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RESPONSE TO LETTER TO THE EDITOR

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Cancer surgery in the era of COVID-19 pandemic: Changing dynamics

We read the comments made by Cavalcante et al related to our article[1] titled "Discordance of COVID-19 guidelines for patients with cancer: A systematic review" with great interest. We are pleased to note that Cavalcante et al share our concerns that the majority of the cancer treatment guidelines that were proposed in the early phase of coronavirus disease 2019 (COVID-19) pandemic are based on a low level of evidence and need to be updated as the oncologists gain experience in the management of patients with cancer in a pandemic scenario across the centers globally.

The initial response to the COVID-19 pandemic was to delay almost all surgeries for patients with breast cancer. Locally advanced breast cancer did not pose much dilemma as it is already treated with systemic chemotherapy in the neoadjuvant setting. However, almost all the initial guidelines suggested that surgery for early breast cancer (EBC), which is the standard of care in almost all centers, should also be delayed by a varying period of time (6-12 weeks). The fear of unknown prevailed in context to severe acute respiratory syndrome coronavirus-19 infection during the perioperative period—the risk was both for the patient and the surgical team. Patients with triple-negative or Her-2 positive EBC were advised systemic chemotherapy while patients with luminal type EBC were prescribed neoadjuvant hormonal therapy. Surgeons anticipated that they would be able to plan surgery in due course of time as the various facets of COVID-19 were gradually understood—preventive measures, clinical features, treatment modalities—and there was a hope that disease would be contained or a miraculous vaccine would be available soon. However, as time passed, those patients who were initially advised nonsurgical treatment began approaching surgeons for undergoing a surgical procedure following completion of neoadjuvant therapy—how long an inevitable can be delayed!

Though COVID-19 pandemic continues to grapple world with an unclear trajectory, and the hope for a vaccine is still a far-fetched dream, a plethora of literature has been published in the last 6 months to understand the COVID-19 disease, its epidemiology, and impact on cancer patients. The initial fear of unknowns during the COVID-19 pandemic is gradually waning off; oncologists are also learning to live with a new *normal*. Moreover, they have also realized that inadequate treatment of cancer or deviation in the management policies from the well-established standard guidelines results in considerable mayhem and collateral damage in terms of poor treatment outcomes. An analysis of prospectively collected national data from the Surveillance, Epidemiology, and End Results-Medicare-linked database and the National Cancer Database highlighted that overall survival decreases with every 30-day incremental delay in the surgery following diagnosis of breast cancer (hazard ratio: 1.09; 95% confidence interval: 1.06-1.13; $P < .001$).[2] Two modeling studies from England provided a glimpse of how COVID-19 results into additional breast cancer-related deaths and loss of attributable life-years.[3,4] A 3-month delay of the 2-week-wait cancer referral pathway during the COVID-19 pandemic was estimated to cause a loss of 734 additional lives and 15 339 attributable life-years.[3] Another study to assess the impact of the COVID-19 pandemic due to delays in diagnosis based on data for 32 583 patients with breast cancer, the authors estimated a 7.9% to 9.6% increase in the number of additional deaths compared to prepandemic figures.[4]

Undeniably, surgery for breast cancer brings the most significant benefits for patients, especially in the curative setting leading to significant gains in survival.[5] Though the many initial guidelines prohibited performing surgery for breast cancer, it was soon realized that surgery cannot be postponed indefinitely.[6] Patients with breast cancer who have completed neoadjuvant chemotherapy or have salvageable progression on chemotherapy or patients with malignant breast sarcomas cannot be denied surgery for long as we grdually learn to coexist with COVID-19.[7,8] With the

TABLE 1 Suggested strategies to plan breast cancer surgery during COVID-19 pandemic

• Minimize in-person hospital visits of the patients with breast cancer; promote telemedicine
• Plan clinical assessment and investigations in a single visit
• Mandatory multidisciplinary discussion of all patients with newly diagnosed breast cancer via the virtual tumor boards
• Plan surgery for all patients who have completed neoadjuvant therapy; consider surgery (with caution) for patients who progress on neoadjuvant therapy for locoregional control; plan upfront surgery for early breast cancer if the MDT decides
• Diligent preoperative assessment of the patient including routine COVID-19 testing
• Documenting the informed surgical consent with the additional perioperative risk of COVID-19-associated complications—both known and unknown
• Initial admission of the patient in an isolation ward until COVID-19 testing and its report is pending
• Separate hospital for the COVID-19 positive patients or an isolated block for them in a hospital
• Religious adoption of all preventive measures to contain the spread of SARS-CoV-19 infection— wearing face masks, maintianing physical distancing, frequent hand washing, and using PPE as and when required
• Consider surgery with minimal expected postoperative complications; avoid complex breast reconstructions
• Consider daycare surgeries if feasible

Abbreviations: COVID-19, coronavirus disease 2019; MDT, multidisciplinary tumor board; PPE, personal protective equipments; SARS-CoV-19, severe acute respiratory syndrome coronavirus-19.

COVID-19 pandemic still on run, many modifications are being made in the patient management strategies in the hospital so as to minimize the effect of COVID-19 on the perioperative outcomes. Table 1 displays the suggested measures to reduce the impact of COVID-19 pandemic on the perioperative outcomes in patients with breast cancer undergoing surgery.

Though the COVID-19 pandemic continues to create mayhem around the world, its various facets are being better understood over time. Various guidelines to manage the patient with breast cancer would require frequent revision to avoid the collateral damage caused by the delay in the cancer treatment due to the current pandemic in terms of lives and life-years lost. Surgical oncologists need to use their clinical acumen, knowledge of tumor biology, and experience to schedule the surgery cases. They should have a flexible approach to adopt the dynamically evolving strategies and recommendations to deal with the current crisis for the best interest of cancer patients.

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