

children and adolescents from the Vanderbilt University Medical Center's Synthetic Derivative, a de-identified version of the electronic medical record. Childhood hypertension was defined as systolic blood pressure (SBP)  $\geq 130$  mmHg or diastolic blood pressure (DBP)  $\geq 80$  mmHg at three or more outpatient visits before the age of 18. Obesity and hypertension in early adulthood were the primary outcomes. Obesity was defined as being above normal weight for adulthood height at age 30 based on the NIH's body mass index tables. Hypertension was defined as SBP  $\geq 130$  mmHg or DBP  $\geq 80$  mmHg at three or more outpatient visits after the age of 18. Odds ratios and 95% confidence intervals (CIs) were computed from logistic regression models adjusted for demographics, medication use, and childhood weight. RESULTS/ANTICIPATED RESULTS: Most subjects were female (63%) and white (80%). During childhood, 17% of participants had hypertension. Approximately 58% of this group were obese at age 30, and 38% had hypertension as adults. Compared to females with no childhood hypertension, females with childhood hypertension had 1.35 times higher odds of being obese at age 30 (95% CI: 1.15, 1.58) and 3.56 times higher odds of having hypertension over the age of 18 (95% CI: 3.09, 4.09). Males with childhood hypertension, compared to males without, had 1.28 times higher odds of being obese at age 30 (95% CI: 1.08, 1.52) and 2.74 times higher odds of having hypertension over the age of 18 (95% CI: 2.35, 3.20). Associations between childhood hypertension, early adulthood obesity, and hypertension significantly differed by gender (p-for-interaction for both:  $<0.01$ ). DISCUSSION/SIGNIFICANCE OF FINDINGS: Childhood hypertension is associated with obesity and hypertension in early adulthood. Understanding blood pressure levels in childhood and adolescence may help target efforts to reduce early adulthood cardiovascular risk factors.

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### Clinical Outcomes of Chronic Myelomonocytic Leukemia in the VA Healthcare System

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ABSTRACT IMPACT: Through a comprehensive analysis of patterns of care and outcomes in Veterans with chronic myelomonocytic leukemia, we will identify Veteran-specific determinants of survival that will allow for more personalized decision-making in this underserved population. OBJECTIVES/GOALS: Little is known about outcomes of Veterans with chronic myelomonocytic leukemia (CMML), a malignancy with high morbidity and mortality. In this study, we will describe patterns of care, identify factors that impact survival, and compare outcomes in this cohort to those of the civilian population. METHODS/STUDY POPULATION: We will conduct a comprehensive retrospective review of approximately 1,000 Veterans with CMML. We will construct a database of demographics, clinical characteristics, disease characteristics, treatment regimens, and outcomes in this cohort. Adult Veterans with a diagnosis of CMML determined by ICD-O-3 coding who were treated through the VA after 1990 and have sufficient electronic health data will be included in this study. Veterans receiving the majority of their care for CMML at non-VA hospitals or clinics will be excluded. Data on veterans will be obtained and validated from VA clinical databases and chart review. Data on the civilian population will be obtained from SEER registries. RESULTS/ANTICIPATED RESULTS: We will first describe the baseline patient characteristics and distribution of disease in this cohort and illustrate the landscape

of their CMML care. We will subsequently describe the impact of baseline patient characteristics on pathological features of disease, patterns of care, response to therapy, and survival. We anticipate we will identify several Veteran-specific factors that influence treatment and are prognostic or predictive of survival. After drawing conclusions about the Veteran cohort alone, we will compare baseline characteristics and survival outcomes between the Veteran and civilian populations. We predict we will identify significant differences between these two cohorts. DISCUSSION/SIGNIFICANCE OF FINDINGS: This study will help inform Veteran care by identifying clinical features and patient characteristics that are prognostic or predictive of survival. This will open the door for more accurate risk stratification and personalized treatment that could improve outcomes in this underserved population.

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### Prevalence and Co-prevalence of Comorbidities among Patients with Type 2 Diabetes Mellitus living in Puerto Rico, USA

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ABSTRACT IMPACT: Summarize the burden of diabetes comorbidities and its impact in healthcare utilization in Puerto Rico OBJECTIVES/GOALS: To estimate the prevalence of common comorbidities and describe the healthcare utilization patterns in patients with type 2 diabetes mellitus (T2DM) in Puerto Rico. METHODS/STUDY POPULATION: This is a descriptive study using healthcare claims data from patients with T2DM (based on ICD-9 diagnosis code) from most public and private healthcare insurance companies providing services in Puerto Rico in 2013 (representing more than 90% of insured population). Descriptive analyses by age, sex, type of insurance, health region, and type of medical encounter were done using frequency and percent for categorical data or means or median (with corresponding standard deviation or interquartile range) for continuous variables RESULTS/ANTICIPATED RESULTS: A total of 3,100,636 claims were identified from 485,866 adult patients with T2DM. Most patients were women (276,400; 57%), older than 65 years (235,390; 48%), from the Puerto Rico health regions of Caguas (79,604; 16%), Metro (66,280; 14%), or Bayamon (62,673; 13%) with private health insurance (371,806; 77%). The number of claims per patient ranged from 1 to 339. A mean of 6.3 claims (SD  $\pm 9.99$ ) and a median of 3 claims (Q1 1- Q3 8) per subject were identified. Most (74%) were related to the diagnosis of diabetes (1,829,2015; 59%) or to cardiovascular diseases (458,219; 15%) and associated to outpatient services (2,722,727; 88%). The most prevalent comorbidities were hypertension (235,277; 48%), hyperlipidemia (197,449; 41%), neuropathy (100,471; 21%), renal disease (71,517; 15%), and retinopathy (61,837; 13%) DISCUSSION/SIGNIFICANCE OF FINDINGS: A high prevalence of comorbidities and use of healthcare services were identified in patients with T2DM, especially in older adults. Most comorbidities were due to diabetes-related conditions, highlighting the importance of early diagnosis and adequate management of T2DM patients to avoid preventable burden to the patient and the healthcare system