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Temporal association of new onset alcohol use disorder following SARS-CoV-2 infection from 2020-2022

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OBJECTIVES/GOALS: During the pandemic, alcohol related deaths increased by 25%. To help understand how we might mitigate this negative outcome, we sought to examine the association of new diagnosis of alcohol use disorder (AUD) with SARS-CoV2 through two years of the pandemic. **METHODS/STUDY POPULATION:** Using a non-date-shifted TriNetX database, we conducted a retrospective cohort analysis of electronic health records of patients age ≥ 12 years who had been diagnosed either with COVID-19 ($n=1,359,817$) or other respiratory infections with no record of COVID-19 ($n=2,013,031$). Patients were then matched for propensity score risk for AUD, and results were analyzed by three-month intervals from January 2020 through January 2022, in blocks numbered 1-8. Results were expressed as hazard ratios (HR) and 95% confidence intervals (CI) for diagnosis of AUD from two weeks to six months following COVID-19 diagnosis. **RESULTS/ANTICIPATED RESULTS:** There was significant excess risk compared to control cohorts of AUD following COVID-19 diagnoses made during the first three months of the pandemic (HR (CI)): block 1: 2.41(1.89,3.08); no excess risk was seen for the remainder of 2020 (blocks 2-4) (HR1.01-1.14, NS). The excess risk increased again in 2021 as the delta and omicron variants emerged (HR and 95% CI): block 5 were: 1.26(1.11, 1.43)); block 6: 1.88(1.62-2.18)); block 7: 1.24(1.10,1.41); block 8: 1.12(1.0-1.25). COVID-19 diagnosis was associated with clinically-evident AUD under some pandemic circumstances. **DISCUSSION/SIGNIFICANCE:** COVID-19 early in the pandemic (block 1) was associated with substantial excess risk for new diagnosis of AUD, with smaller excess risk after COVID-19 during 2021 (blocks 5-7), and no excess risk otherwise. Diagnosis of COVID-19 and pandemic contextual factors are associated with increased risk for AUD.

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The development of a multi-institutional prospective registry for patients with metastatic invasive lobular carcinoma: identifying new markers of disease progression[†]

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OBJECTIVES/GOALS: We are launching a multi-center prospective registry for patients with metastatic invasive lobular carcinoma (ILC), the second most common type of breast cancer, to better understand patterns of progression, imaging features of metastatic sites, and if serial cell free DNA measurements can serve as a surrogate marker of disease progression. **METHODS/STUDY POPULATION:** Patients with biopsy proven metastatic ILC of any receptor subtype will be included in the registry. We will exclude

patients with ductal histology only or those with multiple primary malignancies. Patients will be enrolled at four large academic medical centers across the country. Cell free DNA measurements using a tumor informed assay will be obtained every 3 months concurrent with regular clinical imaging. Disease status will be determined by the patient's medical oncologist by taking into account imaging, tumor markers, symptoms, and cell free DNA measurement. At each time point, patients will be surveyed on their quality of life and their medical oncologists will be asked to rate the clinical utility of the cell free DNA value. Patients will be followed indefinitely. **RESULTS/ANTICIPATED RESULTS:** We will explore whether the use of serial cell free DNA or a combination of blood-based biomarkers and clinical endpoints can reliably identify treatment response and disease progression in patients with metastatic ILC. Many patients with metastatic ILC have unmeasurable disease on imaging and are thereby excluded from clinical trials. The end goal of this registry is to determine if blood-based biomarkers can be used as a proxy for measurable disease in ILC patients and therefore increase clinical trial enrollment for this subgroup of patients. **DISCUSSION/SIGNIFICANCE:** The creation of this prospective registry will open the door for future studies of blood-based markers that reflect disease stability and progression, which is an unmet need specifically in ILC. Identification of such markers could lead to a novel treatment response endpoint, changing the way patients are enrolled in trials and managed clinically.

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The Association of Patient Characteristics on Provider Referrals to a Health-system Based Diabetes Prevention Program in the Bronx, NY.

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OBJECTIVES/GOALS: The Diabetes Prevention Program (DPP) has been shown to reduce diabetes risk by 58%. Men, particularly men of color, are underrepresented in DPP, while they experience higher diabetes-related morbidity. We examine whether race, ethnicity, and gender disparities in engagement are associated with the risk of referral to DPP in primary care. **METHODS/STUDY POPULATION:** Using electronic health record (EHR) from a large urban health system in the Bronx, NY, with an in-house DPP, we examined patient, visit, referral data for DPP-eligible, adult patients with a primary care visit between July 2015 and December 2017. Eligibility included: hemoglobin A1c between 5.7-6.4%; a body mass index (BMI) ≥ 24 kg/m² (≥ 22 if Asian); and having no prior diagnosis of diabetes. A total of 26987 patients were included in this study. We examined patient race, ethnicity, preferred language, visit and prescription history, and health payer, among other characteristics. SPSS was used for univariate and bivariate analyses to examine associations between patient characteristics and referral followed by a logistic regression to examine the multivariate association between predictors and referrals. **RESULTS/ANTICIPATED RESULTS:** Of all DPP-eligible patients, 49% were Hispanic/Latino, and 39% were non-Hispanic Black. Around one-third (34%) of all eligible patients were men. Among all eligible patients in the sample, only 10% were referred to DPP. There were significant differences in the proportion of eligible patients who were referred versus those who were not referred. Women were referred at more than twice the prevalence