

Racial and Ethnic Differences in Diagnosed Prevalence, Specialist Visits, and Treatment Utilization of Inflammatory Bowel Disease: Retrospective Analysis of US Claims Data

Dolly Sharma¹, Si Xuan¹, Yuri Sanchez Gonzalez¹, Jenny Griffith¹,
Lisa Malter², Anita Afzali³, David T. Rubin⁴

¹AbbVie Inc., North Chicago, IL, USA; ²Division of Gastroenterology, NYU Grossman School of Medicine, New York, NY, USA; ³Division of Digestive Diseases, University of Cincinnati, Cincinnati, OH, USA; ⁴University of Chicago Medicine Inflammatory Bowel Disease Center, Chicago, IL, USA

OBJECTIVE

Assess the racial/ethnic-specific differences in diagnosed prevalence and management of Crohn's disease and ulcerative colitis among commercially insured patients in the US by calendar year from 2016–2020

CONCLUSIONS



Among patients with commercial insurance (2016–2020), White patients had the highest diagnosed prevalence in the US, with fewer Black, Hispanic, and Asian patients diagnosed with inflammatory bowel disease



Significant differences were observed for gastroenterologist visits and advanced therapy use by race/ethnicity, and particularly lower in Hispanic populations



The understanding of racial/ethnic differences in disease prevalence, treatment utilization, and access to care is a critical step to ensure appropriate access and improved outcomes for all inflammatory bowel disease patients

Medical writing services provided by Brandy Menges, PhD, of Fishawack Facilitate Ltd, part of Fishawack Health, and funded by AbbVie

AbbVie funded this study and participated in the study design, study research, collection, analysis and interpretation of data, and writing, reviewing, and approving of this publication. All authors had access to the data, and participated in the development, review, and approval, and in the decision to submit this publication. No honoraria or payments were made for authorship.

L. Malter has received medical education grants from AbbVie, Janssen, Pfizer, and Takeda, and served on an advisory board for AbbVie, Gilead, Janssen, Merck, and Takeda. D.T. Rubin has received grant support from Takeda, and has served as a consultant for AbbVie, Altrio, Arena, BMS, Genentech/Roche, Gilead, Iterative Scopes, Janssen, Lilly, Pfizer, Prometheus, Takeda, and Techlab. A. Afzali is a consultant or speaker for AbbVie, BMS, DiaSorin, Janssen, Lilly, Pfizer, Takeda, and TLL. D. Sharma, Y. Sanchez Gonzalez, J. Griffith, and S. Xuan are employees of AbbVie and may own AbbVie stock.

References

- Vespa J, et al. *Current Population Reports*. 2020. Issued March 2018 25–1144
- Ankaran S, et al. *Therap Adv Gastroenterol*. 2019;6(12):1750284819827692
- Cohen NA, et al. *Gastroenterology*. 2022;162(1):17–21
- Afzali A, et al. *Inflamm Bowel Dis*. 2016;22(8):2023–40
- Sewell JL, et al. *Inflamm Bowel Dis*. 2013;19(3):627–43
- Wang YR, et al. *Digestion*. 2013;88(1):20–5

INTRODUCTION

- Census projections indicate that by 2045, the United States (US) will become a majority minority nation wherein proportion of any racial/ethnic group will not exceed 50%¹
- Despite changes in US demographics, most of the existing literature on inflammatory bowel disease (IBD) epidemiology and outcomes involves predominantly White populations^{2–4}
- Conflicting evidence exists regarding racial/ethnic disparities in the treatment and outcomes of Crohn's disease (CD) and ulcerative colitis (UC)^{5–6}

METHODS

Data Source

- Data were extracted from the Optum™ Clinical and Claims Database (2016–2020), which includes 15–18 million annual beneficiaries (Commercial and Medicare Advantage) covered by a large national managed care company

Study Population

- Patients aged ≥ 18 years with ≥ 1 inpatient or ≥ 2 separate outpatient claims for UC or CD in each calendar year were included
- Patients were required to have continuous enrollment in each calendar year
- Patients with missing data on race (~7%) were excluded

Outcomes

- Diagnosed prevalence of CD and UC was defined as the number of patients with a diagnosis claim for CD or UC divided by the total number of all patients meeting general inclusion criteria (ie, age and continuous enrollment)

- Proportion of patients diagnosed with CD or UC with ≥ 1 visit to a gastroenterologist in each calendar year
- Proportion of patients diagnosed with CD or UC with ≥ 1 prescription for an advanced therapy in each calendar year
- Proportion of patients diagnosed with CD or UC managed with excessive corticosteroid use (defined as ≥ 10 mg/day of prednisone equivalents for ≥ 60 consecutive days or one prescription of ≥ 600 mg prednisone) in each calendar year

Statistical Analysis

- Outcomes are reported by year for the overall population and by race/ethnicity (White, Black, Asian, and Hispanic)
- Outcomes were compared by race/ethnicity using chi-square tests

RESULTS

Study Population

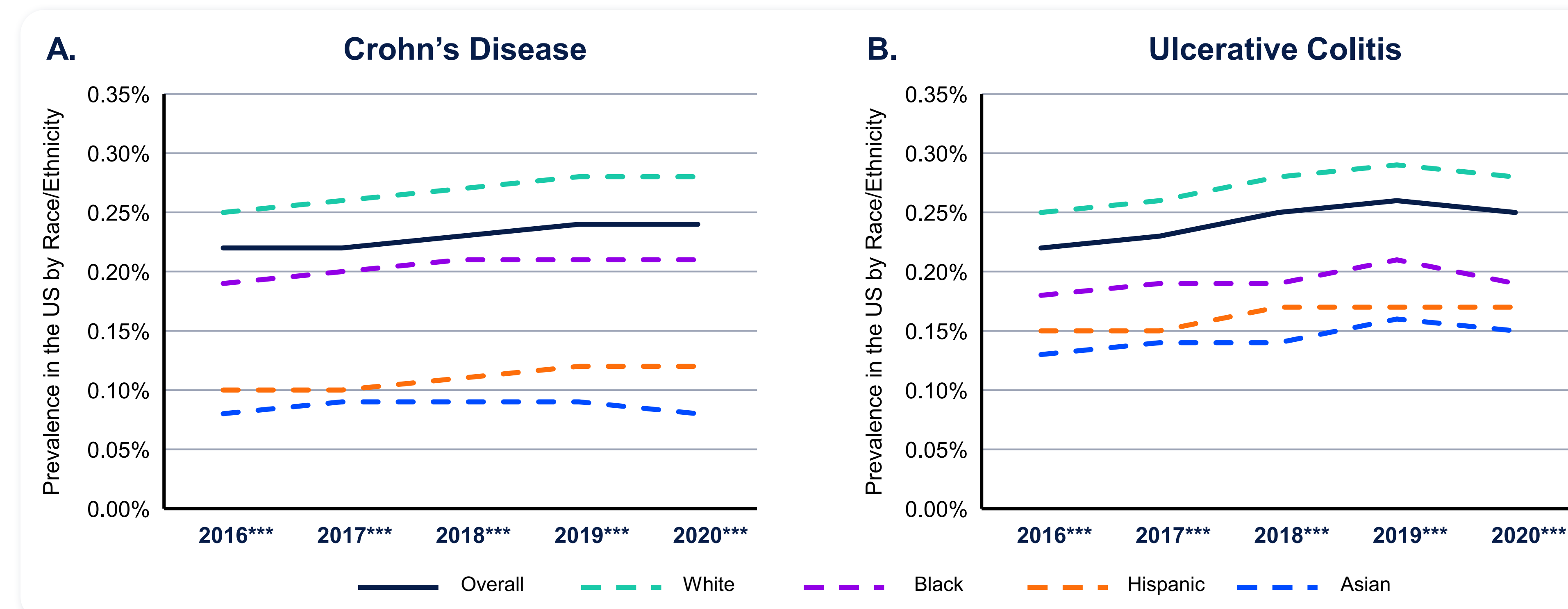
- Total patients meeting the eligibility criteria are shown in the **Table**
- A total of 21,231 (0.22%), 23,777 (0.22%), 25,458 (0.23%), 26,790 (0.24%) and 26,147 (0.24%) patients with CD were identified in years 2016–2020
- A total of 21,909 (0.22%), 24,859 (0.23%), 26,776 (0.25%), 28,441 (0.26%) and 27,075 (0.25%) patients with UC were identified in years 2016–2020

Table. Total, CD, and UC Sample Size for 2016–2020: Overall and by Race/Ethnicity

Race/ethnicity	2016	2017	2018	2019	2020
Total population meeting criteria for prevalence estimation, N					
Overall	9,870,027	10,705,561	10,902,964	10,978,001	10,810,075
White	6,968,106	7,511,298	7,707,776	7,796,227	7,721,712
Black	1,050,809	1,151,795	1,162,036	1,182,013	1,153,437
Hispanic	1,304,445	1,467,845	1,459,273	1,450,039	1,393,181
Asian	546,667	574,623	573,879	549,722	541,745
Population diagnosed with CD, N					
Overall	21,231	23,777	25,458	26,790	26,147
White	17,491	19,467	20,913	22,051	21,619
Black	2015	2298	2409	2512	2464
Hispanic	1263	1510	1626	1725	1616
Asian	462	502	510	502	448
Population diagnosed with UC, N					
Overall	21,909	24,859	26,776	28,441	27,075
White	17,386	19,666	21,248	22,660	21,713
Black	1873	2143	2219	2445	2229
Hispanic	1916	2266	2496	2448	2324
Asian	734	784	813	888	809

CD, Crohn's disease; UC, ulcerative colitis.

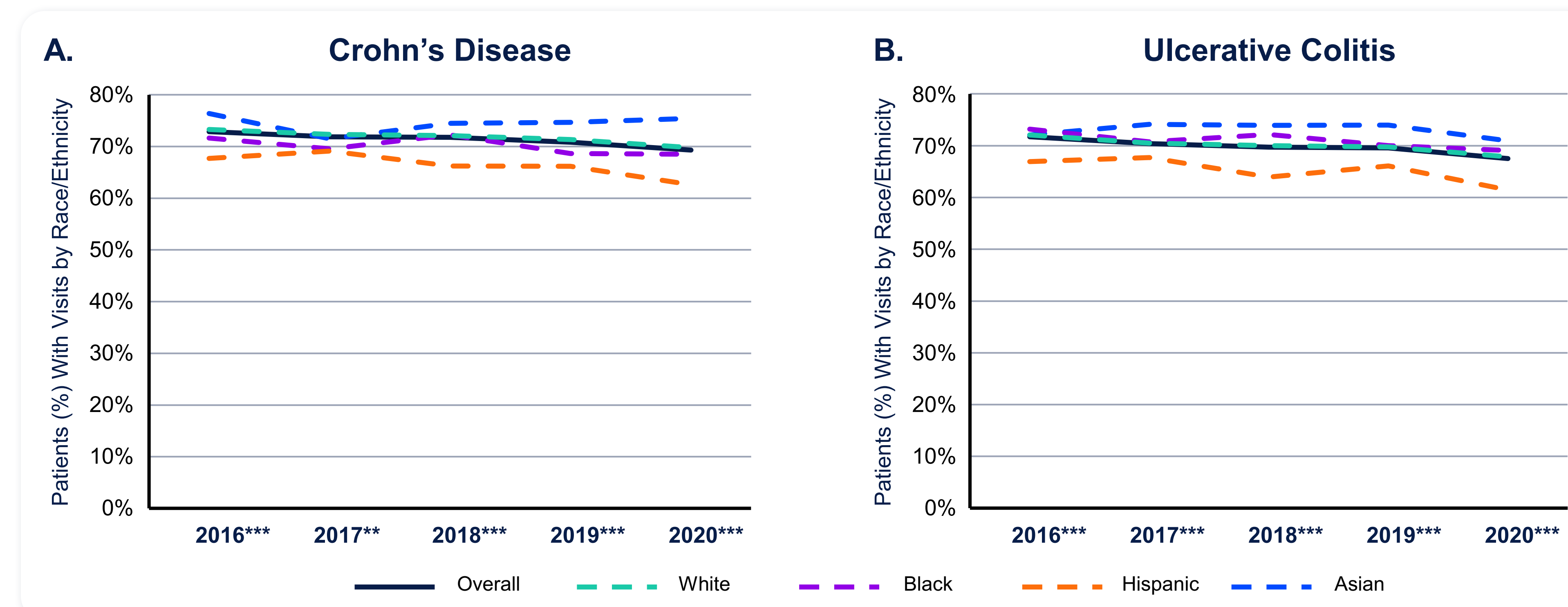
Figure 1. Between 2016–2020, the Overall Diagnosed Prevalence of CD (A) and UC (B) Increased Over Time and Was Significantly Highest Among White Patients



CD, Crohn's disease; UC, ulcerative colitis.
* $P < .05$, ** $P < .01$, *** $P < .001$. Significance indicates differences between races by each calendar year.
White, Black, and Asian patients are non-Hispanic.

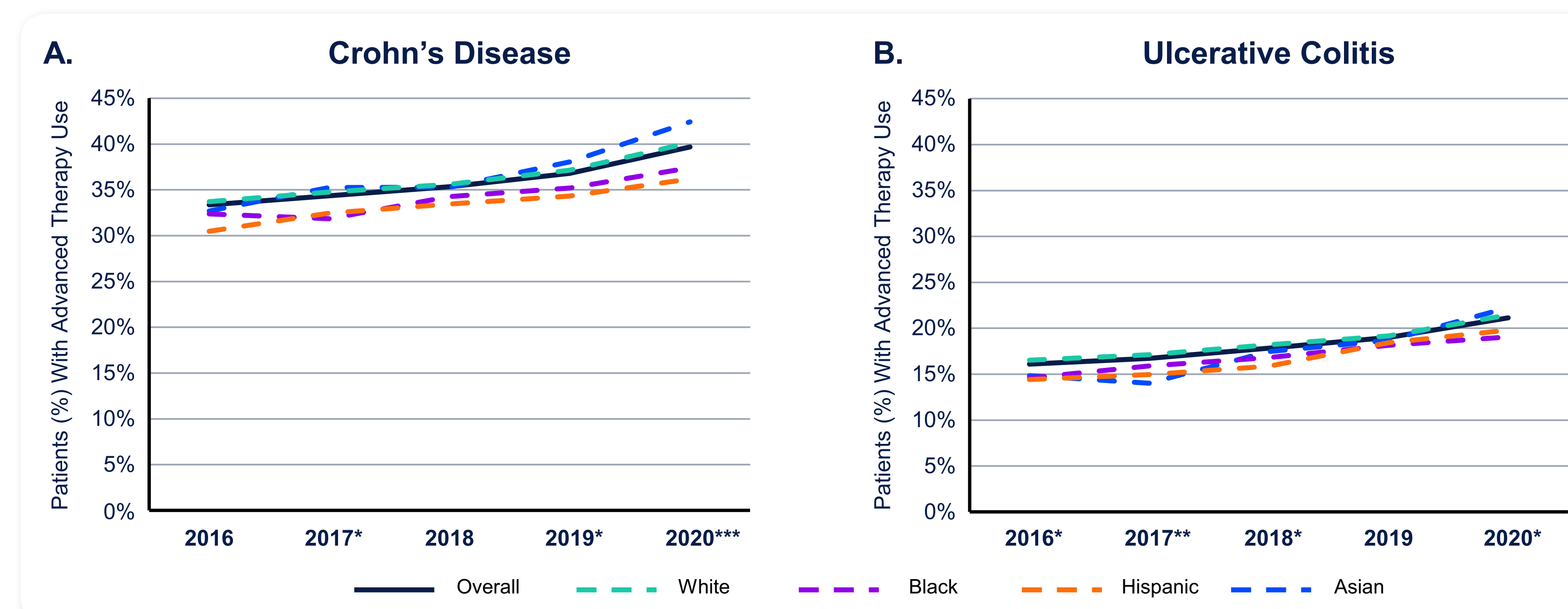
RESULTS CONTINUED

Figure 2. Over Time, Gastroenterologist Visit Rates Declined for Patients With CD (A) and UC (B) and Significant Differences in the Proportions of Patients With at Least 1 Gastroenterologist Annual Visit by Race/Ethnicity Were Observed, With Hispanics Having the Lowest Rates



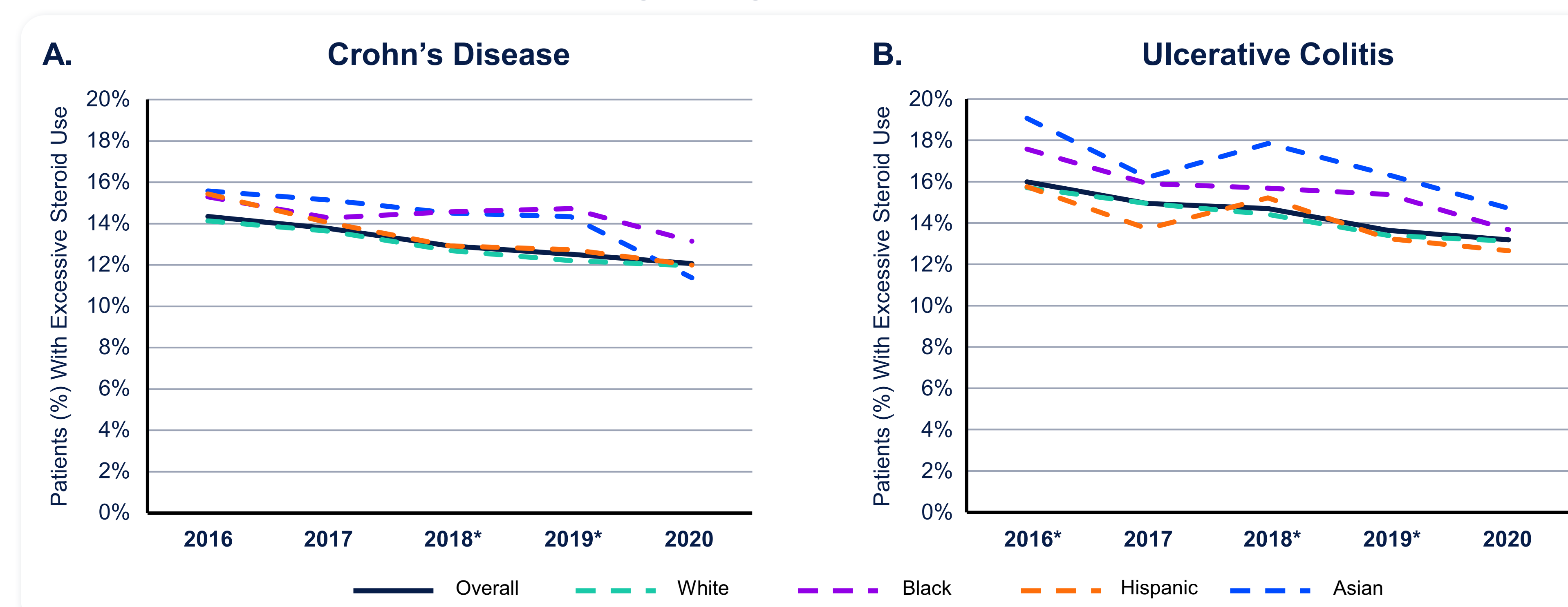
CD, Crohn's disease; UC, ulcerative colitis.
* $P < .05$, ** $P < .01$, *** $P < .001$. Significance indicates differences between races by each calendar year.
White, Black, and Asian patients are non-Hispanic.

Figure 3. Advanced Therapy Use Increased Over Time Among Patients With CD (A) and UC (B); Black and Hispanic Patients Were Least Likely to Receive an Advanced Therapy for CD or UC Over 2016–2020



CD, Crohn's disease; UC, ulcerative colitis.
* $P < .05$, ** $P < .01$, *** $P < .001$. Significance indicates differences between races by each calendar year.
White, Black, and Asian patients are non-Hispanic.

Figure 4. Excessive Corticosteroid Use Among Patients With CD (A) and UC (B) Decreased Over Time, With Black and Asian Patients Having the Highest Excessive Corticosteroid Use Over 2016–2020



CD, Crohn's disease; UC, ulcerative colitis.
* $P < .05$, ** $P < .01$, *** $P < .001$. Significance indicates differences between races by each calendar year.
White, Black, and Asian patients are non-Hispanic.

LIMITATIONS

- Patients with missing data for race variable were excluded which may have affected the inferences made from the results
- This study is only generalizable to those in the insured population in the Optum database; these findings may vary in populations with other/no insurance
- The impact of the COVID-19 pandemic on these results, especially rates of office visits, is unknown