

## Cancer and COVID-19: The Synergistic Burden on Mental Health Status of Patients with Cancer

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Dear Editor,

Over the recent decades, there have been more than 30 emerging infectious diseases appeared as pandemics.<sup>1</sup> In December 2019, the outbreak of coronavirus disease 2019 (COVID-19) was initially observed in the city of Wuhan, China.<sup>2, 3</sup> COVID-19, the novel member of the coronavirus family, can cause acute respiratory diseases and death among infected individuals.<sup>4</sup> In this regard, the World Health Organization (WHO) declared this condition as a global major public health emergency.<sup>2, 5, 6</sup>

In this pandemic, while the general population is susceptible to this infection, people with cancer appear to be at a higher risk with a poorer prognosis compared with patients suffering from other diseases.<sup>2, 7-9</sup> According to the reports released in China, patients with cancer infected with COVID-19 required mechanical ventilation and admission to intensive care units (ICUs) 3.5 times more with a higher mortality rate in comparison with individuals without cancer.<sup>2, 4, 10</sup> Another study on 1524 patients with cancer at the Tertiary Cancer Institution of Wuhan University reported that the risk of COVID-19 among such patients was approximately two times more than that among the general population.<sup>11</sup> An updated WHO report correspondingly declared that mortality rates among infected patients with cancer was 7.6% compared with 1.5% in the general population.<sup>12, 13</sup>

Patients with cancer are forced to choose between seeking treatment and accepting the risk of exposure to COVID-19 or postponing therapy processes and minimizing the risk of being infected by COVID-19.<sup>14, 15</sup> In this respect, the higher risk of serious complications and mortality rates of COVID-19

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infection in cancer patients might most likely be explained by the weakened immune systems and poor functional status associated with active adjuvant therapies for most types of cancer, such as chemotherapy and radiotherapy.<sup>2, 3, 5, 16, 17</sup> Moreover, due to the fact that patients with cancer have higher rates of referrals to medical centers for receiving active cancer treatments and also monitoring side-effects of their treatments, they are exposed to a higher risk of infection to COVID-19.<sup>5, 8</sup> Poor prognosis is more prevalent in patients concurrently receiving chemotherapy and/or radiation compared with surgery and/or hormonal medications.<sup>2</sup> The national health services of England, regarding the management of patients with cancer requiring acute treatment, warned that certain groups, such as individuals undergoing active chemotherapy or radical radiotherapy for lung cancer and those with cancers of blood or bone marrow, are particularly vulnerable to a serious illness, if they become infected with COVID-19.<sup>14</sup>

Studies have to date indicated that patients with cancer experience considerable emotional and psychological distress following diagnosis under non-pandemic conditions.<sup>18, 19</sup> Factors, like anxiety following the initial diagnosis, the stress related to the side-effects of chemotherapy and other adjuvant therapies, awareness of decreased lifetime, fear of disease recurrence, and possibility of death in some cases, were accordingly highlighted among the main psychological challenges that patients with cancer encounter.<sup>20</sup> In this regard, the results of published studies have demonstrated that that patients undergoing chemotherapy could experience more depressive symptoms and anxiety disorders compared with those undergoing surgery or surgery in combination with hormonal therapy.<sup>21, 22</sup> The questionable issue is that which is the best protocol for psychological protection of these susceptible patients during this pandemic without extended treatment interruptions.<sup>6</sup> The National Health Commission of China and other countries, including Iran, have published guidelines concerning psychological crisis interventions for general populations affected by COVID-19.<sup>23, 24, 25</sup> Literature

review showed that from December 2019, the beginning of COVID-19 outbreak, to June 2020, when the present letter was written to editor, we found no published specific psychological intervention protocols regarding psychological reactions and responses of patients with cancer to this disabling pandemic infection.

During the pandemic, people with cancer who become infected with the virus or have the fear of becoming infected may be exposed to increased fears of death from experiencing disruptions or delays in treatment or of becoming infected with COVID-19, specifically in newly diagnosed patients.<sup>26</sup> Furthermore, according to the results of a study which assessed the psychological impact of COVID-19 pandemic on patients with cancer in Singapore, 66% of the patients reported a high level of fear from COVID-19, 19.1% had anxiety, and the main concern of patients was the wide community spread of COVID-19.<sup>15</sup> These individuals may also feel stressed about a lack of health equipment and medicine shortages, particularly chemotherapy and narcotics.<sup>17</sup> Mandatory social distancing due to personal protection from the virus can also have a significantly negative effect on these patients' psychological status and coping mechanisms.<sup>27, 28</sup> Moreover, an important psychological reaction to a pandemic is believed to be fear as an emotion and the fear-associated behavior in the general population. Fear of epidemics is assumed to be an intrinsic reaction provoked due to the stress of oneself or loved ones contracting the disease. In this regard, a significant relationship was reported between the epidemic conditions and fear of contagion in infectious disease outbreaks in general populations. The unconscious fantasy of fear of epidemics and existence of a virus among populations could lead to describing a virus as an enemy or a stranger among them.<sup>1, 26</sup> Therefore, an individual might display a set of paranoid behaviors or defense mechanisms, such as projecting innocence or guilt on certain groups in a population, and then, reacting negatively or even violently towards the members of groups perceived to spread the infection, which can significantly embolden defensive actions among

patients with cancer as a susceptible group, while healthy individuals may not have such fearful concerns in this regard.<sup>26</sup> The nature of fear is more dangerous than COVID-19 by itself or other pandemics, since fear is a social disease that can be commonly transmitted among populations even though only a small number of them may be infected with a disease.<sup>1</sup> This fact could be attributed to the importance of management of mental health and psychological well-being during pandemics in these patients.<sup>3</sup>

Interventions that improve psychological well-being in people with cancer during pandemics have not yet been performed. Based on a few guidelines, physicians can help relieve anxiety among their patients with cancer through remote communications via telephone, social media, or telemedicine.<sup>4, 5</sup> Web-based psychological counseling can provide support through sharing educational media and information to teach certain subjects, for instance, stress management, exercises, and relaxation techniques.<sup>4, 24</sup> Psychological counseling could be thus a crucial and useful method to control the existing conditions temporarily and to teach coping strategies to patients to manage their fear.<sup>4, 13, 19</sup> Employing educational pamphlets and explaining benefits and adverse effects of any diagnostic and therapeutic strategies during the COVID-19 pandemic can most likely be an effective action to raise awareness in patients with cancer.<sup>4, 25</sup>

During the COVID-19 pandemic, clinical research among populations with cancer has been halted or significantly scaled back.<sup>17</sup> As reported in the literature, the synergistic burden of COVID-19 on the psychological health status of patients with cancer and the negative effect of psychological symptoms on these individuals have been evident.<sup>16, 29</sup> Therefore, developing an integrated and multidisciplinary approach to encompassing psychosocial support and physical rehabilitation techniques in combination with standard treatment care could be more effective on the management of these individuals during this global pandemic.<sup>9, 16, 29</sup> Since there have been no published guidelines for the management of the psychological status of people with cancer,

particular attention needs to be paid to this susceptible population. In addition, it could be highly recommended to design a special universal guideline regarding the management of psychological challenges among people with cancer during the COVID-19 pandemic by a multidisciplinary team of health care professionals.

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## Conflict of Interest

None declared.

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