Cost-Effectiveness Analysis of Upadacitinib in Patients with Moderately to Severely Active Ulcerative Colitis in Greece

Charalampos Tzanetakos¹, Marina Psarra¹, Ilias Kotsis², George Gourzoulidis¹

¹Health Through Evidence G.P., Athens, Greece; ²AbbVie Pharmaceuticals S.A., Athens, Greece

OBJECTIVE

To evaluate the cost-effectiveness of upadacitinib in patients with moderately to severely active ulcerative colitis (UC), who have had an inadequate response, lost response or were intolerant to either conventional therapy (bio-naive) or a biologic agent (bio-exposed), in Greece

CONCLUSIONS

Upadacitinib was estimated to be more effective and cost-effective therapy versus all biologics and small molecule agents in the treatment of moderately to severely active UC in Greece The present cost-effectiveness findings underpin the potential of upadacitinib as a promising treatment option in UC patients, where despite the currently available treatments, a large unmet need still exists

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INTRODUCTION

- UC is a chronic inflammatory bowel disease (IBD) that affects the mucosa, the innermost lining of the intestinal wall in the large bowel (i.e., the colon and rectum)¹
- Significant clinical, humanistic and economic burden is associated with UC¹⁻⁴
- Despite the availability of multiple treatment options, many patients with UC do not achieve disease remission at 52 weeks with current advanced therapies (biologics and small molecule agents) and unmet therapeutic need remains in patients with moderately to severely active disease⁵⁻⁷
- Based on its clinical evidence, upadacitinib represents a promising oral advanced therapy (JAK inhibitor) in the therapeutic arsenal against this inflammatory disease^{7,8}

RESULTS

Base case pairwise results for bio-naïve and bio-exposed population

		Lifetime Total	Upadacitinib versus comparator (bio-naïve population)		
Therapy	Lifetime				
	Total costs	QALYs	Incremental	Incremental	Cost per QALY
			costs	QALYs	gained ^a
Upadacitinib	€ 112,780	9.030	—	-	-
Adalimumab	€ 97,279	8.198	€ 15,501	0.833	€ 18,618
Infliximab	€ 100,789	8.359	€ 11,991	0.671	€ 17,864
Golimumab	€ 98,262	8.361	€ 14,518	0.670	€ 21,682
Vedolizumab	€ 104,298	8.509	€ 8,481	0.522	€ 16,263
Tofacitinib	€ 103,339	8.716	€ 9,441	0.314	€ 30,061
Ustekinumab	€ 105,402	8.453	€ 7,378	0.577	€ 12,776
Ozanimod	€ 100,529	8.247	€ 12,251	0.783	€ 15,637
	,		,		
			Upada	acitinib versus co	mparator
Thorppy	Lifetime	Lifetime Total	Upada (b	acitinib versus co io-exposed popula	mparator ation)
Therapy	Lifetime Total costs	Lifetime Total QALYs	Upada (b Incremental	acitinib versus co io-exposed popula Incremental	mparator ation) Cost per QALY
Therapy	Lifetime Total costs	Lifetime Total QALYs	Upada (b Incremental costs	acitinib versus co io-exposed popula Incremental QALYs	mparator ation) Cost per QALY gained ^a
Therapy Upadacitinib	Lifetime Total costs € 109,730	Lifetime Total QALYs 8.928	Upada (b Incremental costs -	acitinib versus con io-exposed popula Incremental QALYs -	mparator ation) Cost per QALY gained ^a
Therapy Upadacitinib Adalimumab	Lifetime Total costs € 109,730 € 96,882	Lifetime Total QALYs 8.928 8.144	Upada (b Incremental costs - € 12,848	acitinib versus con io-exposed popula Incremental QALYs - 0.784	mparator ation) Cost per QALY gained ^a - € 16,396
Therapy Upadacitinib Adalimumab Vedolizumab	Lifetime Total costs € 109,730 € 96,882 € 99,749	Lifetime Total QALYs 8.928 8.144 8.209	Upada (b Incremental costs - € 12,848 € 9,981	acitinib versus con io-exposed popula Incremental QALYs - 0.784 0.719	mparator ation) Cost per QALY gained ^a - € 16,396 € 13,881
Therapy Upadacitinib Adalimumab Vedolizumab Tofacitinib	Lifetime Total costs € 109,730 € 96,882 € 99,749 € 100,955	Lifetime Total QALYs 8.928 8.144 8.209 8.414	Upada (b Incremental costs - € 12,848 € 9,981 € 9,981 € 8,776	acitinib versus con io-exposed popula Incremental QALYs - 0.784 0.719 0.514	mparator ation) Cost per QALY gained ^a - € 16,396 € 13,881 € 17,074
Therapy Upadacitinib Adalimumab Vedolizumab Tofacitinib Ustekinumab	Lifetime Total costs € 109,730 € 96,882 € 99,749 € 100,955 € 101,791	Lifetime Total QALYs 8.928 8.144 8.209 8.414 8.204	Upada (b Incremental costs - € 12,848 € 9,981 € 9,981 € 8,776 € 7,940	acitinib versus con io-exposed popula Incremental QALYs - 0.784 0.719 0.514 0.723	mparator ation) Cost per QALY gained ^a - € 16,396 € 13,881 € 17,074 € 10,975
Therapy Upadacitinib Adalimumab Vedolizumab Tofacitinib Ustekinumab Ozanimod	Lifetime Total costs € 109,730 € 96,882 € 99,749 € 100,955 € 101,791 € 100,210	Lifetime Total QALYs 8.928 8.144 8.209 8.414 8.204 8.204 8.204	Upada (b Incremental costs - € 12,848 € 9,981 € 9,981 € 8,776 € 7,940 € 7,940 € 9,520	acitinib versus con io-exposed popula Incremental QALYs - 0.784 0.719 0.514 0.723 0.697	mparator ation) Cost per QALY gained ^a - $\in 16,396$ $\in 13,881$ $\in 17,074$ $\in 10,975$ $\in 13,661$

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METHODS

- A cost-effectiveness model was locally adapted from a public payer perspective⁹
- Response to treatment in the induction and maintenance phase was obtained from a network meta-analysis¹⁰
- Probabilities for surgical events and utility values were retrieved from published literature¹¹⁻¹⁵
- Drug acquisition, administration, disease management, and adverse events costs were considered^{16,17}



Long-term maintenance phase Markov model



Cost-effectiveness acceptability curves (multiple comparisons)

Bio-naïve population

100%







Deterministic and probabilistic sensitivity analysis (Upadacitinib versus most utilized biological [Infliximab] in Greece)





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