Differences in the ability to obtain breast reduction surgery according to type of insurance

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Introduction: Reduction mammaplasty surgery is known to produce improvement of symptoms associated with macromastia, but access to this surgery remains limited by socioeconomic and demographic factors.

Method: A prospective cohort study was performed to evaluate the differences between women with macromastia who had government-funded vs. private insurance and their access to surgery. All women who presented to the Plastic Surgery Clinic with complaints of large and heavy breasts were invited to participate in the study. Data collection included demographic questions as well as bra cup size, body mass index (BMI), specimen weight, time interval for insurance approval or denial of coverage, and postoperative complications. This study was IRB approved.

Results: The study evaluated 154 women with symptomatic macromastia. Of the group 80 (52%) had government-funded insurance and 74 (48%) had private insurance. Our findings are shown in table 1.

Conclusion: There are significant disparities in access to reduction mammaplasty based on type of insurance. Patients who depend on government-funded insurance have a higher percentage of denial of surgery, longer waits and reach surgery older, more obese and with greater complication rates.

Table 1. Comparison of groups.

	Government insurance n=80	Private insurance n=74	P
Age	36±11	29±9	<0.05
Bra cup size	40-DD	38-D	<0.05
Body mass index	34±4	29±3	<0.05
Specimen weight (gm)	1,200±350	760±255	<0.05
Time to coverage decision (months)	6±3	2±2	<0.05
Claims approved (%)	71%	90%	<0.05
Postoperative complications (%)	45%	26%	<0.05

Women with government-funded insurance were older, had larger breasts, more obesity, and more postoperative complications.

Insurance Type and Patient Characteristics

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Introduction: Insurance type may be responsible for disparities in access to medical care.

Method: We evaluated the characteristics of cases in the Surgery Department's database by insurance type from 1/1/2018 to 12/31/2018. Variables examined included age, gender, inpatient/outpatient status, wound classification, elective/emergency surgery, American Society of Anesthesiology (ASA) classification and if diabetic, smoker, or hypertensive. This database was IRB approved.

Results: Information was available for 5,097 cases during the study period. Insurance type was distributed as follows: government 38.3%, Medicare 12.3%, private 47.9% and uninsured 1.5%. Private insurance was more frequent among women, with elective surgery and clean wounds. Table 1 shows our findings.

Conclusion: Young males were more frequently uninsured or government insured, and they required emergency surgery more frequently than private or Medicare patients. Women were more frequently privately insured with elective surgery.

	Government n=1953	Medicare n=627	Private n=2441	Uninsured n=76	P
Mean Age	41±24	72±12	54±18	45±18	≤0.001
Females	1044 (53.5%)	326 (52.1%)	1480 (60.7%)	22 (28.9%)	≤0.001
Inpatient	1353 (69.6%)	462 (73.8%)	1268 (52.0%)	67 (88.2%)	≤0.001
Outpatient	592 (30.4%)	164 (26.2%)	1171 (48.0%)	9 (11.8%)	
Wound/Clean	875 (45.2%)	284 (46.0%)	1380 (58.0%)	18 (23.7%)	≤0.001
Elective	1608 (82.4%)	544 (86.8%)	2198 (90.1%)	10 (13.2%)	≤0.001
Emergency	344 (17.6%)	83 (13.2%)	242 (9.9%)	66 (86.8%)	
ASA ≥3	680 (35.1%)	453 (72.8%)	910 (37.7%)	26 (35.6%)	≤0.001
Diabetes	367 (18.8%)	286 (45.8%)	559 (22.9%)	19 (25.3%)	≤0.001
Smoker	164 (8.4%)	74 (11.8%)	171 (7.0%)	16 (21.1%)	≤0.001
Hypertension	761 (39.0%)	506 (80.7%)	1272 (52.2%)	33 (43.4%)	≤0.001

Characteristics and outcomes of cardiac arrest patients in the Puerto Rico Trauma Hospital

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Introduction: Cardiac arrest refers to the sudden cessation of cardiac activity with hemodynamic collapse. In this study, we seek to evaluate the characteristics and outcomes of trauma patients admitted to our Hospital who suffered cardiac arrest during their stay.

Methods: A retrospective analysis using data of 87 cardiac arrest cases recorded in the Puerto Rico Trauma Registry Databank during the period from January 1st, 2016 thru December 31st, 2018. Data collected included demographics, trauma mechanism, Injury Severity Score (ISS), Glasgow Coma Scale (GCS), initial vital assessment, and hospital course. Descriptive analyses were done using the mean ± standard deviation, median, interquartile range (IQR), or frequencies and percentages as appropriate according to variable type. This study is IRB approved.

Results: 89.3% of the patients were male, mean age was 55.2 ± 22.1 years. Motor vehicle collisions (31%), falls (25%) and pedestrian (18%) accidents were the most common trauma mechanisms. Median ISS was 17. Initial GCS < 9 was reported in 31% of the cases. Median (IQR) hospital stay, ICU, and mechanical ventilation were 35(58), 22(45) and 23(41) days, respectively. Mortality was reported in 64% of the cases.

Conclusion: Cardiac Arrests were seen in the older age group of patients. Also, initial ISS of these patients are in the higher part of the spectrum. In addition, this group of patients has a 64% of mortality which is lower than the 80% commonly reported {Schober2014}. Further studies should focus on analyzing the patient's functional status after discharge from hospital.

Comparison of burnout and stress levels according to gender and post-graduate year in general surgery residents

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Introduction: Burnout prevalence among surgery residents can amount to 69%. However, few studies have addressed the prevalence of burnout and stress according to gender and post-graduate years.

Methods: Burnout and stress levels were evaluated through a cross-sectional study of a single general surgery residency program of 39 students. Two validated instruments (MBI and PSS) were distributed through an anonymous online survey on September 2018. Burnout score was based on 3 MBI dimensions: emotional exhaustion, depersonalization, and personal accomplishment. Total scores were stratified as low, moderate, or high. The PSS was used for stress levels, with a score ≥17 considered high. Subjects were compared according to age group, gender, and postgraduate year. This study was approved by IRB.

Results: Thirty-eight residents participated, with a mean(SD) age of 28.9(2.9) years and males composing 55%. Burnout prevalence totaled 31.6%, higher among males (p=0.10). Prevalence per residency year was 50% of PGY1s, 25% among PGY3s, and 8.3% for each remaining year. Age-wise, residents of 25-29 years (33%) and those > 35 years (33%) had high burnout. Stress prevalence was 56%, also higher among males (62% vs. 47%, p=0.36). By residency year, it was 40% for PGY1, 25% for PGY2, 20% for PGY3, 10% for PGY4 and 5% in PGY5. Residents aged 25-29 years (60%) and 30-34 years (63%) had the highest levels of stress.
Conclusion: Burnout prevalence among our residents is comparable to that reported in the literature. Both burnout and stress levels were higher among males, junior residents and the youngest age group.

Hurricane Maria and Prehospital Management Impact in Penetrating Trauma Patients Receiving Exploratory Surgery

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Introduction: Exploratory surgeries are damage control and evaluative procedures done when hemodynamically unstable patients arrive to the hospital. In severe trauma, time to treatment plays a critical role in patient outcome. After a natural disaster, hospital arrival becomes complicated and lengthens time to arrival. Moreover, patients are still brought to periphery hospitals that cannot provide proper surgical care. This study aims to compare outcomes of patients receiving exploratory surgery when brought to the Puerto Rico Trauma Hospital from scene versus outside institutions.
Method: A retrospective study of 33 records associated with penetrating trauma and exploratory surgery from September 20th, 2017 to December 31st, 2017 were evaluated. Group comparisons were done using the Wilcoxon test; P <0.05 was considered significant. This study was approved by IRB.
Results: The median hospital and ICU length of stay (LOS) were 10 and 8 days, respectively. Patients brought from outside institutions had a median of 8.7 hours until treatment, as compared to 3.5 hours for those from the scene (p<0.05). However, no statistical difference for hospital or ICU LOS was seen between the two groups. Overall, 87.9% of the study population were males. Elevated glucose (168.4±88.1mg/dL), hemoglobin (12.5±2.0g/dL) and CO2 (21.3±4.0mmol/L) levels were also present in the study population.
Conclusion: Patients arriving from non-specialized hospitals received intervention later than those arriving from the scene. This can impact patient outcomes as injuries may worsen over time, but a larger study is needed. This study can assist in developing new pre-hospital management policies to ensure timely interventions.

Epidemiology of Traumatic Falls after Hurricane Maria in Puerto Rico

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Introduction: In September 2017, Puerto Rico experienced its worst atmospheric event in decades with the hit of Hurricane Maria. Currently, the epidemiology of fall-related injuries after the occurrence of a tropical storm is unknown. This study aims to compare the demographical, clinical, and hospital profile of patients admitted to the Puerto Rico Trauma Hospital before and after Hurricane Maria.
Method: A retrospective study was performed to compare fall-related injuries after the hurricane (September 20, 2017 - December 20, 2017) with a control period (same period in 2016). Comparison between the groups was done using chi-square, Mann-Whitney test, and logistic regression. Statistical significance was set at p<0.05. This study was approved by IRB.
Results: An increase in fall-related admissions of subjects aged 40-64 years (34.7% vs. 50.6%) and a decrease among those aged 18-39 years (18.7% vs. 5.9%) was reported. A greater proportion of patients presented with a GCS <15 after the storm (4% vs. 19.3%). No differences were identified for sex, ISS, and hospital outcomes (hospital and ICU days, mechanical ventilation and mortality). Intracranial injuries were marginally higher post-Maria (p=0.06). In multivariate analysis, during the post-Maria period, an increased risk of falls-related injuries was observed among subjects ≥40 years (OR: 3.32) and those with GCS <15 (OR: 5.16) (p<0.05).
Conclusion: Hurricanes represent a serious threat to fall-related injuries among middle-aged individuals, causing significant changes in its epidemiology. This study helps to elucidate the health consequences of falls, and improve healthcare preparedness and interventions to better plan for future natural disasters.

Recidivism at the Puerto Rico Trauma Hospital

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Introduction: Recidivists comprise a rare population of trauma patients, who present with an injury on two or more separate occasions. Multiple factors such as race, insurance status and injury mechanism have been associated. Nevertheless, data regarding recidivists are limited and heterogenous. This analysis compares sociodemographic characteristics, injury profile, and outcomes between recidivists and non-recidivist patients admitted to Puerto Rico Trauma Hospital (PRTH) from 2000-2017.

Methods: An IRB approved retrospective cohort study was performed with data from the PRTH Trauma Registry. Comparisons between groups were done using Pearson's chi-square or Mann-Whitney U tests, as appropriate. Statistical significance was set at $p<0.05$.

Results: 25,378 patients were admitted during the study period, of which 307 (1.2%) were recidivists. Recidivists were less likely to be female (4.6% vs. 17.5%, $p<0.001$), and younger than non-recidivists (27 vs. 33, $p<0.001$). Furthermore, recidivists were more likely to have public insurance (39.4% vs 26.6%, $p<0.001$). Violence-related injuries were the predominant mechanisms of trauma among recidivists (44.6% vs. 29.22%); whereas motor-vehicle injuries were common in non-recidivists (48.3% vs. 39.7%) ($p<0.001$). Recidivists also demonstrated a lower median Injury Severity Score (9 vs. 13, $p<0.001$). When comparing the first injury to the second, 65.7% of patients presenting with violence-related injuries returned for the same type of mechanism. The median time to reinjury for recidivists was 3.5 years. Recidivists exhibited less in-hospital mortality (7.2% vs. 10.8%, $p=0.043$).

Conclusion: Recidivists are less likely to be female; suffer more violence-related injuries; and have less in-hospital mortality.

Single Center Descriptive Report For The Evaluation And Management Of Retained/Calcified Ureteral Stents

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Introduction and Objectives: The development of the ureteral stent is a pioneering advancement in medical technology. A forgotten ureteral stent is defined as a stent that cannot be cystoscopically removed during the first attempt due to stone formation. We reviewed our experience with the evaluation and management of retained ureteral stents.

Methods: We reviewed our IRB-approved database of 38 patients with retained ureteral stents over a 3-year period (2015-2017). Patient information included: gender, height, weight, laterality of stent, reason for placement, BUN and creatinine, grade of calcification, procedure to remove stent, number of procedures, complications, and stone free rate. To classify grade of calcification we utilized the FECal grading system.

Results: Mean age was 45 years. 15 were male and 23 female. Average BMI was 30.4kg/m2. One patient had bilateral stents, while 16 were right 21 left. Stent placement was related to ureterolithiasis in all patients. Grade of calcification was; I: 1, II: 12, III: 12, IV: 6, V: 7. Average number of procedures was 1.5. PCNL was utilized as monotherapy for 12 patients, while 20 underwent PCNL plus another procedure. 94.7% of patients were stone free. 4 complications were recorded.

Conclusions: Management of calcified ureteral stents presents a daunting challenge due to need for a multimodal approach with advanced endourologic techniques. Although best practice for these patients is prevention of stent calcification, it is unrealistic to expect 100% compliance with follow-up. Our data presents a safe and effective pathway for the management of calcified ureteral stents.

Smoking and Risk of Adverse Pathologic Features and Biochemical Recurrence after Radical Prostatectomy.

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Introduction: Studies have shown mixed results in regards the association between smoking and aggressive prostate cancer (PC) among men in the US. However, there is limited data in Hispanic men. We aim to study the association of smoking and the biochemical recurrence (BCR) after radical prostatectomy in a retrospective cohort of Hispanic PC patients.

Method: We are conducting a retrospective analysis of 750 patients treated with radical prostatectomy between 2000-2015 at the VA Caribbean Healthcare System (VACHS). Data were summarized using descriptive statistics. To calculate recurrence hazard ratios associated with smoking status, a Cox proportional hazard regression adjusted for age, BMI, Gleason score, preoperative PSA, clinical stage and extracapsular extension (ECE) was used. Adjusted logistic regressions were performed as a secondary analysis to explore associations between smoking status and ECE, seminal vesicle invasion and positive surgical margins. This study was approved by the IRB.

Results: Preliminary data shows that current smokers had higher ECE presence (75% versus 58%; p=0.019) than former/non-smokers. In the adjusted model, no significant difference in risk of recurrence was observed for smoking status. Gleason scores of 3+4 or higher, preoperative PSA and a T2 clinical stage were all associated with increased BCR. In the secondary analysis, being a current smoker was associated with a 2-fold risk of ECE presence.
Conclusion: Among Hispanic patients in this retrospective cohort, preliminary results support that smoking was associated with higher risk of adverse pathologic features of ECE, but no evidence of association between smoking and BCR.
Acknowledgement: This material is based upon work supported by the Research & Development Service, Urology Section, Surgery Department and Department of Veterans Affairs, Caribbean Healthcare System San Juan, PR.
Disclaimer: The contents of this Presentation do not represent the views of the VA Caribbean Healthcare System, the Department of Veterans Affairs or the United States Government.

Can 3D-Imaging Improve Laparoscopic Radical Prostatectomy outcomes?

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Introduction: The purpose of this study is to determine whether adding 3D-Imaging Improves perioperative and intermediate outcomes of patients treated with laparoscopic radical prostatectomy in the setting of invasive prostate cancer.
Methods: From March 2013 to October 2015, there were 150 consecutive patients who were treated with either 2D (n=75) or 3D (n=75) laparoscopic radical prostatectomy for biopsy confirmed prostate cancer. Perioperative and intermediate term outcomes were compared between the groups. This study was approved by IRB.
Results: There was no difference between the groups for baseline characteristics (i.e. age, PSA levels, and Gleason scores), except BMI was significantly higher in the 3D group (3D [29.1 ± 4.2] vs. 2D [27.4 ± 3.44], P=0.004). There were no significant differences between the groups for complication rates, Hemoglobin loss, positive surgical margin rates, and post-op Gleason scores (P>0.05). Length of stay of stay was significantly reduced in the 3D group (36±12 vs. 46 ± 0.7 hrs, P < 0.001). At 6 month follow up, potency was preserved more frequently in patients treated with 3D (74% vs. 52%), P=0.02).
Conclusion: High definition 3D laparoscopic radical prostatectomy affords an enhanced surgical experience with improved depth perception and spatial orientation. In our experience, 3D laparoscopic radical prostatectomy has resulted in improved operative, perioperative, and intermediate term outcomes when compared to 2D laparoscopic radical prostatectomy.

Laparoscopic Sleeve Gastrectomy Knows no Race

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Introduction: Bariatric surgery has been shown to favorably affect cardiovascular risk factors, and to improve glycemic control and upper airway function in obstructive sleep apnea patients. Laparoscopic sleeve gastrectomy (LSG) is rapidly emerging as the standard of care in the morbid obese population.
Methods: The outcomes of LSG between July 2016 and June 2018 were evaluated. Data was retrieved retrospectively from chart reviews at Bariatric Surgery Clinic. The sample size consisted of n=119. From this sample size, we analyzed the 3-month, 6-month, 9-month, and one-year postoperative weight loss evolution. We also evaluated resolution of the most common comorbidities of patients that had undergone LSG. Comorbidities studied included, diabetes mellitus type 2, hypertension, and obstructive sleep apnea. Finally, the relationship between percent of excess weight loss (%EWL) to the resolution of comorbidities was analyzed. This study was IRB approved.
Results: %EWL after 3 months was 40.6%; at one year from surgery, 66.9%. At three months from surgery 56.1% of patients had eliminated their antihypertensive medications; 58% of patients eliminated their diabetic medications and 51% of patients abandoned use of CPAP machine. Direct relationship in comorbidities resolution for hypertensive patients with a p- value of 0.037. Mean HbA1c before surgery was 7.25; nine months after surgery 5.87. We demonstrated a statistically significant decrease of 1.38 in the HbA1C value.
Conclusion: LSG in our institution has comparable outcomes to national studies with positive results in terms of %EWL and remission of comorbidities. Latinos are not the exception to the therapeutic effects of LSG.