OBJECTIVE: To determine the rate of CVD in asymptomatic individuals with diabetes mellitus [DM] using non-invasive myocardial perfusion imaging [MPI]. **METHODS:** This observational study identified individuals with DM [ICD-9-CM 250.0] from an administrative database maintained by VISN 22 [Department of Veterans' Affairs]; and, patients received all inpatient and out-patient care from this VISN. One cohort of 53-year old males consisted of individuals who did not undergo MPI over a 24-month interval [n = 60]; another cohort included attribute-matched individuals who had undergone MPI during the same interval. This group did not undergo MPI due to ischemia or other clinical findings of CAD. Evidence of MPI utilization consisted of HCPCS code assignment. Patient records were examined to identify post-MPI CVD and interval morbidity. **RESULTS:** Of those who did not undergo MPI, 15% experienced CVD-related events during the observation interval including acute MI [n = 7], dysrhythmias, and heart failure; however, 25% of MPI studies were abnormal in the second cohort, no patients experienced acute MI, and dysrhythmias and heart failure occurred in two patients [$p < 0.01$]. The rate of CVD events in the first cohort is 0.375/month whereas in the second cohort it is 0.083/month [$p < 0.001$]. Half of the abnormal MPI studies identified multi-vessel CAD. Eleven patients underwent CABG procedures in the second cohort based on findings at MPI; none of the non-MPI patients underwent such intervention. **CONCLUSIONS:** MPI detected CVD in asymptomatic patients with DM which resulted in appropriate intervention and improvement in net health outcomes. Up to 22% of individuals in the US with DM have asymptomatic CVD, and appropriate use of MPI should be considered in this setting.

PDB4

GLYCEMIC RESPONSE TO PIOGLITAZONE THERAPY IN AFRICAN-AMERICAN AND LATINO PATIENTS WITH TYPE-2 DIABETES

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OBJECTIVE: To compare African-American patients (16% of the population) and Latino patients (15% of the population) to their respective complementary cohorts of all other patients (including 66% Caucasian, and 3% others) in terms of glycemic response to pioglitazone combination therapy. METHOD: Twenty-four-week data from three randomized controlled trials, each using 30- or 45 mg doses of pioglitazone combined with i) sulfonylurea; ii) metformin; or iii) insulin for 24-weeks, were analyzed. Mean changes from baseline in hemoglobin A1c between (a) African-Americans and all others and (b) Latinos and all others were compared using regression models with baseline demographics and hemoglobin A1c as covariates. **RESULTS:** Baseline hemoglobin A1c measurements ranged from 10.11 to 10.86 among African-Americans, from 9.73 to 10.11 among Latinos, and from 9.57 to 9.89 among all others. The mean reduction in hemoglobin A1c from baseline was statistically significant in every African-American treatment group (–0.96% to –2.34%) and every Latino treatment group (–1.26% to –1.85%) as well as the "all others" groups. Significantly larger mean reductions in hemoglobin A1c were detected in African-Americans than all others in two treatment groups (receiving higher doses of pioglitazone with sulfonylurea and with metformin) and in Latinos in one treatment group (the lower dose of pioglitazone with metformin combination). Patients with relatively higher baseline hemoglobin A1c and body mass index measurements tended to benefit more from treatment. **CONCLUSION:** Data from three clinical trials show that African-Americans and Latinos attained decreases in hemoglobin A1c levels using pioglitazone combination therapy. Generally, the improvements in hemoglobin A1c in African-Americans and Latinos were comparable to the corresponding cohorts of all others.

PDB5

CAN USE OF GLITAZONES REDUCE THE RISK OF ALZHEIMER'S DISEASE IN PATIENTS WITH DIABETES?

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OBJECTIVES: Diabetic patients have increased risk of developing Alzheimer's disease (AD). Recent clinical studies have shown that the use of insulin-response enhancers, (rosiglitazone and pioglitazone), have improved memory functioning in patients with mild Alzheimer's disease. We hypothesized that the use of glitazones may reduce the risk of AD in diabetic patients. **METHODS:** Diabetic patients were identified from a 20% sample of California Medicaid claims database from 1995–2002. Diabetic patients were divided into a glitazone group and a relatively comparable control group that had at least an interclass switching or combination regimen. Index events were the first glitazone prescription for the experimental group, or the first switching or combination regimen for the control group. Six months of continuous eligibility were required prior to the index event, and patients were followed until admission to nursing home, disenrollment or the end of study period. Patients with any diagnosis of AD prior to index event were excluded. We used Cox proportional hazard model to adjust for variable length of follow-up periods and account for censoring. **RESULTS:** In total, 16,378 patients in glitazone group and 7313 controls met selection criteria. Glitazone patients were older (64.1 vs. 54.3 years, $p < 0.0001$), had significantly higher incidence of each of fourteen morbidities included (diabetic complications, dementia, depression, hypertension, CHF, CHD, etc.), and more resource utilization than control group. However, glitazone patients had fewer incidence of AD during the follow-up period than the control group (0.33% vs. 0.62%, $p = 0.0016$). After controlling for risk factors, use of glitazone was associated with 55% risk reduction of developing AD (HR = 0.448, $p = 0.01$). Additional analysis revealed no significant difference between rosiglitazone and pioglitazone in risk reduction. **CONCLUSIONS:** Use of glitazones significantly reduced the risk of AD in the study population.This implied a preventive utility of glitazones in delaying the onset of AD in diabetic population.

PDB6

TREATMENT PATTERNS IN MANAGEMENT OF TYPE-2 DIABETES WITH CONCURRING COMORBIDITIES

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OBJECTIVE: The goal of this study is to evaluate treatment patterns in the management of type-2 diabetes (T2D) patients, with coexisting comorbidities, including cardiovascular diseases and hyperlipidemia. **METHODS:** In a retrospective cohort study covering three 12-month periods (2001, 2002 and 2003), we analyzed the treatment of newly diagnosed T2D patients. We kept track of records for each cohort in the subsequent 12-months after the initial diagnosis. The study was based on the analysis of electronic CMS1500 medical claims for more than 2,466,131 unique patients (HIPAA compliant). The patients' medication records were assessed through NCPDP electronic pharmacy claims utilizing NDC codes and drug classes. **RESULTS:** Between 2000 and 2003, only 30.8%–35.8% of all patient cohorts did not have comorbidities. The highest level of comorbidities prevalence was discovered within older patients. In 2003, the per-