Demographic and Clinical Differences in Multiple Myeloma by Race: A Multi-Year National Perspective

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Introduction

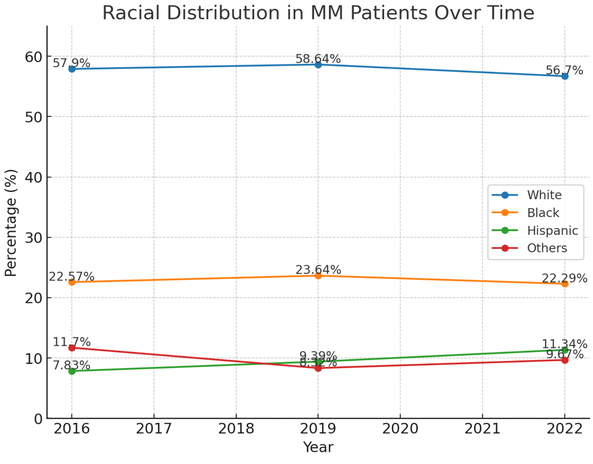
Multiple myeloma (MM) is a clonal plasma cell neoplasm projected to affect approximately 36,000 individuals and cause 12,000 deaths in the United States in 2025, according to the American Cancer Society.

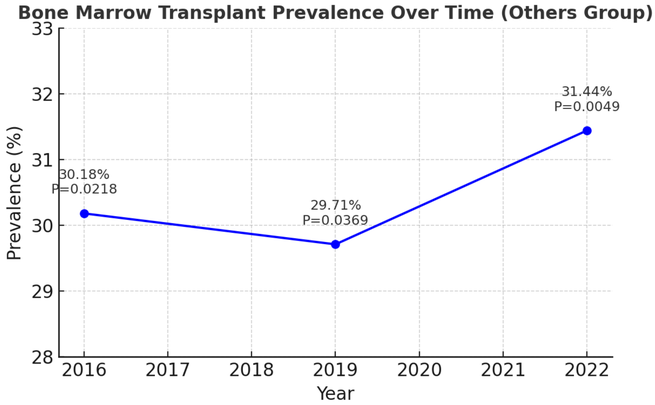
Aim

This study aims to evaluate racial disparities among MM patients by comparing demographic characteristics, in-hospital mortality rates, comorbidity prevalence, length of stay, and total hospital charges across different racial groups.

Methods

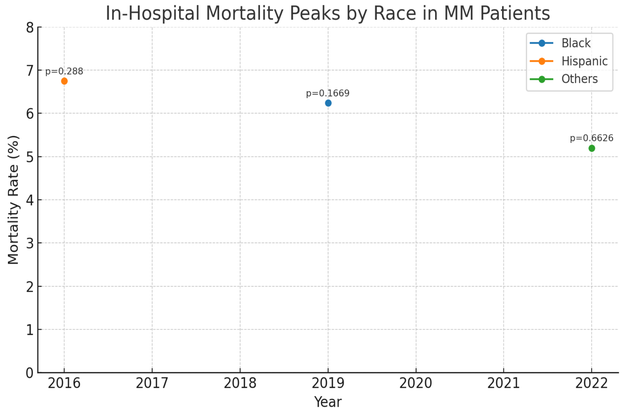
We used the 2016, 2019, and 2022 National Inpatient Sample databases to identify patients admitted with a primary diagnosis of MM. We divided patients into four racial groups, based on relevant ICD-10 codes, to analyze epidemiological trends, demographic characteristics, length of hospital stays, hospital charges, and mortality rates across these years.





Results

Mean ages were 66.88 (White), 63.92 (Black), 62.98 (Hispanic), and 64.28 (Others) years. Female representation was 41.9% among Whites, 50.5% among Blacks, 43.3% among Hispanics, and 44.4% among Others. Chronic kidney disease (CKD), acute kidney injury (AKI), and diabetes mellitus (DM) were most prevalent among Black patients. Other comorbidities (stroke, sepsis, acute coronary syndrome, pulmonary embolism) showed no significant racial variation. Venous thromboembolism (VTE) prevalence differed by race in 2016 (6.1% in Hispanics vs 2.46% in Others; P=0.0469). Congestive heart failure (CHF) prevalence differed in 2022 (10.95% in Blacks vs 9.07% in Hispanics; P=0.0124).



Discussion

Our analysis revealed persistent racial disparities in comorbidities, procedure utilization, and select outcomes among patients with MM. Despite non-significant mortality differences, the consistently higher burden of CKD, AKI, and DM in Black patients, and varying CHF and VTE prevalence, underscore the need for targeted interventions and equitable care delivery across racial groups.