12 months. Length of stay in the process analysis group was decreased by.84 days (p<.001) with an average Room and Board savings of $1,755.16 (p<.001). Operative time in the process analysis group was decreased by 2 hours and 13 minutes (p<.001) with an average MedSurg Supplies savings of $440.71 (p<.001). There were no statistically significant differences among Radiology, Blood, Lab or Pharmacy costs. Therapy costs increased in the process analysis group by $166.63 (p<.001). OR Services and Anesthesia costs increased each year with no differences between groups; however, total cost was less in the process analysis group, with an average savings of $3,881.07 (p<.001) per episode.

CONCLUSION: Deliberate practice and process analysis are highly associated with safe, improved and cost-effective outcomes. While this analysis is from the hospital's perspective, the decreased hospital stay and cost per episode have clear and significant benefits when translated to the patient

Obesity and Taxanes are Independent Risk Factors for Postmastectomy Lymphedema: A TriNetX Based Analysis

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INTRODUCTION: Postmastectomy lymphedema is the most common cause of secondary lymphedema in the developed world, and it has a significant negative impact on patients' quality of life.

OBJECTIVES: The objective of this study is to define the relationship between BMI and postmastectomy lymphedema, so we can have a better understanding of the disease which could improve the current clinical practice.

METHODS: This study was conducted with anonymized data accessed via the TriNetX platform. All data collection, processing, and transmission were done in compliance with data protection laws applicable to the contributing HCOs. Analysis is performed at HCO with only aggregated results being returned to the platform. We utilized ICD-10, CPT, and TNX- curated codes to build our cohorts. We compared mastectomy patients who are overweight, obese, or morbidly obese at the time of surgery with those who had a BMI that ranged from 18.5- 24.9 kg/m2. The patients were stratified by WHO categories: underweight BMI< 18.5 kg/m2, normal weight BMI 18.5- 24.9, overweight BMI 25- 29.9, Class I obese BMI 30- 34.9, Class II obese BMI 35- 39.9, and obese class III BMI ≥ 40. The cohorts were matched by age, sex, race, axillary lymph node dissection, radiotherapy, chemotherapy, hypertension, diabetes mellitus, congestive heart failure, chronic kidney disease, cellulitis, type of mastectomy procedure, type of breast reconstruction. The outcome of interest was development of postmastectomy lymphedema in the first three years after mastectomy.

RESULTS: There were 111,619 mastectomy encounters in the TriNetX database from the year 2000 to 2019, of which, 27,423 patients had BMI index reported on the day of surgery (24.6% of all cases). The mean age at index was 57.3 years (SD 15.2), and 96% were females. The mean BMI for the cohort was 28.8 (SD 6.53). The incidence proportion of postmastectomy lymphedema was lowest in the underweight and normal weight patients (1.719% and 2.296, respectively), while it was the highest in class III obese cohort (5.144%), followed by class I obese (3.978%), class II obese (3.912%), and overweight cohort (3.175%).

After matching, there was an increased risk of postmastectomy lymphedema in overweight (RR 1.265, 95% CI 1.059- 1.513, P= 0.0096), class I obese (RR 1.674, 95% CI 1.399- 2.002, P< 0.0001), class II obese (RR 1.704, 95% CI 1.299- 2.234, P< 0.0001), and class III obese (RR 2.636, 95% CI 1.872- 3.714, P< 0.0001). There was no significant difference in the underweight cohort (RR 0.8, 95% CI 0.44- 1.456, P= 0.4631).

Subsequent analysis revealed increased risk of postmastectomy lymphedema in patients who received taxanes therapy (RR 3.385, 95% CI 3.212- 3.569, P< 0.0001). Hypertension was associated with increased risk of postmastectomy lymphedema (RR 1.36, 95% CI 1.26- 1.469, P< 0.0001). There was no increased risk of lymphedema in chronic kidney disease (RR 1.021, 95% CI 0.869- 1.2, P= 0.7985), or congestive heart failure (RR 1.229, 95% CI 0.997- 1.515, P= 0.0503).

CONCLUSION: Obesity and taxanes are independent risk factors for postmastectomy lymphedema. Therefore, weight reduction interventions should be the focus of future research.