Supplementary Figure 1.

(A) Rate of 30-day re-admission

- UC (N = 186)
  - Vedolizumab: 0.04
  - Anti-TNF-α agents: 0.06
  - Non-biological therapy: 0.03
  
  \[ P = 0.49 \]

- CD (N = 257)
  - Vedolizumab: 0.03
  - Anti-TNF-α agents: 0.04
  - Non-biological therapy: 0.07
  
  \[ P = 0.59 \]

(B) Rate of 30-day re-surgery

- UC (N = 186)
  - Vedolizumab: 0.04
  - Anti-TNF-α agents: 0.06
  - Non-biological therapy: 0.06
  
  \[ P = 1.00 \]

- CD (N = 257)
  - Vedolizumab: 0.03
  - Anti-TNF-α agents: 0.03
  - Non-biological therapy: 0.07
  
  \[ P = 0.44 \]
Supplementary Figure 2.

IBD surgery (N = 443)

→ UC (N = 186)

→ CD (N = 257)

Propensity score matching

- Vedolizumab (N = 24)
  - Anti-TNF-α agents (N = 24)
  - Non-biological (N = 24)

- Vedolizumab (N = 40)
  - Anti-TNF-α agents (N = 40)
  - Non-biological (N = 40)
Supplementary Figure 3.

Rate of 30-day postoperative complication:

- UC (N = 72): Vedolizumab 0.29, Anti-TNF-α agents 0.50, Non-biological therapy 0.33
- CD (N = 120): Vedolizumab 0.20, Anti-TNF-α agents 0.28, Non-biological therapy 0.35

Rate of 30-day re-admission:

- UC (N = 72): Vedolizumab 0.04, Anti-TNF-α agents 0.13, Non-biological therapy 0
- CD (N = 120): Vedolizumab 0.03, Anti-TNF-α agents 0.05, Non-biological therapy 0.05

Rate of 30-day re-surgery:

- UC (N = 72): Vedolizumab 0, Anti-TNF-α agents 0.04, Non-biological therapy 0
- CD (N = 120): Vedolizumab 0, Anti-TNF-α agents 0.05, Non-biological therapy 0
Supplementary Figure 4.

IBD surgery (N = 443)

Major (N = 314)
Minor (N = 129)

Propensity score matching

Vedolizumab (N = 49)
Anti-TNF-α agents (N = 49)
Non-biological (N = 49)

Vedolizumab (N = 15)
Anti-TNF-α agents (N = 15)
Non-biological (N = 30)
Supplementary Figure 5.

![Bar chart showing the rate of 30-day post-operative complication for different treatment groups.

- **Major** (N = 147)
  - Vedolizumab: 0.24
  - Anti-TNF-α agents: 0.35
  - Non-biological therapy: 0.29
  - P = 0.57

- **Minor** (N = 60)
  - Vedolizumab: 0.20
  - Anti-TNF-α agents: 0.27
  - Non-biological therapy: 0.40
  - P = 0.44

The rates are compared using the 30-day post-operative complication metric.
IBD surgery (N = 443)

Emergency (N = 73)  Elective (N = 370)

Propensity score matching

Vedolizumab (N = 16)
Anti-TNF-α agents (N = 16)
Non-biological (N = 16)

Vedolizumab (N = 48)
Anti-TNF-α agents (N = 48)
Non-biological (N = 144)
Supplementary Figure 7.

The chart shows the rate of 30-day post-operative complications for patients treated with Vedolizumab, Anti-TNF-α agents, and Non-biological therapy in both Emergency and Elective surgery groups. The rates are as follows:

- **Emergency (N = 48):**
  - Vedolizumab: 0.19
  - Anti-TNF-α agents: 0.38
  - Non-biological therapy: 0.38

  **P = 0.40**

- **Elective (N = 240):**
  - Vedolizumab: 0.25
  - Anti-TNF-α agents: 0.31
  - Non-biological therapy: 0.33

  **P = 0.63**