

## Background

- It has been reported that there is a possible association between inflammatory bowel disease (IBD) and multiple sclerosis (MS).
- Some studies suggest that there are familial links and shared genetic factors between two diseases, and MS course appears to be milder in patients with concomitant IBD.
- On the other hand, there is a lack of studies on how the outcomes of IBD are affected by MS.
- Thus, we aim to assess the outcomes of IBD in patients with concomitant MS.

## Methods

- Patients hospitalized with IBD from the National Inpatient Sample, Healthcare Cost and Utilization Project, Agency for Healthcare Research and Quality in the year 2014 were selected.
- Patient demographics and outcomes of IBD were compared between the groups with and without MS.
- The outcomes of interest were inpatient mortality, length of stay, total hospital charge, and IBD complications including malnutrition, penetrating disease, stricturing disease/bowel obstruction, colectomy, and ileostomy.

## Results

Table 1. Patient Demographics and Characteristics

	MS	Without MS	p-value
N = 34,374	N = 132	N = 34,242	
Patient age, mean (SD)	51.94 (14.137)	47.81 (18.636)	<0.05
Sex			<0.05
Female (%)	106 (80.3%)	19284 (56.3%)	
Male (%)	26 (19.7%)	14948 (43.7%)	
Race, N (%)			<0.05
White	116 (95.6%)	25098 (77.8%)	
Black	*	3732 (11.6%)	
Hispanic	*	2099 (6.50%)	
Asian or Pacific Islander	0 (0%)	367 (1.14%)	
Native American	0 (0%)	143 (0.44%)	
Other	0 (0%)	83 (0.26%)	
Length of stay, in days (SD)	4.39 (4.680)	4.55 (5.042)	0.716
Total hospital Charges, in \$ (SD)	33729.6 (31209.5)	36726.5 (48171.3)	0.48
Inpatient Mortality	0 (0%)	78 (0.23%)	0.583
Charlson comorbidity index (SD)	1.72 (1.59)	1.53 (1.94)	0.264

\*Exact number not included in the table due to small sample sizes

Table 2. Multivariate Regression Analysis of Outcomes

Outcomes	Adjusted Odds Ratio	Confidence Interval	p-value
Malnutrition	0.935	0.381-2.294	0.883
Penetrating Disease	0.43	0.136-1.355	0.15
Stricturing Disease/Bowel Obstruction	1.134	0.712-1.804	0.597
Colectomy	0.641	0.236-1.739	0.382
Ileostomy	0.865	0.319-2.350	0.776

- Among 34,374 patients with IBD identified in the study, 132 patients had MS.
- Between the groups with and without MS, there were no statistically significant differences in inpatient mortality, length of stay, and total hospital charge (all p > 0.05).
- There were no statistically significant differences in IBD complications including malnutrition, penetrating disease, stricturing disease/bowel obstruction, colectomy, and ileostomy (all p > 0.05).

## Conclusion

- Our study indicates that there are no differences in outcomes between IBD patients with and without MS including inpatient mortality, length of stay, total hospital charge.
- There were no differences in IBD complications such as malnutrition, penetrating disease, stricturing disease/bowel obstruction, colectomy, and ileostomy.
- Despite possible genetic links between IBD and MS, our study suggests that outcomes of IBD are not affected by the presence of MS.