Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Rationalizing breast cancer surgery during the COVID-19 pandemic

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The global pandemic COVID-19 has placed healthcare systems under enormous pressures as the number of affected individuals requiring hospital-based care increases daily. Consequently, medical resources for other highly treatable illnesses such as cancer are potentially compromised, requiring dynamic, transparent prioritization to maintain non-COVID-19 care that is essential and time-critical to preserve life but also nationally equitable in publicly funded healthcare systems.

This is particularly relevant for breast cancer, the commonest malignancy in women worldwide. The challenge is maintaining optimal breast cancer treatment for as many as possible while minimizing exposure to COVID-19 risk. Moreover, cancer care has to be delivered within a highly unstable service environment which must protect and conserve critical capacity and resources such as workforce, ventilators and personal protective equipment to maintain core urgent and emergency services as the pandemic unfolds.

Over 80% of breast cancer patients undergo primary surgery, the main curative modality in early breast cancer. Professional bodies have issued scalable recommendations to provide a framework to aid clinicians prioritize essential breast cancer care dependent on the extent of the health crisis. These recommendations, based on tumour stage and biology, focus on identifying patients for whom surgery is time-critical and those for whom surgical management could be deferred. The latter are primarily clinical stage I/II oestrogen receptor positive breast cancer patients who can be safely treated with self-administered primary endocrine therapy, which does not suppress the immune system and allows self-isolation.

Although there are no studies specifically linking breast cancer treatment with COVID-19 risk, there is data suggesting that cancer patients in general are at higher risk of death. Data from China and Italy, shows that cancer patients with confirmed SARS-Cov-2 infection had a case fatality rate of up to 28.6% [1]. This increased up to 48.5% for 3 or more comorbidities including cancer, diabetes, hypertension, and cardiovascular disease [2]. Notably, patients who underwent chemotherapy or surgery in the past month were five times more likely to develop severe events after adjusting for other risk factors including age, smoking history and other comorbidities [3]. Age has been shown to be an independent risk factor for in-hospital death from COVID-19 [4]. As cancer diagnosis increases with age it is likely that breast cancer patients, with a median age of 62 years at diagnosis, may have additional comorbidities which would put them at higher risk of adverse outcomes in case of SARS-CoV-2 infection.

These findings should be interpreted with extreme caution; they come from small, mainly retrospective cohort studies including many cancer subtypes and disease stages, thus limiting their applicability and generalizability to early operable breast cancer. However, it raises an important issue: how do clinicians balance achieving optimal oncological outcomes with the risk of contracting or dying from COVID-19. Available data does not yet support an accurate risk-assessment tool that incorporates both cancer and COVID-19 risk factors, underlining the need for a carefully balanced, shared decision-making consultation. Patients should be adequately counselled and informed that increasing age and the presence of underlying comorbidities such diabetes and hypertension could put them at significant risk of death in case of SARS-CoV-2 infection. Whilst this risk may not be quantifiable for any one individual it must be factored into any decision-making when deciding a treatment plan for early breast cancer (75% of diagnoses in UK and USA) with a 5-year survival of 91–99% for localized disease.

Deferring surgery when considered safe following multidisciplinary discussion, limits multiple healthcare interactions so decreasing the risk of exposure to COVID-19 for patients and staff.

The effects of the pandemic could be mitigated to some extent for breast cancer patients by careful, individualized triage and adoption of specialty association COVID-19 adapted treatment pathways supported by pooling modest volumes of protected resources into cancer hubs that run parallel to the essential COVID-19 treatment centres and pathways.

In conclusion, the SARS-CoV-2 pandemic is expected to have a huge impact on healthcare systems. The recommendations provided by professional bodies regarding breast cancer management are a useful guidance for physicians. These recommendations should be adopted and adapted dynamically to provide a framework for escalation/de-escalation of treatment including surgery according to cancer and COVID-19 risk factors as well as the depth of the crisis and the availability of resources and workforce.

Declaration of competing interest

None.

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