

national clinical trials. Our results suggest that a racial disparity in proton radiotherapy use may exist; additional confirmatory investigation is needed.

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## COMMENT & RESPONSE

### Cancer Survivorship—Considering Mindsets

**To the Editor** We commend Baker<sup>1</sup> for his call to action to “do better” in cancer survivorship care. Baker advocates for an increased focus on treatment-specific late effects; this work can promote precision in survivorship care by targeting prevention efforts and increasing medical surveillance for those with elevated biomedical risk.

Yet, better survivorship care must think outside the confines of the biomedical model alone. During survivorship, mindsets matter. While treatments such as anthracycline chemotherapy may confer toxic effects on the heart, certain unhelpful mindsets may be equally toxic to the lived experience of a patient. Mindsets—core associations about the nature and workings of things and processes in the world—help patients make sense of complex states of health, guide responses to physical symptoms, and motivate health behaviors. Studies of the placebo effect are revealing that our mindsets can even leverage endogenous opioid<sup>2</sup> and neuroimmune<sup>3</sup> pathways, thereby directly changing physiology and shaping objective markers of health. During cancer treatment, mindsets about the meaning of illness (eg, whether it is a catastrophe, a manageable challenge, or an opportunity to make positive life changes) are important.<sup>4</sup>

After treatment ends, a patient's mindset about the capability of their own body becomes central. Take Baker's adolescent patient, cured of his sarcoma but now at increased risk of a heart attack and stroke due to his cardiotoxic treatment.<sup>1</sup> While minimizing biomedical risk, increasing his surveillance for and awareness of this risk may (unwittingly) reinforce his mindset that his body is incapable of recovery and of handling future illness. Holding the mindset that his body is “incapable” may lead him to give up on his body, reducing his engagement in adaptive physical activity and ultimately neglecting his routine surveillance and follow-up visits, thereby increasing his risk of unmanaged late effects. Alternatively, the same mindset that his body is incapable may result in him anxiously misinterpreting and seeking consultation for every new ache and pain (ie, health care overutilization). As we see in chronic pain<sup>5</sup> and posttraumatic stress disorder, this state of anxious hypervigilance and excessive monitoring is associated with increased severity and salience of physical symptoms and worse quality of life.

Mindsets matter, both during and after cancer, and are shaped by survivorship care. A comprehensive, precise survivorship care approach must strive to support individuals with the information and surveillance they need while also leveraging adaptive mindsets about their body's capability to heal and function after treatment ends.

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**In Reply** We thank Heathcote et al<sup>1</sup> for their reply to the recent Viewpoint calling for action in cancer survivorship.<sup>2</sup> We were heartened at the response to the call to action from practitioners and cancer survivors who responded to us directly, including faculty within our own medical center. These responses support the comments from Heathcote et al advocating that “better survivorship care must think outside the confines of the biomedical model alone.” Survivorship care indeed extends beyond the walls of the oncologist’s office. Heathcote et al state that “mindsets matter,” a statement with which we concur.

However, we caution equating treatment with anthracycline chemotherapy with unhelpful mindsets, which increase the severity of anxiety and worsen quality of life. Treating the mind and body in tandem, and not at the expense of the other, is necessary to improve survivorship care. Within our sarcoma survivorship program, longitudinal collection of patient-reported outcomes confirms that patients experience anxiety and depression—often directly related to their cancer experience driven by the fear of recurrence. Educating survivors of their risks, including recurrence, yielded a reduction in anxiety, depression, and fear over time. Consequently, we began using the term *cure* when appropriate, demonstrably influencing the patient’s mindset. The mounting evidence of the relationship between anthracycline exposure and coronary artery disease necessitates patient education coupled with support of health behaviors to decrease their risk (eg, diet modification, physical activity).<sup>3</sup> We advocate that for patients with multiple complex care needs, this team be led by the treating medical oncologist, who is also trained in internal medicine and able to treat chronic illnesses, such as hypertension, dyslipidemia, and kidney disorders, which increase the risk of

coronary artery disease. Treating a 13-year-old patient with osteosarcoma with a year of anthracycline chemotherapy and limb salvage surgery and pronouncing cure is a hollow victory if the same patient develops a myocardial infarction at 38 years old, especially if preventive measures could have avoided an early death.

Central to improving survivorship care is integration across disciplines. Mindsets—core associations about the nature and working of things and processes in the world—matter both within the patient and within the health care system. The experience of matching practice to the ideals under which we initiated the program has proved to be challenging in a medical landscape where prevention is not a lucrative endeavor. The call to extend survivorship beyond the biomedical model heightens our commitment to this call to action. Mindsets matter, for survivors of cancers and for those who have the power to support a holistic, integrated model of care.

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## Risk of COVID-19 in Patients With Cancer

**To the Editor** We read the article by Yu and colleagues<sup>1</sup> published in *JAMA Oncology* with great interest. In this article, Yu et al reported that patients with cancer have a notably higher risk of coronavirus disease 2019 (COVID-19) compared with that of overall population in Wuhan, China, which shares a similar conclusion with a recent report by Liang et al.<sup>2</sup> Also, the authors found that age older than 60 years is an independent risk factor of COVID-19 in individuals with lung cancer.

COVID-19 has been officially declared a global pandemic, and the needs of patients with particular vulnerabilities require particular attention. To date, a number of comorbidities have evidently contributed to the incidence of COVID-19.<sup>3</sup> However, it has been well documented that diseases such as chronic obstructive pulmonary disease, hypertension, and cancer are closely related to age. In China Statistical Yearbook