



# Policy Brief

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## Cost-effectiveness of Vedolizumab for the Management of Inflammatory Bowel Diseases in India ICMR-National Institute of Epidemiology, Chennai



### Recommendations

- At the cost-effectiveness cut off of 1 GDP (INR 2,31,784) for procurement in public health programmes, the proposed intervention will be cost effective only after the price is reduced by 70-76%.
- Cost effectiveness: ICER/ QALY for ulcerative colitis is Rs 8,64,026 (3.72 times GDP per capita) and for Crohn's disease is Rs 11,44,244 (4.93 times GDP per capita).
- Cost-threshold analysis: Threshold analysis indicated that substantial price reductions—approximately 70% for UC and 76% for CD—are necessary for Vedolizumab to be considered cost-effective in the Indian context

### Key Findings

- From a health system perspective, the economic evaluation indicate that Vedolizumab IV 300 mg is not cost-effective compared to conventional therapy for managing inflammatory bowel disease at current market prices, given a willingness-to-pay threshold of one GDP per capita in India. Vedolizumab IV 300 mg provide gains in QALYs for UC and CD.
- Considering the current market price, a price reduction of 70% for UC and 76% for CD is necessary for Vedolizumab to be considered cost-effective in the Indian context.

### Background

- Vedolizumab, a biologic therapy targeting gut-specific inflammation, has demonstrated clinical efficacy in managing Inflammatory Bowel Disease (IBD), which includes Ulcerative Colitis (UC) and Crohn's Disease (CD).
- Vedolizumab IV is available globally as ENTYVIO 300 mg IV, and in India, it is marketed as KYNTELES 300 mg IV.
- A cost-utility analysis evaluated the addition of Vedolizumab IV 300 mg for Inflammatory Bowel Disease in India, compared to standard care alone.

PICO	Description of the components of PICO
Population	Patients with Moderately-to-severely active Inflammatory Bowel Disease (ulcerative colitis or Crohn's) disease population (includes both anti-TNF alpha naïve and anti-TNF alpha failure)
Intervention	Vedolizumab IV 300mg
Comparator	Conventional therapy (includes 5-ASAs, steroids, immunomodulators such as methotrexate).
Outcome	Incremental Cost-utility Ratio (ICUR) per QALY gained or Incremental Net Benefit (INB)

### Price Reductions Required for Vedolizumab IV 300 mg to be Cost-effective

Drug name	Market Price per vial	Cost-effective at Price per vial
Ulcerative Colitis	₹ 71,310	₹ 21,239 (▼70%)
Crohn's Disease	₹ 71,310	₹ 16,847 (▼76%)

### Conclusion

- At current market prices, Vedolizumab IV 300 mg, although clinically effective, is not cost-effective compared to conventional therapy for managing moderate to severe active ulcerative colitis and Crohn's disease in India
- Even within specific subgroups of IBD, such as the anti-TNF alpha naïve population, the anti-TNF alpha failure population, and the mixed population based on prior exposure, VDZ remains not cost-effective.
- Threshold analysis indicates that, at current market prices, Vedolizumab IV 300 mg would be cost-effective only after a 70% price reduction for the mixed UC population and a 76% price reduction for the mixed CD population.