



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Disclosures: S. Sheikh *Nothing to disclose.* G. Peerwani *Nothing to disclose.* S. Aijaz *Nothing to disclose.* R. Malik *Nothing to disclose.* S. Murtaza *Nothing to disclose.* H. Khan *Nothing to disclose.* A. Pathan *Nothing to disclose.*

Journal of the Society for Cardiovascular Angiography & Interventions 1 (2022) 100077

<https://doi.org/10.1016/j.jsc.2022.100077>

A-23 | PCI and sex disparities in cancer and thrombocytopenia: Propensity score and machine learning analysis of 101 million+ hospitalizations



Cesar A. Simbaqueba Clavijo, *The University of Texas MD Anderson Cancer Center, United States*; Dominique J. Monlezun, *McGovern Medical School, United States*; Kevin A. Honan, *The University of Texas Health Science Center at Houston, United States*; Jin wan Kim, *The University of Texas Health Science Center at Houston, United States*; Andrew Badalamenti, *The University of Texas Health Science Center at Houston, United States*; Victor Liu, *The University of Texas Health Science Center at Houston, United States*; Awad Javaid, *University of Nevada, Las Vegas, United States*; Nicolas Palaskas, *The University of Texas MD Anderson Cancer Center, United States*; Gloria Iliescu, *Department of General Internal Medicine, The University of Texas MD Anderson Cancer Center, United States*; Mehmet Cilingiroglu, *Department of Cardiology, The University of Texas MD Anderson Cancer Center, United States*; Konstantinos Marmagkiolou, *The University of Texas MD Anderson Cancer Center, United States*; Cezar A. Iliescu, *Department of Cardiology, The University of Texas MD Anderson Cancer Center, United States*

Background: Thrombocytopenia (TP) in patients with active cancer and acute myocardial infarction (AMI) often complicates optimal inpatient management, based on percutaneous coronary intervention (PCI) versus medical management, and few studies have analyzed related outcomes

Methods: This case-control study is the first nationally representative analysis of mortality, cost, and procedural volume in the above patient group. It utilized the United States largest all-payer hospitalized dataset, the 2016-2018 National Inpatient Sample (NIS). Machine Learning-augmented Propensity Score adjusted multivariable regression (ML-PSr) was conducted, weighted by the NIS complex survey design, and adjusted for known confounders (including NIS-calculated mortality risk by DRG and the likelihood of undergoing PCI versus medical management)

Results: Among 101,521,656 hospitalizations, 2,280,554 (2.25%) had active cancer with AMI and 1,360,097 (1.34%) underwent PCI, of whom 220,558 (16.22%) had TP. The rate of PCI decreased with each subsequent year (30.33 versus 15.17 versus 14.14%) with comparable reduction for both TP and non-TP. AMI cancer patients with versus without TP across all years were significantly less likely to receive PCI (13.96 versus 20.66%, $p<0.001$), despite comparable mortality (21.13 versus 30.33%, $p=0.094$) when matched for age and mortality risk. Females with TP were also significantly less likely to receive PCI compared to male patients with TP (28.68 versus 39.87%, $p<0.001$). In multivariable regression, TP versus non-TP did not increase PCI mortality (OR 0.92, 95%CI 0.46-1.84; $p=0.809$) nor cost (\$-7,168.64, 95%CI -30236.18-15898.91, $p=0.542$)

Conclusions: This study suggests PCI can provide comparable safety and cost for AMI cancer patients with or without thrombocytopenia, though this procedure is done less often for those with it particularly females

Disclosures: C. A. Simbaqueba Clavijo *Nothing to disclose.* D. J. Monlezun *Nothing to disclose.* K. A. Honan *Nothing to disclose.* J. W. Kim *Nothing to disclose.* A. Badalamenti *Nothing to disclose.* V. Liu *Nothing to disclose.* A. Javaid *Nothing to disclose.* N. Palaskas *Nothing to disclose.* G. Iliescu

Contributions: First two authors contributed equally to this abstract as co-first authors

Nothing to disclose. M. Cilingiroglu *Nothing to disclose.* K. Marmagkiolou *Nothing to disclose.* C. A. Iliescu *Nothing to disclose.*

Journal of the Society for Cardiovascular Angiography & Interventions 1 (2022) 100078

<https://doi.org/10.1016/j.jsc.2022.100078>

A-24 | Association of COVID-19 Pandemic with Percutaneous Coronary Interventions for ST Elevation Myocardial Infarction within a Large National Healthcare System



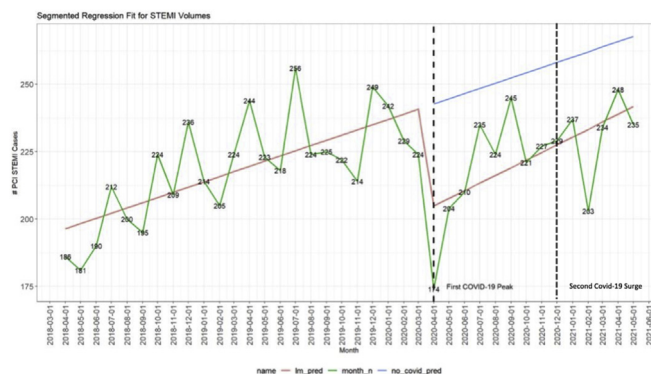
Manoj Thangam, *Ascension Seton Medical Center Austin, United States*; Mark Pirwitz, *Ascension Texas Cardiovascular, United States*; Frederick Masoudi, *Chief Science Officer, VP of Research and Analytics, United States*; Collin Miller, *Ascension Data Science Institute, Ascension Health, United States*; Allison Ottenbacher, *Ascension Data Science Institute, Ascension Health, United States*; Kevin Willmann, *President of Navion Healthcare Solutions, United States*; Sarah Benedict, *Ascension Texas Cardiovascular, United States*; Edward T. Fry, *The Heart Center of Indiana, United States*; Peter Monteleone, *The University of Texas at Austin, United States*

Background: Several centers reported an impact on STEMI volumes during the COVID-19 pandemic. Ascension Health's NCDR CathPCI registry monitors percutaneous interventions (PCI) for STEMI across the nation's largest nonprofit healthcare system.

Methods: To better understand the relationship between COVID and STEMI, data were abstracted from the internal NCDR CathPCI registry between March 2018 and June 2021 across 42 sites. Timing of COVID-19 pandemic was assessed with county level COVID prevalence. A segmented regression with a monthly interrupted time series utilizing a linear regression model to quantify expected STEMI PCIs before and after the COVID onset was performed. The predicted number of PCIs for STEMI from our model was compared to counterfactual values (predictions if COVID had not occurred) to evaluate differences in STEMI volumes (Fig 1).

Results: STEMI PCI trends increased until pandemic declaration in March 2020 with a rapid decrease nadiring in April 2020 (first COVID surge). Thereafter, STEMI PCIs rose consistently until December 2020 (second COVID surge) when a less severe drop occurred. The segmented regression showed 194 STEMI PCIs done monthly (95% CI 182-207, $p<0.001$) with a month-to-month increase of 2 cases (95% CI 1-2.8, $p<0.001$). After pandemic declaration, STEMI PCI decreased by 39 (95% CI -60 - -18, $p<0.001$) per month. Figure 1 shows the decrease in PCI associated with COVID 19 compared to expected numbers if no pandemic occurred.

Conclusions: COVID-19 was associated with a significant decline in STEMI PCI throughout the Ascension health system that has yet to fully recover. The reasons for these observations warrants further assessment.



Disclosures: M. Thangam *Nothing to disclose.* M. Pirwitz *Nothing to disclose.* F. Masoudi *Nothing to disclose.* C. Miller *Nothing to disclose.* A.

Ottenbacher *Nothing to disclose*. K. Willmann *Nothing to disclose*. S. Benedict *Nothing to disclose*. E. T. Fry *Nothing to disclose*. P. Monteleone *Nothing to disclose*.

Journal of the Society for Cardiovascular Angiography & Interventions 1 (2022) 100079
<https://doi.org/10.1016/j.jscai.2022.100079>

A-25 | Racial Differences in Rates of Cardiac Catheterization and Revascularization in Patients with History of Cocaine Use Admitted with Acute Coronary Syndrome



Michael Dangl, *University of Miami/Jackson Memorial Hospital, United States*; Jelani K. Grant, *University of Miami/Jackson Memorial Hospital, United States*; Carlos Vergara, *University of Miami Palm Beach Regional Campus, United States*; Michael Albosta, *University of Miami/Jackson Memorial Hospital, United States*; Ian Ergui, *University of Miami/Jackson Memorial Hospital, United States*; Karla Inestroza, *Jackson Memorial Hospital, United States*; Bertrand Ebner, *University of Miami/Jackson Memorial Hospital, United States*; Stefanie Brown, *University of Miami/Jackson Memorial Hospital, United States*; Rosario Colombo, *Jackson Memorial Hospital, United States*

Background: There is limited data on whether race influences the decision for cardiac catheterization or revascularization for acute coronary syndrome (ACS) in patients with a history of cocaine use.

Methods: The National Inpatient Sample Database was queried from 2011-2019 for relevant ICD-9 and -10 procedural and diagnostic codes. Baseline characteristics and in-hospital outcomes were compared between non-Hispanic Black (NHB) and White patients with a history of cocaine use and a primary admission diagnosis of ACS. A multivariate logistic-regression was performed to adjust for age, sex, ST-elevation myocardial infarction (MI), tobacco use and select co-morbidities for cardiac catheterization and revascularization. A p-value <0.001 was considered significant.

Results: We identified 43,798 patients with a history of cocaine use and ACS, of whom 26,905 were NHB (61.4%). Baseline characteristics are shown in Table 1. NHB patients had lower rates of cardiac catheterization (61.7% vs 72.5%) and revascularization (38.4% vs 52.1%), p<0.001 for all. NHB race was associated with a decreased odds of cardiac catheterization (adjOR 0.765, 95% CI [0.728-0.804]) and revascularization (adjOR 0.676, 95% CI [0.644-0.711]).

Conclusions: Among patients with ACS and cocaine use, rates of cardiac catheterization and revascularization were significantly lower in non-Hispanic Black patients. This highlights a significant racial disparity that must be addressed in this population, since race should not affect whether to proceed with an invasive strategy.

Variable	White (n=16,893)	Black (n=26,905)	p-value
Age (years)	50.8±10.1	53.9±8.9	<0.001
Female	3,182 (18.8%)	6,404 (23.8%)	<0.001
Insured	12,244 (72.5%)	20,665 (76.8%)	<0.001
Income <50 th percentile	10,390 (61.5%)	22,056 (82.0%)	<0.001
ST-Elevation MI	6,173 (36.5%)	7,423 (27.6%)	<0.001
Non-ST-Elevation MI	10,293 (60.9%)	18,495 (68.7%)	<0.001
Unstable Angina	427 (2.5%)	987 (3.7%)	<0.001
Hypertension	10,599 (60.9%)	21,895 (81.4%)	<0.001
Diabetes Mellitus	3,917 (23.2%)	8,103 (30.1%)	<0.001
Hyperlipidemia	8,538 (50.5%)	12,609 (46.9%)	<0.001
Coronary Artery Disease	12,326 (73.0%)	18,594 (69.1%)	<0.001
Peripheral Artery Disease	858 (5.1%)	1,558 (5.8%)	0.001
Chronic Kidney Disease	1,449 (8.6%)	6,326 (23.5%)	<0.001
Heart Failure	5,265 (31.2%)	11,348 (42.2%)	<0.001
Tobacco Use	13,570 (80.3%)	20,803 (77.3%)	<0.001

Table 1. Patient Characteristics. Values are reported as mean ± standard deviation for continuous variables. Categorical variables are represented as n (%). Between-group comparisons were performed for continuous data using T-test for parametric and Mann-Whitney U test for nonparametric variables, respectively. Categorical variables were compared using Chi squared test. A p-value <0.001 was considered significant. MI = myocardial infarction.

Disclosures: M. Dangl *Nothing to disclose*. J. K. Grant *Nothing to disclose*. C. Vergara *Nothing to disclose*. M. Albosta *Nothing to disclose*. I. Ergui *Nothing to disclose*. K. Inestroza *Nothing to disclose*. B. Ebner

Nothing to disclose. S. Brown *Nothing to disclose*. R. Colombo *Nothing to disclose*.

Journal of the Society for Cardiovascular Angiography & Interventions 1 (2022) 100080
<https://doi.org/10.1016/j.jscai.2022.100080>

A-26 | PCI for acute myocardial infarction in patients with a pre-existing LVAD, does it improve survival?



Eric Warner, *Thomas Jefferson University Hospital, United States*; Waqas Ullah, *Thomas Jefferson University Hospital, United States*; Jason Farber, *Thomas Jefferson University Hospital, United States*; Indraneel Rajapreyar, *Thomas Jefferson University Hospital, United States*

Background: It is well established that percutaneous coronary intervention (PCI) is a life-saving procedure for acute myocardial infarction (AMI) in the general population and is guideline recommended for both STEMI and NSTEMI but there is little literature regarding its use in patients with a pre-implanted Left Ventricular Assist Device (LVAD).

Methods: We retrospectively analyzed data from 2002-2018 in the National Inpatient Sample (NIS) Database to select all US adult patients (>18 years) with an LVAD diagnosed with an AMI divided into two groups; those who received PCI during the hospitalization and those who didn't.

Results: A total of 4,534 patients were included in the study of whom 1,507 (33.2%) died during hospitalization. 3693 (81.5%) patients did not receive PCI and 841 (18.5%) underwent PCI. 3095 (68.3%) patients presented with STEMI. Mortality rates were comparable between those receiving PCI and those not receiving PCI (33.4% vs 32.7%, OR 0.97, 95% CI 0.826 to 1.14, p = 0.73). Rates of stroke (9.4% vs 9.4%, OR 0.96, 95% CI 0.776 to 1.30, p = 0.963) and major bleeding (29.3% vs 31%, OR 1.09, 95% CI 0.924 to 1.28, p = 0.34) were similar between groups while rates of AKI (61.5% vs 55.6%, OR 0.79, 95% CI 0.675 to 0.913, p = 0.002) were higher among those managed without PCI. Tamponade (4.3% vs 7%, OR 1.67, 95% CI 1.23 to 2.28, p = 0.001), vascular complications (3.1% vs 6.2%, OR 2.07, 95% CI 1.48 to 2.89, p <.001) and septic shock (7.1% vs 10.1%, OR 1.46, 95% CI 1.13 to 1.89, p = 0.004) were more common in patients receiving PCI. Among patients with STEMI when benefit is theoretically highest, there was no difference in mortality (35.0% vs 35.1%, OR 1.00, 95% CI 0.833 to 1.19, p = 1.0).

Conclusions: There was no mortality benefit demonstrated in LVAD patients undergoing PCI for AMI. Tamponade, vascular and infectious complications were more common in patients undergoing PCI.

Disclosures: E. Warner *Nothing to disclose*. W. Ullah *Nothing to disclose*. J. Farber *Nothing to disclose*. I. Rajapreyar *Nothing to disclose*.

Journal of the Society for Cardiovascular Angiography & Interventions 1 (2022) 100081
<https://doi.org/10.1016/j.jscai.2022.100081>

Carotid Interventions

A-27 | Carotid artery stenting versus carotid artery endarterectomy in asymptomatic severe carotid stenosis: An updated meta-analysis



Ankita Aggarwal, *Ascension Providence Hospital, United States*; Cameron Whitler, *Ascension Providence Hospital, Southfield Campus, United States*; Anubhav Jain, *Ascension Genesys Hospital, United States*; Harshil Patel, *Ascension Providence Hospital, Southfield Campus, United States*; Marcel E. Zughalb, *Ascension Providence Hospital, Southfield Campus, United States*

Background: Carotid artery stenting (CAS) and carotid artery endarterectomy (CEA) are treatment options for the management of severe carotid disease in asymptomatic patients. We aimed to compare the periprocedural outcomes of the two modalities.