38%. Overall, 20% of patients developed abdominal morbidity. Seven percent of hemi-abdomens developed hernias, all of which required surgical repair; 8% developed a bulge, and only 1 was surgically revised. Hernia occurred most commonly in fTRAM hemi-abdomens and was not associated with closure type or BMI, but was associated with increased age (p<0.05). Survey response rate was 63%. Abdominal well-being and satisfaction scores were not associated with BMI, flap, or closure type. Patients with a bulge had higher well-being and satisfaction scores compared with those without bulge or hernia (p<0.05), and hernia was unrelated with both.

CONCLUSION: Abdominal closure type does not affect the occurrence of abdominal morbidity in the obese patient; however, increased age and flap type likely contribute. Abdominal wall morbidity does not detract from abdominal wall function or patient-perceived cosmesis among obese patients.

Computer Vision Analysis of Specimen Mammography
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INTRODUCTION: In breast-conserving surgery, obtaining negative margins is critical to reducing breast cancer recurrence. Intraoperative specimen mammography is one commonly used technique to identify positive margins, but it can be inaccurate. We sought to create an algorithm using machine learning to identify positive margins on specimen mammography.

METHODS: From 7/2017 to 6/2020, specimen mammograms were collected as part of a surgeon’s quality assurance process. After IRB approval, these images were matched with pathology reports and classified as positive or negative margins based on National Comprehensive Cancer Network (NCCN) guidelines. This dataset was split into a 70/30 ratio for training and validation with the positive images duplicated once within the training set to boost sensitivity. Standard data augmentation was applied. Transfer learning using the ResNet-50 model was used.

RESULTS: The dataset included a total of 450 images, with 208 positive and 242 negative; 319 images were used for training and 131 were used for testing. The overall accuracy was 63%. For positive margins, the sensitivity was 84%, while the specificity was 33%. The positive predictive value was 64% and the negative predictive value was 60%.

CONCLUSION: Our project developed a prototype algorithm that assesses the margin status of specimen mammograms with modest accuracy. Our accuracy metrics compare favorably with published literature at 63% vs 53%. We plan to improve the model by creating a more robust training set, evaluating with an independent test set, and developing image segmentation. Optimized versions of this algorithm could reduce the rate of positive margins in breast-conserving surgery.

Cost-Effectiveness Analysis: Staged vs Nonstaged Techniques for Nipple-Sparing Mastectomy
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INTRODUCTION: Staged breast reduction before nipple-sparing mastectomy (SNSM) has been associated with decreased complications compared to nonstaged (NNSM), and can be helpful in patients with large, ptotic breasts. However, SNSM incurs additional cost associated with a second surgery. We therefore performed a cost-effectiveness analysis comparing SNSM and NNSM for the treatment or prophylaxis of breast cancer.

METHODS: Rates of infection, necrosis, wound complications, and explantation for each surgery were obtained from the literature. Procedural costs were calculated from Medicare reimbursement rates. Costs to manage each complication were obtained from literature review. Average utility scores for each health state were previously obtained via visual analog scale, and then converted to quality-adjusted life years (QALYs). A decision tree was constructed and incremental cost-effectiveness ratio (ICER) was assessed at $50,000/QALY. Deterministic and probabilistic sensitivity analyses were performed to evaluate the robustness of our findings.

RESULTS: SNSM was more costly ($16,520.07 vs $12,994.99) but more effective (26.55 QALY vs 26.2 QALY) than NNSM, resulting in an ICER of $10,062.03/QALY. Deterministic and probabilistic sensitivity analyses were performed to evaluate the robustness of our findings.

RESULTS: SNSM was more costly ($16,520.07 vs $12,994.99) but more effective (26.55 QALY vs 26.2 QALY) than NNSM, resulting in an ICER of $10,062.03/QALY. One-way (deterministic) sensitivity analysis demonstrated that SNSM became cost-ineffective when its cost was greater than $27,571.19. Probabilistic sensitivity analysis using Monte-Carlo simulation demonstrated that even with uncertainty present in the variables analyzed, the