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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My Thoughts / My Surgical Practice

The consideration for outpatient mastectomy during the COVID-19 global pandemic

The COVID-19 global pandemic has heavily dictated surgical care over the past several months, with no clear end in sight. Healthcare workers, resources, and safety are constantly in flux while patient care continues to be the top priority. With the changing surgical landscape, surgeons and patients have been faced with the arduous decision of operative timing, particularly non-emergent oncological cases. The burden of inpatient COVID-19 cases has affected the availability of inpatient beds for non-emergent post-operative inpatient hospitalizations, thus requiring surgeons to re-consider which operations may be performed in the outpatient setting, thereby reducing the strain on inpatient resources. Additionally, as healthcare workers are infected or are required to quarantine secondary to COVID-19 exposure, fewer healthcare workers and providers are available to staff inpatient hospitalizations. The balance of meeting the oncologic needs of the patient along with the financial and physical stressors on the health care system have left many surgeons in a quandary on how to manage cancer patients.

Several societies have collaborated and published guidelines on how to manage breast cancer patients during this global pandemic.[1] Many patients can be managed medically with anti-endocrine therapy or chemotherapy until healthcare systems are able to resume normal operating room functions and inpatient hospital admissions. However, there are a select group of patients who benefit from an upfront mastectomy because they are not candidates for neoadjuvant systemic therapy, or they require final surgical pathology to dictate the need for adjuvant therapies. The current pandemic provides an opportunity for both patients and surgeons to strongly consider the evidence and safety behind outpatient mastectomies, with and without reconstruction. With proper patient selection, outpatient mastectomies have the potential to allow surgeons to treat breast cancer patients in a timely manner, minimize healthcare resource utilization, and lower the risk of potential COVID-19 exposures.

After undergoing a mastectomy, with or without breast reconstruction, patients are frequently admitted to the hospital for observation or full admission for optimization of pain control, close observation for potential complications, and patient education. Over the past two decades, successfully implemented Enhanced Recovery After Surgery (ERAS®) programs have shown that select mastectomy cases are able to be safely performed in the outpatient setting.[2] ERAS programs incorporate pre-operative counseling about post-operative expectations, opioid-sparing multimodal analgesia approaches, and early mobilization to optimize patient satisfaction while minimizing post-operative complications and the need for inpatient admission.[3] Evidence has demonstrated that outpatient mastectomies, with or without reconstruction, are safe with no increased risk of post-operative complications compared to inpatient mastectomies.[3] Success of the outpatient mastectomy is largely influenced by patient expectations and providing a unified multidisciplinary team approach for post-operative pain control.[4] Additionally, ensuring that patients are able to contact healthcare providers with inquires or concerns is essential to the outpatient mastectomy. This includes appropriate training of the staff who manage evening and weekend triage telephone lines and that surgeons are also available to be contacted for more serious concerns.

Studied populations for outpatient mastectomy are those who do not undergo reconstruction, those with direct to implant reconstruction, and patients who receive first phase reconstruction with expander placement.[2–4] Autologous tissue reconstruction can result in hospitalizations for several days; however, recent reports have shown that in select patients, 23-h observation can be a safe and feasible option.[5] Patient selection plays an important role when instituting the outpatient mastectomy as patients need to be educated on drain care, pain management, and when to call if complications or problems arise. If a patient is unable to manage these issues without significant coaching or are limited in their abilities to care for themselves without significant support, the patient may not be the ideal candidate for this protocol.[2–4]

Short-term surgical delays for breast cancer patients are common and are often dependent upon surgeon and patient schedules; however, longer delays in time to surgery are associated with disease progression and less favorable long-term patient outcomes.[6] One option to mitigate surgical delay, for select patients, is to perform their mastectomy in the outpatient setting. Many hospital systems and surgeons are affiliated with outpatient ambulatory surgery centers (ASC) that are less burdened by COVID-19 compared to main hospital operating rooms. These high efficiency centers remove work-load volume on the main hospital and are frequently used for procedures that are low-risk and have shorter operative times. The utilization of ASCs, combined with implementation of an ERAS program, provide surgeons the opportunity to potentially offer mastectomies in the ambulatory setting to relieve some of the burden on the hospital and healthcare system. Converting mastectomies to the outpatient setting and to ASCs can improve access to surgical care for those patients who require a mastectomy and who do not have safe treatment options to allow for a safe surgical delay. This strategy can also allow for elective prophylactic mastectomies to continue while restrictions are placed on the

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number of elective inpatient operations. As cancellation or suspension of elective operations due to the COVID-19 pandemic has, and will continue, to have a drastic effect on hospital revenue and net income, the shift of more surgeries to the outpatient setting could also help to maintain incoming revenue.[7] In addition, as surgical delays also have psychological consequences on patients, reducing delays has the potential to reduce patient anxiety and improve patient quality measures.

With the steady daily rise of COVID-19 cases and deaths across the United States, surgeons and patients are re-considering oncologic practices in an effort to minimize patient and provider exposure risks, provide prompt oncologic care, and reduce the strain on resource allocation within healthcare systems. Multidisciplinary guidelines have aided in breast oncologic treatment decisions over the past several months and will continue to evolve as the pandemic continues to shape our clinical practices.[1] Healthcare institutions will need to continuously evaluate their resources on a regular basis in effort to maximize the utilization of available resources to provide optimal patient care while also reducing risks. Investigations have revealed that outpatient mastectomy is safe and feasible during this global pandemic and now is the time for both surgeons and patients to consider this as the surgical standard for appropriately selected patients.[8]

Declaration of competing interest

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References

1. Dietz JR, Moran MS, Isakoff SJ, et al. Recommendations for prioritization, treatment, and triage of breast cancer patients during the COVID-19 pandemic. the COVID-19 pandemic breast cancer consortium. *Breast Canc Res Treat*. 2020;181(3):487–497. https://doi.org/10.1007/s10549-020-05644-z.
2. Cortina CS, Patten CR, Adamson K, Doren EL. Enhanced recovery after surgery (ERAS): protocols in post-mastectomy breast reconstruction. *Curr Breast Cancer Rep*. 2020;12:398–404. https://doi.org/10.1007/s12609-020-00378-9.
3. Offodile 2nd AC, Gu C, Boukovalas S, et al. Enhanced recovery after surgery (ERAS) pathways in breast reconstruction: systematic review and meta-analysis of the literature. *Breast Canc Res Treat*. 2019;173(1):65–77. https://doi.org/10.1007/s10549-018-4991-8.
4. Shahbazi S, Woods SJ. Influence of physician, patient, and health care system characteristics on the use of outpatient mastectomy. *Am J Surg*. 2016;211(4):802–809. https://doi.org/10.1016/j.amjsurg.2015.10.021.
5. Martinez CA, Reis SM, Rednam R, Boutros SG. The outpatient DIEP: safety and viability following a modified recovery protocol. *Plast Reconstr Surg Glob Open*. 2018;6(9), e1898. https://doi.org/10.1097/GOX.0000000000001898. Published 2018 Sep. 14.
6. Bleicher RJ, Ruth K, Sigurdson ER, et al. Time to surgery and breast cancer survival in the United States [published correction appears in JAMA oncol. 2016 sep 1;2(9):1244]. *JAMA Oncol*. 2016;2(3):330–339. https://doi.org/10.1001/jamaoncol.2015.4508.
7. Best MJ, McFarland EG, Anderson GF, Srikumaran U. The likely economic impact of fewer elective surgical procedures on US hospitals during the COVID-19 pandemic. *Surgery*. 2020;168(5):962–967. https://doi.org/10.1016/j.surg.2020.07.014.
8. Specht M, Sobti N, Rosado N, et al. High-efficiency same-day approach to breast reconstruction during the COVID-19 crisis. *Breast Canc Res Treat*. 2020;182(3):679–688. https://doi.org/10.1007/s10549-020-05739-7.

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