and maxillofacial surgery literature. *J Oral Maxillofac Surg.* 2020;78:1460.e1–1460.e7.
4. Mullins CH, Boyd CJ, Corey BL. Examining the correlation between altmetric score and citations in the general surgery literature. *J Surg Res.* 2020;248:159–164.
5. Nocera AP, Boyd CJ, Boudreau H, Hakim O, Rais-Bahrami S. Examining the correlation between altmetric score and citations in the urology literature. *Urology* 2019;134:45–50.

## Breast Surgery in the Time of Global Pandemic: Benefits of Same-Day Surgery for Breast Cancer Patients Undergoing Mastectomy with Immediate Reconstruction during COVID-19

***Sir:***

I read with interest the Viewpoint published in the October 2020 issue by Perez-Alvarez et al.[1] describing their preliminary experience with same-day surgery after mastectomy and immediate implant-based reconstruction during the coronavirus disease of 2019 (COVID-19) pandemic. Their group began offering patients same-day surgery in 2018 and began enrolling patients in a prospective clinical trial comparing same-day surgery with inpatient admission in 2019. While not providing extensive details about their protocol and results, they describe an enhanced recovery after anesthesia protocol and the use of intraoperative liposomal bupivacaine blocks to facilitate same-day surgery. They do mention that the majority of these reconstructions were performed in the prepectoral plane, as these patients would be expected to have significantly less immediate postoperative pain. Preliminarily, their results demonstrate no emergency room admissions or readmissions and no increased need for postoperative opioid prescriptions. While these findings have important implications for our general approach to immediate implant-based breast reconstruction, the authors correctly point out that their findings have even more relevance during the COVID-19 pandemic. Same-day surgery reduces strain on hospital resources and staff utilization, both of which are in short supply as the pandemic intensifies. They also cite data from publications looking at same-day surgery for mastectomy alone that demonstrate improved psychological well-being, decreased exposure to nosocomial infections, and decreased burden on the health care system, and extrapolate that same-day surgery for mastectomy and immediate implant-based reconstruction would likely provide these benefits as well.[2]

I am in agreement with these findings and recently published results for 106 consecutive patients (183 breasts) who underwent mastectomy and immediate implant-based reconstruction and same-day discharge from my institution's ambulatory surgery center.[3] My experience started in July of 2017 and is currently ongoing, now with more than 200 patients undergoing same-day surgery. I utilize preoperative celecoxib, gabapentin, and acetaminophen[4] and perform intraoperative pectoral nerve blocks to minimize narcotic requirements and to facilitate same-day surgery. While my recent publication described tissue expander reconstruction, my current standard is to go direct to implant. I demonstrated no difference in complications between patients who underwent same-day surgery in the ambulatory surgery center versus those patients who were admitted to the hospital. As Perez-Alvarez et al. found, I also noted no unplanned readmissions for pain, nausea, or vomiting. I also found improved patient satisfaction for patients who had surgery in the ambulatory surgery center, as the process is more efficient and personal, with only two operating rooms, increased privacy, and more dedicating nursing staff. Interestingly, I also found a significantly reduced rate of major infectious complications requiring reoperation for implant salvage or removal when retrospectively compared to a similar cohort of my patients operated on in the hospital with or without admission.

My article discussed the relevance of the findings given the COVID-19 pandemic with regard to cost savings, decreased utilization of health care resources, and increased patient safety. I pointed out that surgery in the ambulatory surgery center with same-day discharge is almost certainly safer for immunocompromised patients who have or will be receiving chemotherapy, as there will be less exposure to nosocomial infections in the hospital. I concluded that as ambulatory surgery centers are inherently more cost-effective and have a possibly reduced infection rate, shifting surgery to the ambulatory surgery center with same-day discharge will have the most pronounced impact on reducing costs and decreasing utilization of resources during this critical time. Finally, I noted that surgery in an ambulatory surgery center also frees up hospital beds and operating rooms for the more acutely ill. I acknowledge that not all surgeons have access to an ambulatory surgery center where breast reconstruction can be performed. Regardless, I strongly urge surgeons to at least consider same-day discharge after mastectomy and implant-based reconstruction in the hospital during these critical times, as Perez-Alvarez et al. and I have shown that it is safe. I again maintain that admission after mastectomy and immediate prepectoral reconstruction should be the exception and not the rule.

DOI: 10.1097/PRS.0000000000008158

**Jean-Claude Schwartz, M.D., Ph.D.**
Northside Hospital
Northside Gwinnett Surgical Associates
631 Professional Drive, Suite 300
Lawrenceville, Ga. 30046
gabreastsurgery@gmail.com

### DISCLOSURE

*The author has no financial interest to disclose in relation to the content of this communication.*

### REFERENCES

1. Perez-Alvarez IM, Bartholomew AJ, King CA, et al. Breast surgery in the time of global pandemic: Benefits of same-day surgery for breast cancer patients undergoing mastectomy

with immediate reconstruction during COVID-19. *Plast Reconstr Surg.* 2020;146:522e–523e.
2. Shahbazi S, Woods SJ. Influence of physician, patient, and health care system characteristics on the use of outpatient mastectomy. *Am J Surg.* 2016;211:802–809.
3. Schwartz JC. Mastectomy and prepectoral reconstruction in an ambulatory surgery center reduces major infectious complication rates. *Plast Reconstr Surg Glob Open* 2020;8:e2960.
4. Parsa AA, Sprouse-Blum AS, Jackowe DJ, Lee M, Oyama J, Parsa FD. Combined preoperative use of celecoxib and gabapentin in the management of postoperative pain. *Aesthetic Plast Surg.* 2009;33:98–103.

## Reply: Breast Surgery in the Time of Global Pandemic: Benefits of Same-Day Surgery for Breast Cancer Patients Undergoing Mastectomy with Immediate Reconstruction during COVID-19

***Sir:***

We sincerely appreciate the comments provided by Dr. Jean-Claude Schwartz regarding our publication.[1] The budding topic of same-day surgery for mastectomy has certainly gained immense traction given the pandemic and its impact on hospital resource allocation. We acknowledge that overall, our own experiences, previous research, and Dr. Schwartz's study[2] uphold the consistent outcomes of reduced readmissions, reoperations, and postoperative complications following same-day surgery for mastectomy.

Our protocol involves a prospective, single-arm, multi-institutional study that primarily seeks to measure complications, pain, satisfaction, and cost subsequent to same-day surgery for mastectomy with reconstruction. (This trial is registered under the name "Same-Day Discharge after Nipple-sparing Mastectomy or Skin-sparing Mastectomy with Breast Reconstruction," ClinicalTrials.gov identification no. NCT04596683, https://clinicaltrials.gov/ct2/show/NCT04596683.) Inclusion criteria consist of women with breast cancer electing mastectomy with immediate implant-based reconstruction who are amenable to same-day surgery. Exclusion criteria include active smoking and high-risk comorbidities (e.g., cardiac disease, diabetes, and so on). Distinct from Dr. Schwartz's article, we opted for the validated BREAST-Q survey to collect data on satisfaction and the standardized American Pain Society survey to evaluate postoperative pain. We have enrolled approximately 40 patients treated by various providers within a single hospital system, albeit all operations have been performed within the hospital operating rooms and not in separate ambulatory surgery centers.

Ideally, randomization would have been the gold standard for reporting on a relationship between same-day surgery and improved outcomes. However, without mitigating difference in cost to the patient and influence on satisfaction for those unhappy with treatment allocation, we felt our chosen research design to be more appropriate as an initial study. We have not encountered a study to date that has randomized patients into same-day surgery for mastectomy. Unless evidence demonstrating potential compromise to clinical equipoise is elucidated, this should be the aim for future studies.

While we believe the primary goal of our research is to demonstrate equal if not improved outcomes and satisfaction for women undergoing same-day surgery for mastectomy with reconstruction, a secondary critical component is cost. Dr. Schwartz comments on the financial benefits to same-day surgery, which is very applicable in the time of SARS-Cov-2. In his study, he emphasizes data demonstrating reduced infection rates to infer cost-effectiveness of same-day surgery for mastectomy.[2] While this is a notable assumption, it is not direct evidence. With access to billing information for cohorts that have been either discharged from same-day surgery or admitted following mastectomy, we are conducting a thorough cost analysis of the procedures. In addition, all procedures are performed in the same settings with similar staff and protocols, further reducing potential confounders to our results.

Similar to the evolution of reduced length of stay following the transition from radical to simple mastectomy,[3] the recent advancements in anesthetic protocols and techniques for breast reconstruction serve as the catalyst for change in the standard timing of hospital-level treatment. We completely agree with Dr. Schwartz's last comment, that admission following mastectomy should eventually be the exception, rather than the standard. Thorough research into the ideal characteristics of patients and resources required to appropriately educate and support same-day surgery for mastectomy is critical. Nonetheless, studies such as Dr. Schwartz's[2] and ours[1] promote the transition to same-day surgery as a means of improved quality, satisfaction, and cost of reconstruction for breast cancer patients.

DOI: 10.1097/PRS.0000000000008159

**Idanis M. Perez-Alvarez, B.S.**

**Eleni A. Tousimis, M.D.**
Department of Breast Surgery
MedStar Georgetown University Hospital
Washington, D.C.

Correspondence to Dr. Tousimis
Department of Surgery
MedStar Georgetown University Hospital
3800 Reservoir Road, NW
PHC Building, 4th Floor
Washington, D.C. 20007
eleni.a.tousimis@gunet.georgetown.edu

### DISCLOSURE

*Dr. Tousimis receives honoraria for speaking faculty from Medtronic. Idanis M. Perez-Alvarez has no financial interests to declare.*