



Title **Infliximab for the Treatment of Crohn's Disease: A Systematic Review and Cost-Utility Analysis**

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Aim

- To review available data on the efficacy, effectiveness, and adverse effects of infliximab in treating patients with Crohn's disease (CD)
- To review available data evaluating the economic impact of infliximab
- To conduct a primary cost-utility analysis of infliximab treatment for patients with active CD that is resistant to conventional therapy.

Conclusions and results

Infliximab appears to be clinically effective for treating fistulizing CD and active CD resistant to conventional therapy. Its short-term safety profile is acceptable, however, increased rates of acute respiratory infection were observed. The long-term risk, including malignancy and autoimmune disease, are not known. Cost-utility analysis of infliximab in treatment-resistant active CD suggests that the incremental costs per additional quality-adjusted life-year exceed traditional benchmarks. Results were sensitive to extreme reductions in the cost of infliximab and increases in the rate of medical admission for drug-refractory disease. Limitations to the economic analysis include assumptions about natural history, resource utilization, drug dosing, a limited time horizon, and that only direct medical costs were assessed.

Infliximab's economic impact may continue to evolve with changes in delivery, dose, and cost.

Decision makers must recognize that few, if any, treatment alternatives are available to patients with severe, refractory CD.

Methods

Clinical Effectiveness: Because only four eligible randomized controlled trials that evaluated the efficacy of infliximab for treatment of CD were identified, a qualitative summary of the available clinical data was undertaken.

Economic Analysis: Six previous economic analyses of infliximab and two observational studies of infliximab-associated resource utilization were identified, along with four unpublished economic evaluations prepared by industry. Reviewers undertook a cost-utility analysis of infliximab for active CD that is resistant to conventional therapy. The use of infliximab for fistulizing CD was not evaluated. A Markov model was used to compare three infliximab treatment strategies to usual care. Advanced probabilistic sensitivity analysis was used to explore the impact of parameter uncertainty.

Further research/reviews required

Further information on the long-term adverse effects of infliximab therapy is needed, particularly with respect to maintenance therapy.