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42 First Year of COVID-19: Stay at Home Decreased Accidents, but Increased Assaults
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Study Objective: Early articles published during the first few months of the COVID-19 pandemic indicated declines in traumatic injuries in the U.S. and internationally. Throughout 2020, there were numerous governmental stay-home orders and policies, health care responses, and COVID-19 vaccine development; all of which may have had unintended consequences beyond illness prevention. Here we investigate the longer-term impact over the first year of the pandemic on the incidence of traumatic injuries.

Methods: This retrospective analysis was performed with all records of trauma activations from an urban level 1 trauma center’s trauma registry. Mean weekly, monthly, and total yearly patient counts from 2017-2019 and total from 2020 were compared using independent samples t-test or Mann-Whitney U test. Shapiro-Wilk tests were used to assess normality and variances, respectively. Differences were considered significant when two-sided p-value < 0.05.

Results: Of 4157 trauma patients in 2020, 73% were male and average age was 39 years old. There were more trauma patients in 2020 than the 2017-2019 average (n = 3869). No demographic differences were present comparing patients seen in 2020 and those of previous years. In 2020, there were significantly higher weekly counts of penetrating injuries versus the 2017-2019 average (mean [SD]) (22.5 [7.2] vs 17.5 [3.1], p > 0.0000), specifically gunshot wounds (GSWs) (15.8 [6.0] vs 11.3 [2.7], p > 0.0000) and more assaults (23.3 [6.7] vs 19.4 [3.2], p > 0.0000). In 2020, fewer falls (11.9 [4.3] vs 13.4 [2.5], p > 0.03), pedestrian/bicycle accidents (5.5 [3.1] vs 7.5 [2.1], p > 0.0002) and accidents in general (45.9 [17.1] vs 50.9 [5.6], p > 0.0003) presented to our hospital compared to 2017-2019 average. Monthly totals in 2020 were higher than average in every month except those with strictest stay home mandates in place (March-May). Overall, weekly totals were higher than average in 2020 (79 vs 73) and decreased during the strictest shut-downs from March 18 through the beginning of June (Fig. 1A & B).

Conclusion: A decreased number of traumatic injuries presented to our level 1 trauma center during the first six weeks of the pandemic, which coincided with closure of most non-essential businesses and the strictest government-instituted stay home orders. The week that our state and city moved into re-opening of businesses to 50% capacity and opened bars, there were more traumatic injuries than previous years on average. After that initial week of increased patient volume, weekly counts of trauma patients were above average in most (25 / 31, 80%) weeks through the end of the year. Increased GSWs and assaults this year may suggest increased interpersonal conflict due to external stressors caused by the pandemic. Conversely, decreased falls, pedestrian/bike accidents and other causes of accidents may suggest that staying at home decreases activities and associated accident risk.

43 COVID-19 in Patients With Cancer
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Study Objective: The COVID-19 pandemic caused by the severe acute respiratory coronavirus 2 (SARS-CoV-2) has significantly affected the provision of routine and acute medical care. The aim of this report is to characterize patients with cancer presenting to EDs in the United States and COVID-19 mortality risk according to tumor subtype.

Methods: The RECOVER registry represents a collaboration between 45 EDs spanning 27 states. This retrospective registry enrolled patients from each study site who received molecular diagnostic testing as part of ED care due to clinical suspicion for COVID-19 disease. Clinical characteristics pertaining to a patient’s cancer status were obtained from medical record review, specifically cancer type, active versus remission status, metastatic versus isolated tumor, and hematologic versus solid tumor status. Cancer type was further classified as solid/hematologic tumor localized or metastatic based on documented diagnoses and/or past medical history.

Results: There are a total of 2865 patients who have a reported history of cancer, 1899 (66.3%) were negative for COVID-19 and 33.7% were positive on COVID-19 testing. There are higher percentages of minority-identifying patients in the COVID-19 positive cohort as compared to the negative cohort, namely Black or African American (33.9% vs 13.5%, respectively, p<0.001), and unknown/other (20.5% vs. 7.1%, p<0.001). Breast cancer was the most common solid tumor presenting in this cohort, with 19.6% of the COVID-positive cohort compared to 9.6% of the COVID-negative cohort (p<0.009). The next most common cancers in the cohort were colorectal (7.5%) and prostate (6.9%), however there were no statistical differences between the cohorts. The mortality rate for COVID-19 positive patients was 24.2% versus 9.9% for the COVID-19 negative rate (p<0.001, OR 1.96). Patients with breast cancer had a much higher mortality rate when associated with a COVID-19 positive test (26.4% versus 10.2%, p<0.001, OR 3.27). Similarly, colorectal cancer, prostate cancer, and leukemias experienced higher mortality rates for COVID-19 positive patients, 31.4% versus 13.2%, 31% versus 12.4%, and 30.8% versus 16.4% (all p<0.001). For patients with a documented history of cancer in remission, they also experienced higher mortality rates when associated with a positive COVID-19 test, namely 21.3% versus 7.2%.

Conclusion: This study represents one of the largest COVID-19 cancer-related studies with 966 patients with a history of active cancer and SARS-CoV-2 infection. Patients with cancer present to the ED with diverse symptoms, treatment regimens, and having a diagnosis of COVID-19 is associated with higher mortality rates. Because of the high mortality rates observed for several of the cancer types in this study, initial evaluation of patients in the ED, subsequent ED therapies, and close communication with treating oncologists is of the utmost importance.