# Identifying Racial Disparities in Clinical Characteristics and Inflammatory Markers in Treatment Naive Multiple Sclerosis

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**Objective:**
To identify race-related clinical differences between Black and White multiple sclerosis (MS) populations.

**Background:**
Few studies exist regarding variations in clinical characteristics in treatment-naive MS patients at clinical presentation. There is even less research on differences at initial evaluation between minority populations. Existing research indicates that Black patients with MS may experience poorer outcomes compared to their White counterparts.

**Design/Methods:** This retrospective chart review collected data on patients with definite treatment-naive MS between 11/14/2007 and 10/30/2019 in the greater Houston area. Clinical characteristics, diagnostics, and inflammatory markers were analyzed between African Americans and Caucasians. Descriptive analyses were completed using Pearson Chi-Square for bivariate analyses with means and medians for continuous variables.

**Results:** A total of (n=56) treatment-naive MS patients were identified (Black = 19.6% vs White = 80.4% ; n=11 vs n=45). Black patients were more likely to present with sleep disturbances than White at initial encounter (Black = 45.5% vs White = 15.6%; n=11 vs n=45; p = .03). Black patients had higher rates of bowel dysfunction at presentation (Black = 45.5% vs White = 4.4%; n=11 vs n=45; p = .002). Memory impairment was also higher in Black patients (Black = 63.6% vs White = 31.1%; n=11 vs n=45; p = .046). Overall, median IgG index levels in CSF were significantly higher in Black patients than White (Black = 1.2 vs White = .92 ; p = .021).

**Conclusions:** Our analyses found that treatment-naive Black patients had significantly higher incidence of CSF IgG index levels, memory impairment, bowel dysfunction, and sleep disturbances. The elevated IgG levels in treatment-naive Black patients implies possible health disparities or amplified immune-mediated mechanisms at baseline. Further investigation is required to better understand causes of these disparities and their external validity.