lumpectomies, mastectomies, and breast reconstruction operations performed from January 2019 through June 2021. Data was extracted from a combination of institutional databases in conjunction with direct electronic health record review. Only index breast reconstructions were included, and by such, revisions or secondary procedures were not included. Wilcoxon signed-rank tests were used to compare the number of total number of mammograms, oncologic, and reconstruction cases between calendar quarters using SPSS Version 25 (IBM Corp., Armonk, N.Y.). Predetermined level of significance was p<0.05.

RESULTS: Mammography volume declined by 11% in March-May of 2020. Oncologic breast surgeries and reconstructive surgeries similarly declined by 6.8% and 11%, respectively, in 2020 compared to 2019, reaching their lowest levels in April 2020. The volume of all procedures increased during the summer of 2020. Mammography volume in June and July 2020 were found to be at pre-COVID-19 levels, and in October–December 2020 were 15% higher than in 2019. Oncologic breast surgeries saw a similar rebound in May 2020, with 24.6% more cases performed compared to May 2019. Breast reconstruction volumes increased, though changes in the types of reconstruction were noted. Oncoplastic closures were more common during the pandemic, while two-stage implant reconstruction and immediate autologous reconstruction decreased by 27% and 43%, respectively. Volume in 2021 will supersede 2020 levels in all categories.

CONCLUSION: The COVID-19 pandemic acutely reduced the volume of breast cancer surveillance, surgical treatment and reconstruction procedures. Despite mask mandates and required COVID-19 preoperative testing, diligent efforts were made to mitigate the decline in volume related to the COVID-19 pandemic. Volume increased beyond baseline levels to make up for the backlog created by the COVID-19 pandemic. The plastic surgery community can learn from these experiences in order to mitigate the impact of future disrupting events.

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PURPOSE: Perforator flaps have become widely used in plastic surgery. Anatomically, perforators have a gradual reduction in the vessel caliber as they run towards the periphery. During free flap elevation, temporary or prolonged vascular spasms can be appreciated, resulting in a momentary decrease in pulsation. This phenomenon, unless resolved, can result in postoperative flap failure. Usually, intraoperative topical application of papaverine hydrochloride and/or warm water are sufficient to restore normal blood flow. Nevertheless, due to lack of reliable assessment modalities (e.g., macroscopic observation, loupe, or palpation), resolution of the spasm and recovery of pulsation at the periphery of perforators cannot be determined in a judicious and objective manner. The purpose of this study was to use the new generation video-capillaroscopy to evaluate and analyze the pulsation of perforators and observe circulation at the end of branches with a diameter even in ≤ 0.01-mm in adipose tissue during flap elevation.

METHOD: Between November 2021 and February 2022, seven free flaps (two rectus abdominis flaps and 5 anterolateral thigh flaps) for head and neck reconstruction were evaluated with video-capillaroscopy (Bscan-ZD, GOKO Imaging Devices Co., Ltd., Japan). The visual field of video-capillaroscopy was about 175x and 620x, 1.2 million pixels, and 1-mm depth from the surface. The type of perforator spasm after flap elevation was divided into 6 types according to the video-capillaroscopy findings. No spasm/decreased pulsation (S/DP) (type A); S/DP with recovery within 5 minutes (type B); S/DP requiring papaverine hydrochloride spraying (PHS) and hot water treatment (HWT), resulting in recovery within 5 minutes (type C); S/DP requiring PHS and HWT resulting in recovery within 10 minutes (type D); S/DP requiring PHS and HWT resulting in recovery within 15 minutes (type E); S/DP with no recovery on pulsation following PHS and HWT (type F).

RESULTS: Twenty-five perforators were evaluated. Using our classification for perforator vessel spasms on video-capillaroscopy, observations of five perforating branches were classified as Type-A, seven as Type-B, six as Type-C, five as Type-D, and two as Type-E. No Type-F spasms were observed. Real-time movement of red blood cells in

**TRACK: RECONSTRUCTIVE**

Intraoperative Identification of Perforator Vessel Spasm and Decreased Pulsation During Free Flap Harvest Using Video-capillaroscopy

**Presenter: Chihiro Matsui, MD**
adipose tissue and pulsation could be observed in perforator’s branches with a minimum diameter of 0.007 mm. Vascular pulsation with sinus rhythm could be observed on the imaging monitor. The absence/presence of pulsation made it possible to determine the alignment of the artery and vein.

CONCLUSION: During microvascular reconstruction, it is imperative that blood flow from perforating vessels is stable with resolution of S/DP before the pedicle vessel is cut and anastomosis is performed. In some instances, vascular damage during flap harvest and perforator dissection can cause interruption of blood flow to the periphery via different mechanisms. With video-capillaroscopy it is possible to confirm if blood flow deterioration occurs even in areas that are difficult to observe macroscopically. Video-capillaroscopy, a non-invasive imaging modality, is a useful alternative for the intraoperative evaluation of perforator flow and safe flap elevation and transfer.

TRACK: AESTHETIC
Enhanced Recovery after Surgery (ERAS) Protocol in Facelift Surgery

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PURPOSE: Development of ERAS protocols can improve patient recovery following cosmetic surgery. We aim to present our ERAS protocol for rhytidectomy of the face and neck.

METHOD: A review of outcome analyses in the literature was conducted and summarized to formulate our recommendations. Emphasis was placed on high quality trials, prospective studies, and meta-analyses of high evidence-level. Our ERAS protocol contains the following standard elements: medical optimization, anesthetic practices, antimicrobial prophylaxis, complication prevention, and postoperative management. For some elements, recommendations were extrapolated from evidence-based ERAS protocols in other surgical fields.

RESULTS: Preoperative Medical optimization includes emphasis on strict blood pressure control, smoking cessation, and anticoagulant discontinuation. Systolic blood pressure (SBP) is maintained below 140 mmHg peroperatively, as SBP above 150 mmHg has been identified as a significant preoperative risk factor hematoma, as well as male gender, aspirin or NSAID intake, and smoking. It has been shown that active smokers are at higher risk for postoperative skin and wound complications decrease when the time between smoking cessation and surgery is ≥4 weeks. However, it has yet to be determined when their complication rates would become equal to non-smokers. Smoking has been consistently linked with increased risk of local flap necrosis and systemic complications. If smoking cessation is questionable, a urine cotinine assay may be used. Perioperative measures include 0.1 mg clonidine patch the night prior, or oral the morning of surgery to address blood pressure and anxiety. The reported incidence of postoperative infection is low and surgery length dictates the use of antimicrobial prophylaxis. First-generation cephalosporin is given 30 minutes before incision, followed by one additional dose. Known MRSA carriers are given vancomycin, 7 days of topical mupirocin ointment, and 5 days of chlorhexidine soap body wash. No evidence supports postoperative antibiotics. Intraoperative The ASPS and AAPS recommended use of 2005 Caprini scores to stratify VTE risk and implement individualized risk reduction plans. Since facelift is usually >2 hours and many patients are ≥70, operation length and high Caprini scores mandate intermittent compression stockings. To minimize bleeding, tranexamic acid is given mixed with local anesthesia, topically, or intravenously. Normotension is maintained intraoperatively. Second look technique is used at closure to minimize epinephrine rebound bleeding. Flap closure is performed only after both sides of the facelift and anterior neck work are completed. Blood pressure is raised to preoperative baseline prior to closure. Postoperative Systolic blood pressure control below 140 is mandatory. Labetalol and hydralazine are initiated if necessary. Multimodal therapy for prevention of pain, postoperative nausea and vomiting, and blood pressure control also includes perioperative intravenous acetaminophen (1g), ondansetron (4g), and dexamethasone administered 30 minutes prior to extubation. Celecoxib has also been effective for pain and opioid use reduction. For blood pressure and anxiety, 150 µg clonidine may be administered with benzodiazepines if necessary. Patients are seen and discharged the following day with emergency physician contact.

CONCLUSION: These recommendations have delivered favorable outcomes in the literature and in our practice. Further refinement will require additional high-quality studies in aesthetic plastic surgery.

TRACK: RECONSTRUCTIVE
Use of Tranexamic Acid in Gender-affirming Mastectomy

Presenter: William J. Rifkin, MD