

Original Article

Short-term effectiveness, safety and treatment costs of vedolizumab versus infliximab in biologic-naïve patients with moderate-to-severe ulcerative colitis

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Abstract: Objectives: To compare 14-week effectiveness, safety, and treatment costs of vedolizumab (VDZ) versus infliximab (IFX) in biologic-naïve adults with moderate-to-severe ulcerative colitis (UC). Methods: We retrospectively included 96 biologic-naïve patients with moderate-to-severe UC treated at Wuxi No. 2 People's Hospital (Jiangnan University Medical Center) between April 2021 and April 2026. Patients received IFX (n = 36) or VDZ (n = 60). Week-14 efficacy, biomarkers, symptom scores, World Health Organization Quality of Life Brief Version (WHOQOL-BREF) scores, adverse drug reactions (ADRs), and induction medication costs were compared between the two groups. Results: Baseline clinical characteristics were comparable between the groups ($P > 0.05$). At week 14, clinical response, clinical remission, and endoscopic remission rates were not significantly different between the groups (all $P > 0.05$). Both treatments significantly improved abdominal pain, diarrhoea, haematochezia, and WHOQOL-BREF scores from baseline ($P < 0.05$), with no significant between-group differences. Both treatments significantly reduced erythrocyte sedimentation rate and C-reactive protein (CRP) levels at week 14 compared with baseline, with no significant between-group differences. The incidence of any adverse event was significantly lower in the VDZ group than that in the IFX group (1.7% vs. 13.9%, $P = 0.027$). Induction medication costs differed significantly according to the IFX product used. The mean 14-week induction medication cost per patient was significantly lower in the VDZ group than that in the overall IFX group ($P = 0.038$). In IFX-treated patients, baseline partial Mayo score and CRP levels were associated with remission status. Conclusions: IFX and VDZ showed comparable short-term efficacy, whereas VDZ demonstrated a more favorable short-term safety profile and a lower mean induction medication cost than the overall IFX group. Longer-term prospective studies are needed to assess maintenance efficacy, immunogenicity, and long-term safety.

Keywords: Ulcerative colitis, vedolizumab, infliximab, real-world study

Introduction

Ulcerative colitis (UC) is a chronic, relapsing inflammatory bowel disease that primarily affects the mucosa and submucosa of the colon and rectum [1]. Patients with moderate-to-severe UC commonly present with abdominal pain, frequent diarrhea, rectal bleeding, and mucus in the stool. Persistent intestinal inflammation can lead to mucosal injury and may be accompanied by complications such as anemia, hypoalbuminemia, and, in severe cases, systemic infection or sepsis. Due to its chronic and relapsing nature, UC can substantially impair patients' health status and quality of life. Conventional therapies may provide sub-

optimal disease control in some patients with moderate-to-severe UC, necessitating treatment escalation. In addition, prolonged corticosteroid use is associated with drug resistance and corticosteroid dependence, limiting its role as a long-term maintenance strategy [2-4]. Therefore, effective and safe therapeutic options remain needed for patients with moderate-to-severe UC.

In recent years, biological therapies have become an important component of treatment for moderate-to-severe UC [5, 6]. Infliximab (IFX) and Vedolizumab (VDZ) are two commonly used biological agents with different mechanisms of action. IFX is a monoclonal anti-

body targeting tumor necrosis factor- α (TNF- α), thereby suppressing systemic inflammation, whereas VDZ is a gut-selective anti- $\alpha 4\beta 7$ integrin monoclonal antibody that inhibits lymphocyte trafficking to the intestinal mucosa [7, 8]. VDZ may offer improved anti-inflammatory effects and favorable safety profile; however, observational studies have generally shown comparable short-term clinical outcomes between VDZ and IFX. Based on the above observations, the present study retrospectively analyzed the clinical data of 96 patients with moderate-to-severe UC to compare the short-term effectiveness, safety, and treatment costs of IFX and VDZ, with the aim of providing evidence to support personalized management and cost optimization in medical practice.

Materials and methods

Study population

We retrospectively reviewed 96 biologic-naïve adults with moderate-to-severe UC who were treated at Wuxi No. 2 People's Hospital (Jiangnan University Medical Center) between April 2021 and April 2026. Inclusion criteria: (1) aged ≥ 18 years; (2) an established diagnosis of UC according to recognized diagnostic criteria [9]; (3) moderately to severely active UC, defined as a total Mayo score of 6-12 with a Mayo endoscopic subscore ≥ 2 ; (4) complete baseline clinical and laboratory data; (5) at least 14 weeks of follow-up; and (6) biologic-naïve and initiating biologic therapy for the first time.

Exclusion criteria: (1) acute severe UC requiring hospitalization, intravenous corticosteroids, rescue therapy, or emergency colectomy at treatment initiation; (2) an uncertain diagnosis of UC or indeterminate colitis; (3) previous colectomy, ileal pouch surgery, a temporary or permanent stoma, or symptomatic colonic stenosis; (4) active severe infection at the initiation of biologic therapy; (5) active malignancy or a history of malignancy within the previous 5 years; and (6) insufficient baseline or week-14 clinical and laboratory data to assess the primary clinical outcomes.

Ethics statement: This study was approved by the Ethics Committee of Wuxi No. 2 People's Hospital (Jiangnan University Medical Center). As this was a retrospective study using anony-

mized clinical data, the requirement for written informed consent was waived. This study was conducted in accordance with the Declaration of Helsinki.

Treatment protocols

Treatment regimens were selected by the treating physicians according to routine clinical practice and the patients' clinical characteristics. Patients in the IFX group received intravenous infliximab at a dose of 5 mg/kg at weeks 0, 2, and 6, followed by maintenance infusions every 8 weeks. Patients in the VDZ group received intravenous vedolizumab at a dose of 300 mg at week 0, 2 and 6, followed by maintenance infusions every 8 weeks. Vital signs and infusion-related adverse reactions were routinely monitored during treatment.

Concomitant conventional therapies that were already used at the initiation of biologic treatment, including oral or topical mesalazine, corticosteroids, and immunomodulators, were continued or adjusted according to the patient's clinical condition and at the discretion of the treating physician. In patients receiving corticosteroids at baseline, dose tapering was considered after clinical improvement. No additional biologic agents or small-molecule therapies were initiated during the 14-week observation period.

Outcome measures

(1) Therapeutic efficacy. Therapeutic efficacy was evaluated at week 14. Clinical remission was defined as a partial Mayo score (PMS) ≤ 2 , with no individual subscore > 1 . Clinical response was defined as a decrease of ≥ 2 points in PMS from baseline. Endoscopic remission was evaluated only in patients with available endoscopic data at both baseline and week 14.

(2) Inflammatory markers. Fasting venous blood samples were collected before treatment and at week 14 to measure white blood cell (WBC) count, platelet count, erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP).

(3) Nutritional and anemia-related indicators. Fasting venous blood samples were collected before treatment and at week 14 to measure serum albumin and hemoglobin levels.

Table 1. Comparison of baseline characteristics between the IFX and VDZ groups

Variable	IFX group (n = 36)	VDZ group (n = 60)	χ^2/t value	P value
Sex (male/female)	22/14	35/25	0.072	0.788
Age (years)	56.89 $\pm$ 6.12	57.10 $\pm$ 5.77	0.169	0.866
Body mass index (kg/m ²)	22.10 $\pm$ 3.65	22.23 $\pm$ 3.20	0.183	0.855
Disease duration (years)	4.72 $\pm$ 1.25	4.77 $\pm$ 1.40	0.176	0.861
Disease severity (moderate/severe)	17/19	39/21	2.926	0.087
Partial Mayo score (points)	7.27 $\pm$ 1.40	7.11 $\pm$ 1.18	0.599	0.550
White blood cell count ($\times 10^9/L$)	5.62 $\pm$ 0.60	5.55 $\pm$ 0.65	0.526	0.600
Platelet count ($\times 10^9/L$)	313.62 $\pm$ 32.10	315.30 $\pm$ 24.13	0.291	0.772
Erythrocyte sedimentation rate (mm/h)	25.57 $\pm$ 7.62	23.62 $\pm$ 6.75	1.305	0.195
C-reactive protein (mg/L)	6.57 $\pm$ 2.32	5.74 $\pm$ 2.35	1.932	0.056
Albumin (g/L)	35.12 $\pm$ 5.17	37.65 $\pm$ 8.20	1.662	0.100
Hemoglobin (g/L)	107.54 $\pm$ 24.66	115.32 $\pm$ 31.20	1.275	0.205

Note: IFX, infliximab; VDZ, vedolizumab.

(4) Symptom scores. Abdominal pain, diarrhea, and hematochezia were assessed before treatment and at week 14 according to the modified Mayo scoring system. Each symptom was scored from 0 to 3, with higher scores indicating more severe symptoms.

(5) Quality of life. Quality of life was assessed before treatment and at week 14 using the World Health Organization Quality of Life Brief Version (WHOQOL-BREF), which includes four domains: physical health, psychological health, environment, and social relationships. Each domain was scored from 0 to 100, with higher scores indicating better quality of life.

(6) Safety indicators. The incidence of adverse drug reactions (ADRs) was recorded in both groups.

(7) Economic indicators. Medication costs for the induction infusions administered at weeks 0, 2, and 6 were calculated for all included patients. Domestic IFX was first introduced at our hospital in March 2024. Before that time, all patients received imported IFX; thereafter, both imported and domestic IFX were available, although domestic IFX was used in most patients. Therefore, the IFX group included patients who received either imported or domestic IFX. Medication costs were calculated according to the actual IFX product received, and induction medication costs were compared between the overall IFX group and the VDZ group. This analysis was intended as a descriptive cost comparison rather than a formal pharmacoeconomic evaluation.

Statistics analysis

All statistical analyses were performed using SPSS version 25.0. Normally distributed continuous variables are presented as the mean $\pm$ standard deviation (SD). Between-group comparisons were performed using the independent-samples t-test, with Welch's correction applied when the assumption of equal variances was not met. Within-group comparisons between baseline and week 14 were performed using the paired-samples t-test. Categorical variables are presented as n (%) and were compared using Pearson's chi-square test or Fisher's exact test, as appropriate. All tests were two-sided, and $P < 0.05$ was considered statistically significant.

Results

Comparison of baseline characteristics between the two groups

A total of 96 patients were included in the study, including 36 in the IFX group and 60 in the VDZ group. There were no significant between-group differences in sex, age, body mass index (BMI), disease duration, disease severity, PMS, or baseline WBC count, platelet count, ESR, CRP, albumin, and hemoglobin levels (all $P > 0.05$), indicating that the two groups were comparable at baseline (**Table 1**).

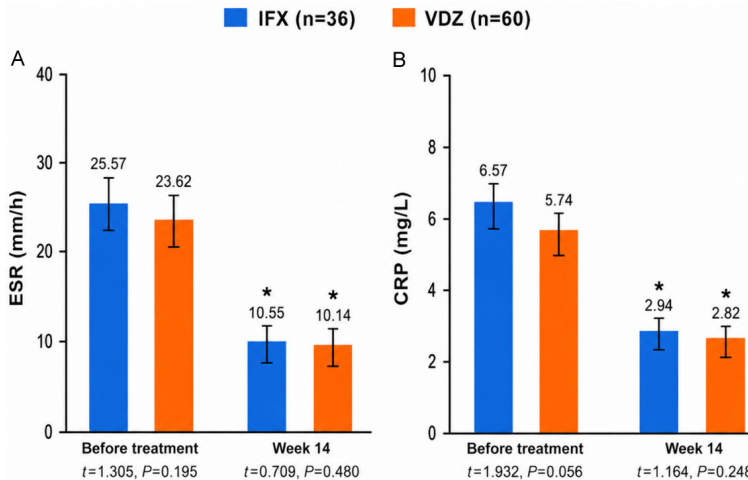
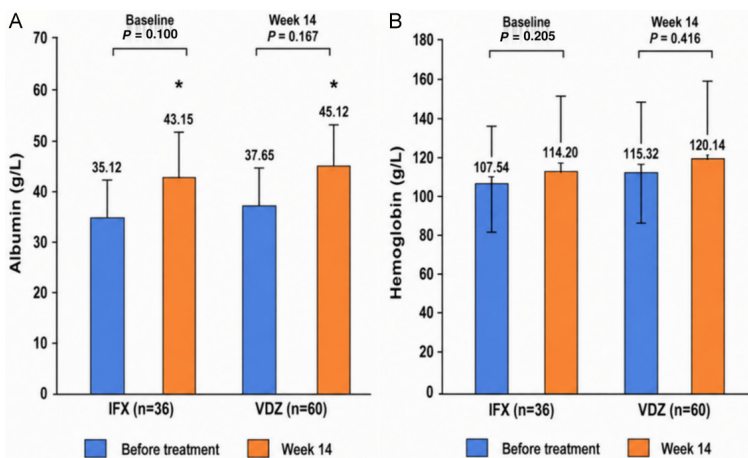
Comparison of clinical efficacy between the two groups

At week 14, the clinical response, clinical remission, and endoscopic remission rates were

Table 2. Comparison of clinical efficacy at week 14 between the IFX and VDZ groups [n (%)]

Group	Clinical response	Clinical remission	Endoscopic remission
IFX Group (n = 36)	24 (66.67)	15 (41.67)	7/16 (43.75)
VDZ Group (n = 60)	35 (58.33)	21 (35.00)	13/31 (41.94)
χ^2	0.660	0.427	0.014
P	0.417	0.514	0.905

Notes: IFX, infliximab; VDZ, vedolizumab.

**Figure 1.** Comparison of inflammatory marker levels before and after treatment between the IFX and VDZ groups. A. ESR. B. CRP. Notes: IFX, infliximab; VDZ, vedolizumab; ESR, erythrocyte sedimentation rate; CRP, C-reactive protein. *P < 0.05, compared with baseline data.**Figure 2.** Comparison of serum albumin (A) and hemoglobin (B) levels before and after treatment between the IFX and VDZ groups. Notes: IFX, infliximab; VDZ, vedolizumab. *P < 0.05, compared with baseline data.

numerically higher in the IFX group than those in the VDZ group, but the difference did not

reach statistical significance ($P > 0.05$, **Table 2**).

Comparison of inflammatory marker levels between the two groups

By week 14, ESR and CRP levels were significantly decreased from baseline in both the IFX and VDZ groups (all $P < 0.05$). However, no significant differences were observed between the two groups after treatment (all $P > 0.05$, **Figure 1**).

Comparison of nutritional and anemia-related indicators between the two groups

At week 14, serum albumin levels were significantly increased from baseline in both the IFX and VDZ groups ($P < 0.05$), whereas hemoglobin levels did not change significantly from baseline. No significant differences were observed between the two groups after treatment (all $P > 0.05$, **Figure 2**).

Comparison of symptom scores between the two groups

At week 14, scores of all evaluated symptoms were significantly decreased from baseline in both the IFX and VDZ groups ($P < 0.05$). However, no significant between-group differences were observed ($P > 0.05$, **Table 3**).

Comparison of quality of life between the two groups

At week 14, scores for all four WHOQOL-BREF domains, including physical health, mental health, social relationships, and environment, were significantly increased from baseline in both the IFX and VDZ groups ($P < 0.05$). However, no signifi-

Table 3. Comparison of clinical symptom scores between the IFX and VDZ groups (Mean $\pm$ SD, points)

Group	Abdominal pain		Diarrhea		Hematochezia	
	Before treatment	After 14 weeks	Before treatment	After 14 weeks	Before treatment	After 14 weeks
IFX Group (n = 36)	2.82 $\pm$ 0.70	0.90 $\pm$ 0.17*	2.53 $\pm$ 0.45	0.84 $\pm$ 0.17*	2.70 $\pm$ 0.62	0.84 $\pm$ 0.18*
VDZ Group (n = 60)	2.54 $\pm$ 0.75	0.86 $\pm$ 0.13*	2.37 $\pm$ 0.49	0.82 $\pm$ 0.14*	2.43 $\pm$ 0.75	0.82 $\pm$ 0.16*
<i>t</i>	1.815	1.298	1.596	0.426	1.733	0.333
<i>P</i>	0.073	0.198	0.114	0.672	0.086	0.740

Notes: IFX, infliximab; VDZ, vedolizumab. **P* < 0.05, compared with baseline.

cant between-group differences were observed (*P* > 0.05, **Table 4**).

Comparison of safety profiles between the two groups

During the 14-week treatment period, the incidence of any adverse event was significantly higher in the IFX group than that in the VDZ group [13.9% (5/36) vs. 1.7% (1/60); *P* = 0.027]. Infections occurred in 5.6% (2/36) of patients in the IFX group and in none of the patients in the VDZ group (*P* = 0.138). Infusion-related or hypersensitivity reactions occurred in 8.3% (3/36) and 1.7% (1/60) of patients in the IFX and VDZ groups, respectively, with no statistically significant between-group difference (*P* = 0.147). Detailed information is shown in **Table 5**.

Comparison of economic outcomes between the two groups

Medication costs in the IFX group were calculated according to the actual IFX product used. The mean induction medication cost per patient during the 14-week observation period was significantly lower in the VDZ group than that in the overall IFX group (1.98 $\pm$ 0.21 vs. 2.10 $\pm$ 0.35 $\times$ 10,000 yuan; *P* = 0.038; **Figure 3**). Because the IFX group included both imported and domestic products, the pooled IFX cost reflects the actual treatment pattern at our hospital. This finding should be interpreted as a preliminary short-term treatment cost comparison rather than a formal cost-effectiveness evaluation.

Subgroup analysis

According to their week-14 clinical remission status, IFX-treated patients were divided into remission and non-remission subgroups. Ba-

seline PMS and CRP protein levels were significantly lower in the remission group than those in the non-remission subgroup (*P* < 0.05, **Table 6**).

Discussion

Ulcerative colitis (UC) is a chronic, relapsing inflammatory disease characterized by continuous mucosal inflammation and ulceration of the colon. It substantially impairs patients' quality of life and is associated with an increased risk of colorectal dysplasia and cancer [10]. Conventional therapies for UC include 5-aminosalicylic acid (5-ASA), corticosteroids, and immunosuppressive agents. However, a substantial proportion of patients with moderate-to-severe UC have an inadequate response to these treatments and may ultimately require surgery. Moreover, prolonged use of corticosteroids and immunosuppressive agents are associated with an increased risk of adverse effects, including systemic infections and other treatment-related toxicities. Therefore, there is a problem of reduced therapeutic effect and safety in the traditional treatment plan [11, 12].

Biologic therapies have been increasingly used for the treatment of moderate-to-severe UC. Vedolizumab (VDZ) and infliximab (IFX) are two widely used biologic agents in clinical practice. However, comparative evidence regarding their real-world effectiveness, safety, and economic outcomes remains limited, and these factors should be considered when selecting an appropriate biologic therapy for individual patients [13, 14].

IFX is a chimeric monoclonal antibody against TNF- α that binds with high affinity to both soluble and transmembrane TNF- α , thereby neutralizing TNF- α activity and suppressing downstream pro-inflammatory signaling. Thus, IFX

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Table 4. Comparison of WHOQOL-BREF scores before and after 14 weeks of therapy between the IFX and VDZ groups (Mean $\pm$ SD, points)

Group	Physical health		Psychological health		Environment		Social relationships	
	Before treatment	After 14 weeks	Before treatment	After 14 weeks	Before treatment	After 14 weeks	Before treatment	After 14 weeks
IFX Group (n = 36)	53.62 $\pm$ 6.60	64.15 $\pm$ 6.73*	54.55 $\pm$ 5.76	60.12 $\pm$ 6.24*	55.12 $\pm$ 6.20	63.12 $\pm$ 6.20*	52.55 $\pm$ 5.05	66.84 $\pm$ 6.20*
VDZ Group (n = 60)	55.10 $\pm$ 5.65	66.40 $\pm$ 7.72*	56.80 $\pm$ 6.32	62.20 $\pm$ 7.33*	57.76 $\pm$ 7.30	64.87 $\pm$ 7.05*	54.12 $\pm$ 5.30	68.20 $\pm$ 7.35*
<i>t</i>	1.166	1.449	1.745	1.421	1.812	1.231	1.429	0.929
<i>P</i>	0.247	0.151	0.084	0.159	0.073	0.222	0.156	0.355

Notes: IFX, infliximab; VDZ, vedolizumab; **P* < 0.05, compared with baseline.

Table 5. Comparison of adverse events during the 14-week treatment period between the IFX and VDZ groups

Adverse event	IFX group (n = 36)	VDZ group (n = 60)	P value
Infection	2 (5.6%)	0 (0%)	0.138
Infusion-related or hypersensitivity reaction	3 (8.3%)	1 (1.7%)	0.147
Any adverse event	5 (13.9%)	1 (1.7%)	0.027

Note: IFX, infliximab; VDZ, vedolizumab; Because of the small expected cell counts, between-group comparisons were performed using a two-sided Fisher's exact test.

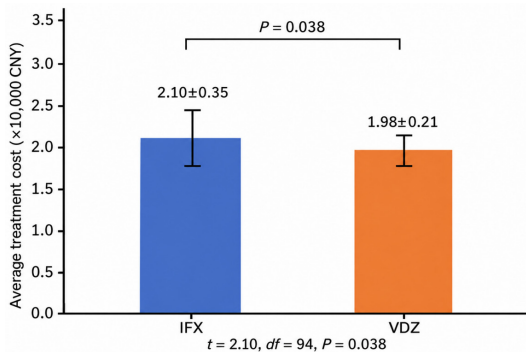


Figure 3. Comparison of 14-week induction medication costs between the IFX and VDZ groups. Notes: IFX, infliximab; VDZ, vedolizumab.

can rapidly reduce intestinal inflammation and promote mucosal healing, making it an important biologic agent for induction therapy in UC [15]. In the present study, no statistically significant differences in clinical response, clinical remission, or endoscopic remission were observed between the IFX and VDZ groups at week 14. This finding is consistent with previous studies [16].

TNF- α is a key pro-inflammatory cytokine involved in both local and systemic immune responses. By inducing systemic TNF- α blockade, IFX can effectively suppress inflammatory activity and promote mucosal healing. However, its systemic immunomodulatory effects may contribute to a different safety profile compared with gut-selective therapies such as VDZ. In this study, IFX was associated with significant reductions in inflammatory markers and an increase in serum albumin levels after 14 weeks of therapy. However, no significant differences were observed between IFX and VDZ, suggesting comparable short-term anti-inflammatory effects and improvement in nutritional status between the two therapies. Previous studies have indicated that differences in real-world effectiveness of biologic thera-

pies may be influenced by baseline disease activity, patient characteristics, concomitant therapies, and treatment selection bias, all of which should be considered when interpreting comparative outcomes [17].

In the subgroup analysis of IFX-treated patients, baseline PMS scores and CRP levels were significantly lower in the remission group than those in the non-remission group. This finding suggests that greater baseline disease activity and systemic inflammatory burden may be associated with a lower likelihood of short-term remission with IFX. Therefore, patients with higher baseline inflammatory burden may require closer monitoring of treatment response and timely optimization of therapy if an inadequate response is observed.

The incidence of any adverse event was significantly lower in the VDZ group than in the IFX group, although the differences in individual adverse-event categories did not reach statistical significance. IFX is a relatively non-specific immunosuppressant that exerts systemic TNF- α inhibition; therefore, it may be associated with systemic immunosuppressive effects, including an increased susceptibility to infection. In addition, immunogenicity and the development of anti-drug antibodies during longer-term treatment may reduce drug exposure and therapeutic effectiveness.

Vedolizumab (VDZ) is a gut-selective integrin antagonist that selectively binds to $\alpha 4\beta 7$ integrin on gut-homing lymphocytes and blocks its interaction with mucosal addressin cell adhesion molecule-1 on intestinal endothelial cells, thereby reducing lymphocyte trafficking to the intestinal mucosa. This gut-selective mechanism is associated with less systemic immunosuppressive activity than systemic biologic therapies [18, 19]. In the present study, the week-14 clinical remission rate in the VDZ group was comparable to that in the IFX group, supporting the short-term effectiveness of VDZ for induction therapy in biologic-naïve patients with moderate-to-severe UC. VDZ was also associated with significant reductions in systemic inflammatory markers after 14 weeks. Although no significant differences were ob-

Table 6. Subgroup analysis of IFX group at week 14

Subgroup	PMS score (points)	C-reactive protein (mg/L)
Remission subgroup (n = 15)	6.12 ± 1.07	4.18 ± 1.10
Non-remission subgroup (n = 21)	8.77 ± 1.90	16.10 ± 3.75
<i>t</i>	4.866	11.906
<i>P</i>	< 0.001	< 0.001

Notes: IFX, infliximab; PMS, partial Mayo score.

served between VDZ and IFX, the gut-selective mechanism of VDZ may offer a theoretical advantage by controlling intestinal inflammation while limiting systemic immunosuppression. Therefore, the increase in serum albumin levels observed after VDZ treatment may indicate improved nutritional recovery during short-term induction therapy. Previous studies have suggested that effective control of intestinal inflammation may contribute to the improvement of nutritional status in patients with UC [20].

In this study, symptom scores for abdominal pain, diarrhea, and hematochezia decreased significantly from baseline in both groups, while WHOQOL-BREF scores increased significantly. No significant between-group differences were observed in these outcomes, suggesting that both VDZ and IFX were associated with improvements in major UC-related symptoms and quality of life during the 14-week treatment period.

The mean induction medication cost per patient during the 14-week observation period was significantly lower in the VDZ group than in the overall IFX group. The IFX group included patients receiving either imported or domestic IFX, and costs were calculated according to the actual product used. Therefore, the pooled IFX cost reflects the actual treatment pattern at our hospital rather than the cost of a single IFX product. However, because no formal cost-effectiveness analysis or long-term economic evaluation was performed, this finding should be interpreted as a preliminary short-term treatment cost comparison rather than definitive evidence of superior cost-effectiveness.

In short, both VDZ and IFX were effective in achieving short-term clinical improvement in biologic-naïve patients with moderate-to-severe UC and were associated with improve-

ments in quality of life. Induction medication costs varied according to the IFX product used. Domestic IFX was less expensive than VDZ, whereas imported IFX was more expensive than VDZ; however, their long-term economic value, treatment durability, and maintenance efficacy require

further investigation. Large-scale, multi-center studies are warranted to further evaluate the effectiveness, safety, and economic outcomes of these biologic therapies and to support the development of personalized treatment strategies for patients with moderate-to-severe UC.

This study has several limitations. First, this was a single-center retrospective cohort study with a relatively small sample size, which may have introduced selection bias and residual confounding. Although baseline characteristics were comparable between the two groups, treatment selection in real-world clinical practice may have been influenced by disease severity, physician preference, and individual patient characteristics. Therefore, residual confounding cannot be completely excluded. Second, detailed information on corticosteroid and 5-ASA dose adjustments during follow-up was not completely available from medical records. Therefore, propensity score matching was not performed, and the potential influence of concomitant medication adjustment on treatment outcomes could not be fully excluded. Third, the follow-up period was limited to 14 weeks, and long-term maintenance efficacy, immunogenicity, and long-term safety require further investigation. The present study evaluated only short-term induction outcomes at week 14; therefore, the findings should not be interpreted as evidence of long-term maintenance efficacy or treatment durability. We did not assess treatment persistence, mucosal healing beyond week 14, immunogenicity, anti-drug antibody formation, particularly for IFX, or long-term adverse events. Thus, any potential long-term advantages of VDZ should be interpreted with caution. Further prospective studies with longer follow-up are needed to compare the maintenance efficacy, durability, immunogenicity, and long-term safety of VDZ and IFX in biologic-naïve patients with moderate-to-severe UC. In addition, the economic analysis

was limited to a comparison of induction medication costs among all included patients. Formal pharmacoeconomic analyses, such as cost per remission, incremental cost-effectiveness ratios, and sensitivity analyses, were not performed. Therefore, the economic findings should be interpreted as preliminary cost-comparison results rather than definitive evidence of cost-effectiveness.

Disclosure of conflict of interest

None.

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References

- [1] Sands BE, Peyrin-Biroulet L, Schreiber S, Danese S, Armuzzi A, Buisson A, Fumery M, Dignass A, Powell N, Kennedy NA, Zeissig S, Kwon T, Kim S, Nam K and Hanauer SB. Efficacy and safety of infliximab and vedolizumab maintenance therapy in patients with Crohn's disease and ulcerative colitis: a systematic review and meta-analysis. *J Clin Med* 2025; 14: 4419.
- [2] Konikoff T, Yanai H, Libchik D, Avni-Biron I, Snir Y, Banai H, Broytman Y, Dotan I and Ollech JE. Vedolizumab is associated with longer drug sustainability compared to infliximab in moderate-to-severe ulcerative colitis: long-term real-world cohort data. *J Clin Med* 2023; 12: 4488.
- [3] Meng RP, Huang BB, Wei YL, Lyu L, Yang H, Liu C, Zhou HL, Liao XP, Zhou JY and Xie X. Effectiveness and safety of vedolizumab and infliximab in biologic-naïve patients with moderate-to-severe ulcerative colitis: a multicenter, retrospective cohort study. *J Dig Dis* 2024; 25: 230-237.
- [4] Sablich R, Urbano MT, Scarpa M, Scognamiglio F, Paviotti A and Savarino E. Vedolizumab is superior to infliximab in biologic naïve patients with ulcerative colitis. *Sci Rep* 2023; 13: 1816.
- [5] Kapizioni C, Desoki R, Lam D, Balendran K, Al-Sulais E, Subramanian S, Rimmer JE, De La Revilla Negro J, Pavey H, Pele L, Brooks J, Moran GW, Irving PM, Limdi JK, Lamb CA, Parkes M and Raine T; UK IBD BioResource Investigators. Biologic therapy for inflammatory bowel disease: real-world comparative effectiveness and impact of drug sequencing in 13 222 patients within the UK IBD BioResource. *J Crohns Colitis* 2024; 18: 790-800.
- [6] Ananthakrishnan AN, Murad MH, Scott FI, Agrawal M, Haydek JP, Limketkai BN, Loftus EV Jr and Singh S. Comparative efficacy of advanced therapies for management of moderate-to-severe ulcerative colitis: 2024 American Gastroenterological Association evidence synthesis. *Gastroenterology* 2024; 167: 1460-1482.
- [7] Salkić N, Bašić Denjagić M, Zubčević N, Tamburić R, Husić Selimović A, Babić E, Bevanda M, Saray A, Jovanović P, Tošić Z, Dobrovoljski A and Barać T. Short-term efficacy of vedolizumab in patients with inflammatory bowel disease in real-life settings in Bosnia and Herzegovina. *Biomol Biomed* 2024; 24: 1400-1406.
- [8] Huang Z, Tang J, Wu R, Long S, Chen W, Lu T, Xia Q, Wu Y, Yang H, Yang Q, Huang Z, Guo Q, Li M, Gao X and Chao K. Comparison of clinical and endoscopic efficacy between vedolizumab and infliximab in bio-naïve patients with ulcerative colitis: a multicenter, real-world study. *Ther Adv Gastroenterol* 2024; 17: 17562848241281218.
- [9] Inflammatory Bowel Disease Group, Chinese Society of Gastroenterology, Chinese Medical Association. Expert consensus on surgical treatment of inflammatory bowel disease. *Zhonghua Yan Xing Chang Bing Za Zhi* 2020; 4: 180-199.
- [10] Flemman A, Bakhor HA, Almuzaini R, Alshahrani T, Alahmadi RA, Alshurbi R, Althobiti K, Alwadai H, Maghrabi S, Alkhairi N, Shawosh M and Zamzami T. Evaluating the effectiveness and safety of vedolizumab in moderate to severe ulcerative colitis: a systematic review and meta-analysis of randomized controlled trials. *Cureus* 2025; 17: e90352.
- [11] Gros B, Ross H, Nwabueze M, Constantine-Cooke N, Derikx LAAP, Lyons M, O'Hare C, Noble C, Arnott ID, Jones GR, Lees CW and Plevris N. Long-term outcomes and predictors of vedolizumab persistence in ulcerative colitis. *Ther Adv Gastroenterol* 2024; 17: 17562848241258372.
- [12] Ylisaukko-Oja T, af Björkesten CG, Eberl A, Nuutinen H, Jussila A, Molander P, Koskela R, Blomster T, Pajala M, Ilus T, Haiko P, Kovac B, Silvola S, Smith S, Jokelainen J and Sipponen T. Real-life treatment persistence and treatment outcomes of Finnish patients with inflammatory bowel disease receiving vedolizumab as first-line biological treatment. *Heliyon* 2024; 10: e32432.
- [13] Xiao HY, Wang WX, Hu DY, Lin DP and Jiang Y. Analysis of influencing factors on the efficacy of vedolizumab in the treatment of ulcerative colitis patients. *Zhonghua Yi Xue Za Zhi* 2025; 105: 2500-2506.

- [14] Meng RP, Huang BB, Liu E, Lin H, Liu C, Wei HQ, Su JQ, Zhou JY and Xie X. A real-world study of vedolizumab versus infliximab in patients with moderate-to-severe ulcerative colitis. *J Army Med Univ* 2024; 46: 1417-1424.
- [15] Bonovas S, Tsantes AG, Sokou R, Tsantes AE, Nikolopoulos GK and Piovani D. Racial disparities in infliximab efficacy for ulcerative colitis: evidence synthesis and effect modification assessment. *J Clin Med* 2024; 13: 319.
- [16] Chen W, Liang SH, Chen RY, Wu D, Yang ZF, Wang Q, Wang YY and Li GL. Efficacy, safety and economic comparison of vedolizumab and infliximab in the treatment of moderate-to-severe ulcerative colitis: a real-world study in a primary hospital. *Chin J Hosp Pharm* 2025; 45: 1659-1664.
- [17] Rokkas T, Gisbert JP, Ekmektzoglou K, Dassopoulos T, Niv Y and O'Morain C. Comparative maintenance performance of all biologic agents and small molecules in ulcerative colitis: a network meta-analysis. *Eur J Gastroenterol Hepatol* 2024; 36: 520-533.
- [18] Bouhnik Y, Atreya R, Casey D, Górecki M, Baik D, Yoon SW, Kwon TS and Jang M. Cost-effectiveness analysis of subcutaneous infliximab for inflammatory bowel diseases in sequential biologic treatment. *Inflamm Bowel Dis* 2023; 29: 898-913.
- [19] Hisamatsu T, Kobayashi T, Motoya S, Fujii T, Kunisaki R, Shibuya T, Matsuura M, Hiraoka S, Takeuchi K, Yasuda H, Yokoyama K, Takatsu N, Maemoto A, Tahara T, Tominaga K, Shimada M, Kuno N, Cavaliere M, Ishiguro K, Fernandez JL, Hirose L and Hibi T. Real-world effectiveness and safety of vedolizumab in patients 70 versus < 70 years with ulcerative colitis: multicenter retrospective study. *J Gastroenterol Hepatol* 2025; 40: 1435-1445.
- [20] Kobayashi T, Hisamatsu T, Motoya S, Matsuura M, Fujii T, Kunisaki R, Shibuya T, Takeuchi K, Hiraoka S, Yasuda H, Yokoyama K, Takatsu N, Maemoto A, Tahara T, Tominaga K, Shimada M, Kuno N, Cavaliere M, Ishiguro K, Fernandez JL and Hibi T. The duration of prior anti-tumor necrosis factor agents is associated with the effectiveness of vedolizumab in patients with ulcerative colitis: a real-world multicenter retrospective study. *Intest Res* 2026; 24: 281-292.