e., enhancing workflow); virtual peer meetings; physician-driven meditation groups; and telephone support. Peer support is beneficial for addressing moral distress for large systemic issues (e.g., COVID-19) without immediate solutions. Novel systems of physical distancing, virtual, and in-person (e.g. inpatient rounds) oncology peer support during the are underway. Moral distress can be rectified in a trust-worthy environment where oncologists are encouraged to prioritize well-being.

Summary

Burnout and moral distress have intensified in oncology due to the COVID-19 pandemic impacting the oncologist’s emotional health. COVID-19 cancer care exposes the ethical dilemmas oncologists experience as they address patient needs. Advocacy is critical for awareness, education, and promotion of the oncologist’s voice in an open forum of communication to restore a sense of agency within the cancer organization. Supportive, ethical climates can be developed and enhanced through community collaboration. Organizational programmatic initiatives are vital for empowerment of oncologists to grapple with the morally distressing situations encountered during and well-after COVID-19 to bolster moral resilience, and professional satisfaction of workforce for the long-term.
Table 1: Sources of Moral Distress and Relevance with the COVID-19 Pandemic In Oncology (Hamric, et al 2012)\\(^6^)

<table>
<thead>
<tr>
<th>Major Sources of Moral Distress</th>
<th>Relevance to COVID-19</th>
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<tbody>
<tr>
<td><strong>Clinical Situations</strong></td>
<td><strong>Changes in care due to COVID-19</strong></td>
</tr>
<tr>
<td>• Improper use of resources</td>
<td>• Lack of PPE</td>
</tr>
<tr>
<td>• Provision of care not in patient’s best interest (e.g. administration of salvage chemotherapy to patients with minimal chance of benefit)</td>
<td>• Treatment plan changes</td>
</tr>
<tr>
<td>• Working with caregivers who are not as competent as care requires</td>
<td>• Self-isolation reduces caregiver involvement</td>
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<tr>
<td>• Lack of consensus regarding treatment plan</td>
<td>• Balancing patient risk of COVID-19 with cancer treatments</td>
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<tr>
<td>• Conflicting duties</td>
<td>• Duty to patients versus infectious risk to self, colleagues, family</td>
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<tr>
<td>• Provision of false hope to patients and families</td>
<td>• Inability to adequately prognosticate novel virus</td>
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<tr>
<td><strong>Internal Constraints</strong></td>
<td><strong>Changes in self-regulation</strong></td>
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<tr>
<td>• Perceived powerlessness</td>
<td>• Agency affected by evolving information</td>
</tr>
<tr>
<td>• Inability to identify ethical issues</td>
<td>• Lack of appreciation for ethical constraints</td>
</tr>
<tr>
<td>• Inadequate understanding regarding situation</td>
<td>• Anticipation as information evolves</td>
</tr>
<tr>
<td>• Uncertainty of clinical expertise</td>
<td>• Lack of competency regarding novel virus management</td>
</tr>
<tr>
<td>• Insufficient knowledge of alternative treatment plans</td>
<td>• Passing iteration of possible COVID-19 treatments</td>
</tr>
<tr>
<td><strong>External Constraints</strong></td>
<td><strong>System changes due to COVID-19</strong></td>
</tr>
<tr>
<td>• Inadequate staffing and increased turnover</td>
<td>• Staff and colleagues on sick leave</td>
</tr>
<tr>
<td>• Policies and priorities conflicting with care needs</td>
<td>• Reduced visits, use of tele-visits, no physical exam</td>
</tr>
<tr>
<td>• Compromised care due to external pressures to reduce cost, insurance pressure or litigation risk</td>
<td>• Rationing of PPE, other practice changes due to system changes</td>
</tr>
<tr>
<td>• Hierarchies within health-care system</td>
<td></td>
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<tr>
<td>Lack of collegial relationships</td>
<td>Disagreement with institutional policies</td>
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<tr>
<td></td>
<td>Colleagues on sick leave, quarantined, working from home, minimal contact</td>
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Table 2: Key Strategies for Implementation of Institutional Well-Being Programs During the Immediate COVID-19 Pandemic & Beyond

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1.</td>
<td>Assessment of Oncologist Needs, Burnout, Moral Distress During Crisis</td>
</tr>
<tr>
<td>2.</td>
<td>Proactive Engagement of Leadership &amp; Mental Health in Collaborative Action Planning</td>
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<tr>
<td>3.</td>
<td>Establish Well-Being Program for Oncology</td>
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<tr>
<td>4.</td>
<td>Implementation of Empirical Well-Being Interventions</td>
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<tr>
<td>5.</td>
<td>Reassessment of Oncologist Needs, Burnout, Moral Distress</td>
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<tr>
<td>6.</td>
<td>Modification of Intervention Plan to Address Evolving Needs</td>
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Table 3. Comprehensive COVID-19 Phase-Specific Oncologist Well-being Interventions For Immediate and Long-term Recovery

<table>
<thead>
<tr>
<th>Phases</th>
<th>Types of Interventions</th>
</tr>
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</table>
| 1. Prevention           | • COVID-19 Oncology Team Education  
                          • Leadership Involvement  
                          • Self-Care  
                          • Stress management (e.g. relaxation techniques; meditation)  
                          • Mindfulness-Based Approaches  
                          • COVID-19 Communication Training  
                          • Fostering Community/Peer Support |
| 2. "Real-time" (During Crisis) | • Continued COVID-19 Education  
                          • Oncologist support hotlines/websites  
                          • Virtual/social media/App Support (e.g. Headspace; Calm; Zoom meetings)  
                          • Internal crisis support  
                          • Mental Health Support  
                          o (e.g. individual/group therapy, medication)  
                          • Psychotherapeutic Modalities (e.g. Cognitive-Behavioral Therapy; Psychodynamic)  
                          • Stress Management  
                          • Mindfulness-Based Approaches  
                          • COVID-19 Communication Training  
                          • Peer to Peer Clinician Support  
                          • Grief Support |
| 3. Recovery             | • Continued COVID-19 Team Education  
                          • Long-term Support (e.g. Zoom stress monitoring; virtual morning coffee; physician hotlines)  
                          • Stress management  
                          • Mindfulness-Based Approaches  
                          • COVID-19 Communication Training  
                          • Fostering Community/Peer Support  
                          • In-person Therapeutic support (e.g. In-patient Rounds)  
                          • Peer to Peer Clinician support  
                          • Grief Support |
Table 4: Oncology Leader Toolkit: Promote and Support Well-being and Professional Fulfillment at the Organizational and Individual Level

<table>
<thead>
<tr>
<th>Organizational</th>
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<tbody>
<tr>
<td>• Assessment of ethical climate and moral distress to improve resilience</td>
</tr>
<tr>
<td>• Instill trust and clear communication</td>
</tr>
<tr>
<td>• Communicate efforts to prevent COVID-19 patient and clinician infection</td>
</tr>
<tr>
<td>• Clear, detailed management plans for cancer patients during COVID-19 pandemic with continuity of care plans</td>
</tr>
<tr>
<td>• Dedication to learning from the pandemic</td>
</tr>
<tr>
<td>• Respect for physician values</td>
</tr>
<tr>
<td>• Trauma informed, supportive oncology collaboration</td>
</tr>
<tr>
<td>• Peer support Programs (e.g. train-the-trainer; clinical reflection)</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Individual</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Oncologist needs assessment (e.g., sleep, nutrition, exercise, patient coverage needs, work logistics, clinician support system)</td>
</tr>
<tr>
<td>• Assessment of Moral Distress and contributors</td>
</tr>
<tr>
<td>• Peer support (e.g., Virtual Coffee Rounds, Check-ins: Support group)</td>
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<tr>
<td>• Communication with immediate work colleagues, participation in work culture/communication improvement</td>
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<tr>
<td>• Mindfulness Based Stress Reduction (MBSR) &amp; Mindful Communication</td>
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<tr>
<td>• Advocacy for organizational cohesion and communication</td>
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</table>
REFERENCES

19. Scarto et al. COVID-19 severity and mortality in patients with chronic lymphocytic leukemia: a joint study by ERIC, the European Research Initiative on CLL, and CLL Campus. Leukemia 2020 9;1-10. doi: 10.1038/s41375-020-0959-x
29. Windover AK, Martinez K, Mercer MB. Correlates and Outcomes of Physician Burnout Within a Large Academic Medical Center JAMA 2018;178(6):856-858.


73. Dean W, Talbot SG, Caplan A. Clarifying the language of clinician distress. JAMA 2020; 323 (10): 923-4.: 36 (9): 400-402


91. Olson LL. Hospital nurses’ perceptions of the ethical climate of their work setting. *Journ Nurs Scholar.* 1998;30(4):345-349.
93. Shanafelt TD et al. Building a program on well-being: Key design considerations to meet the unique needs of each organization. *Acad Med* 2019: 94(2): 156-61
97. Lenoble CA, Pegram R, Shuffler ML et al. To Address Burnout in Oncology, We must look to teams; reflections on an organizational science approach *JCO OP* 2020 16 (4):e377-383


