Supplementary Tables and Figures

Tables

Table S1. Multivariable Generalized Linear Model for Mean PDC and CG20 Adjusted by Difference Between Infliximab/IBD and Infliximab/RA

	Crude Model		**Adjusted Model**	
	LS Mean Difference (95% CI)	***P* Value[a]**	**LS Mean Difference[b] (95% CI)**	***P* Value[a]**
PDC				
Difference in mean PDC for VDZ vs TOF	9.6 (6.6 to 12.6)	<0.0001	10.2 (6.9 to 13.4)	<0.0001
Adjusted for difference in mean PDC between IFX/IBD and IFX/RA	5.0 (0.6 to 9.4)	0.0245	4.7 (0.3 to 9.0)	0.0376
Comparisons between disease states				
Difference in mean PDC for IFX/IBD vs IFX/RA	4.5 (1.3 to 7.7)	0.0054	5.5 (2.0 to 9.0)	0.0021

Comparisons within disease state				
IBD: Difference in mean PDC for VDZ vs IFX	–1.8 (–4.8 to 1.2)	0.2331	–2.2 (–5.2 to 0.8)	0.1545
RA: Difference in mean PDC for IFX vs TOF	6.8 (3.6 to 10.0)	<0.0001	6.8 (3.6 to 10.0)	<0.0001
CG20				
Difference in VDZ vs TOF	–31.5 (–42.3 to –20.7)	<0.0001	–32.7 (–44.3 to –21.0)	<0.0001
Adjusted for difference in mean CG20 between IFX/IBD and IFX/RA	–16.0 (–31.8 to –0.2)	0.0475	–14.9 (–30.8 to 0.9)	0.0646
Comparisons between disease states				
IFX/IBD vs IFX/RA	–15.5 (–27.0 to –4.0)	0.0083	–17.7 (–30.4 to –5.0)	0.0062
Comparisons within disease state				
IBD: Difference in mean	4.7 (–6.1 to	0.3960	5.7 (–5.2 to	0.3057

CG20 for VDZ vs IFX	15.5)		16.5)	
RA: Difference in mean CG20 for IFX vs TOF	–20.6 (–32.2 to –9.1)	0.0005	–20.6 (–32.1 to –9.1)	0.0005

[a]*P*<0.05 was considered statistically significant.

[b]Adjusted for age, sex, and prior hospitalization during the baseline period, as these variables were found to be significant in the initial model (*P*<0.10).

Abbreviations: CG20, cumulative days with gap ≥20% beyond the expected interval; CI, confidence interval; IBD, inflammatory bowel disease; IFX, infliximab; LS, least-squares; PDC, proportion of days covered; RA, rheumatoid arthritis; TOF, tofacitinib; VDZ, vedolizumab.

Table S2. Logistic Regression Analysis for the Proportion of Patients With PDC ≥80%

	Crude Model: OR (95% CI)	**Adjusted Model[a]: OR (95% CI)**
Proportion with PDC ≥80% in VDZ vs TOF	1.9 (1.5-2.4)	2.1 (1.6-2.6)
Comparisons between disease states		
Proportion with PDC ≥80% in IFX/IBD vs IFX/RA	1.6 (1.3-2.1)	1.8 (1.4-2.3)
Comparisons within disease state		
IBD: Proportion with PDC ≥80% in VDZ vs IFX	0.7 (0.6-0.9)	0.7 (0.6-0.9)
RA: Proportion with PDC ≥80% in IFX vs TOF	1.7 (1.3-2.1)	1.7 (1.3-2.1)

[a]Adjusted for prior hospitalization at baseline, as these variables were found to be significant in the initial model (P<0.10).

Abbreviations: CI, confidence interval; IBD, inflammatory bowel disease; IFX, infliximab; OR, odds ratio; PDC, proportion of days covered; RA, rheumatoid arthritis; TOF, tofacitinib; VDZ, vedolizumab.

Table S3. Multivariable Adjusted Cox Proportional Hazards Model (Time to Treatment Discontinuation)[a]

	Adjusted Model: HR (95% CI)
Time to discontinuation, VDZ vs TOF	0.7 (0.6-0.9)
Sensitivity analysis	0.7 (0.6-0.8)
Between-disease-state comparisons	
Time to discontinuation, IFX/IBD vs IFX/RA	0.8 (0.6-0.9)
Sensitivity analysis[b]	0.7 (0.6-0.9)
Within-disease-state comparisons	
IBD: VDZ vs IFX	1.3 (1.1-1.6)
Sensitivity analysis[b]	1.3 (1.1-1.5)
RA: IFX vs TOF	0.7 (0.6-0.9)
Sensitivity analysis[b]	0.7 (0.6-0.9)

[a]Model includes treatment/diagnosis group, hospitalization, and Quan-Charlson Comorbidity Index (excluding RA).

[b]Discontinuation defined as a gap in therapy ≥0.5 times the prior supply.

Figures

Figure S1. Study design. The study groups are defined by diagnosis (UC, CD, or RA) and index therapy (vedolizumab, infliximab, or tofacitinib). The primary comparison was between the vedolizumab/IBD and tofacitinib/RA groups; however, comparison between the infliximab/IBD and infliximab/RA groups was conducted to validate the primary comparison.

Abbreviations: CD, Crohn's disease; IBD, inflammatory bowel disease; IFX, infliximab; RA, rheumatoid arthritis; TOF, tofacitinib; UC, ulcerative colitis; VDZ, vedolizumab.

Sunanda Kane; Suppl Figure 1; Figure S1

S1

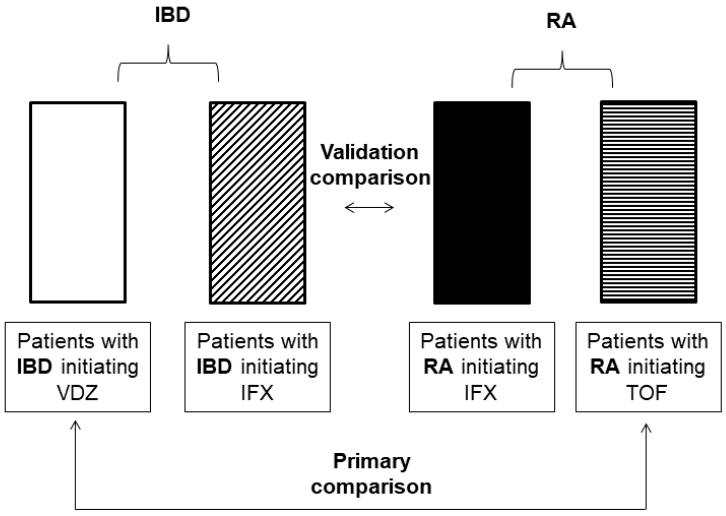


Figure S2. Proportion of persistent patients initiating vedolizumab, infliximab, or tofacitinib after 12 months of follow-up. Nonpersistence was defined as a gap in therapy ≥0.5 times the prior day's supply, beginning from the end of the last supply.

Abbreviations: IBD, inflammatory bowel disease; IFX, infliximab; RA, rheumatoid arthritis; TOF, tofacitinib; VDZ, vedolizumab.

Sunanda Kane; Suppl Figure 2; Figure S2

S2

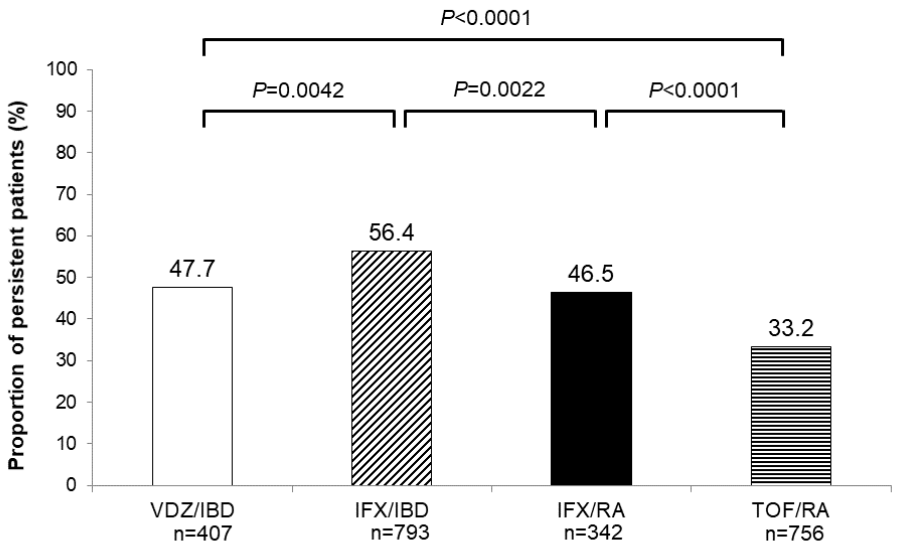
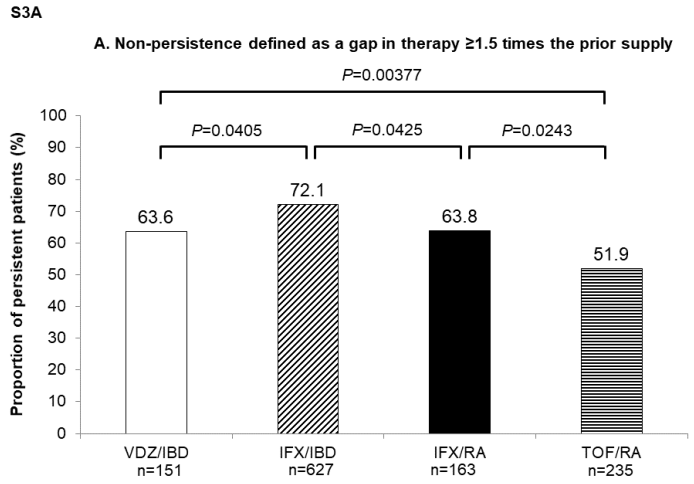


Figure S3. Proportion of persistent biologic-naïve patients initiating vedolizumab, infliximab, or tofacitinib after 12 months of follow-up. Nonpersistence was defined as gap in therapy ≥1.5 times **(A)** or ≥0.5 times **(B)** the prior day's supply, beginning from the end of the last supply. Abbreviations: IBD, inflammatory bowel disease; IFX, infliximab; RA, rheumatoid arthritis; TOF, tofacitinib; VDZ, vedolizumab.

Sunanda Kane; Suppl Figure 3A; Figure S3A



Sunanda Kane; Suppl Figure 3B; Figure S3B

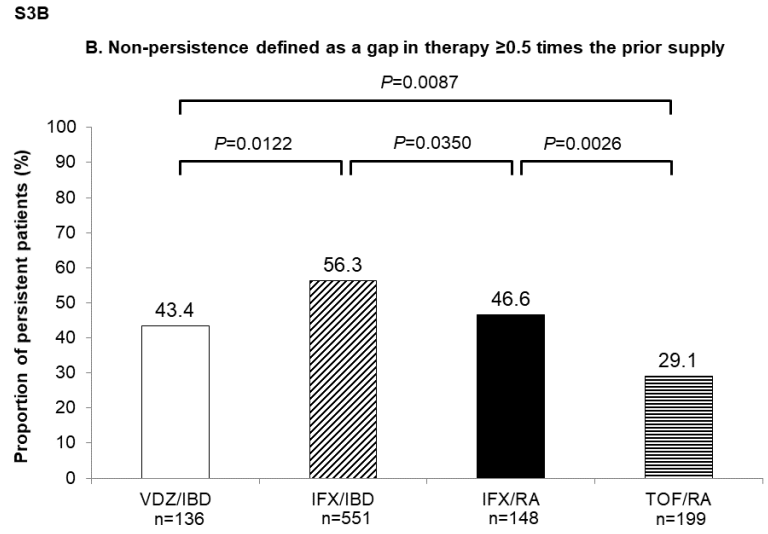


Figure S4. Kaplan-Meier survival curve for time to discontinuation among biologic-naïve patients initiating vedolizumab compared with tofacitinib.

Abbreviations: CD, Crohn's disease; RA, rheumatoid arthritis; TOF, tofacitinib; UC, ulcerative colitis; VDZ, vedolizumab.