EE176

COST OF ADVERSE EVENTS ASSOCIATES WITH THE MANAGEMENT OF INVASIVE MOLD DISEASE WITH ISAVUCONAZOLE COMPARED WITH VORICONAZOLE IN SPAIN

C. Moya-Alarcón C,[1] M. Gálvez-Santisteban,[1] JR. Azanza,[2] I. Izquierdo,[3] V. Merino-Bohórquez,[4] JT. Silva,[5] C. Rubio-Terrés[6] and E. Broughton[7]

[1]Pfizer SLU, Madrid, Spain; [2]MD, Universidad de Navarra, Pamplona, Spain; [3]MD, Hospital Universitario Miguel Servet, Zaragoza, Spain; [4]Pharm. D., Hospital Universitario Virgen Macarena, Sevilla, Spain; [5]MD, Hospital Universitario 12 de Octubre, Madrid, Spain; [6]Health Value SL, Madrid, Spain; [7]Pfizer Inc, New York, USA

OBJECTIVE

To analyze the cost of adverse events (AEs) associated with isavuconazole (ISA) vs voriconazole (VORI) in the treatment of invasive fungal infections (IFI) in Spain.

METHODS

A systematic literature review following PRISMA guidelines of experimental and observational studies of ISA and/or VORI in patients with IFI was conducted. Published studies (full articles; PubMed or clinicaltrials.gov databases) that systematically captured the frequency of individual AEs observed during treatment were selected. The cost of AEs (€ 2025) was calculated based on their frequency, differentiating between severe and mild-moderate, using ISA or VORI and the cost of management from the Spanish National Healthcare System (SNHS) perspective obtained from Spanish sources (published studies and public healthcare prices). A Monte Carlo simulation (1,000 iterations) was performed, to calculate the mean cost (95% CI), and the probability of savings with the best-tolerated treatment compared to the worst-tolerated treatment.

RESULTS

Six studies were initially selected (1-6), but only one study (1) met the inclusion criteria: the SECURE study, a double-blind randomized clinical trial, which included 257 and 259 patients with invasive aspergillosis treated with ISA and VORI, respectively. The frequency of AEs was taken from the final study report published at www.clinicaltrials.gov (1), as it included all observed AEs (134 and 149 severe AEs and 227 and 228 mild-to-moderate AEs, respectively).

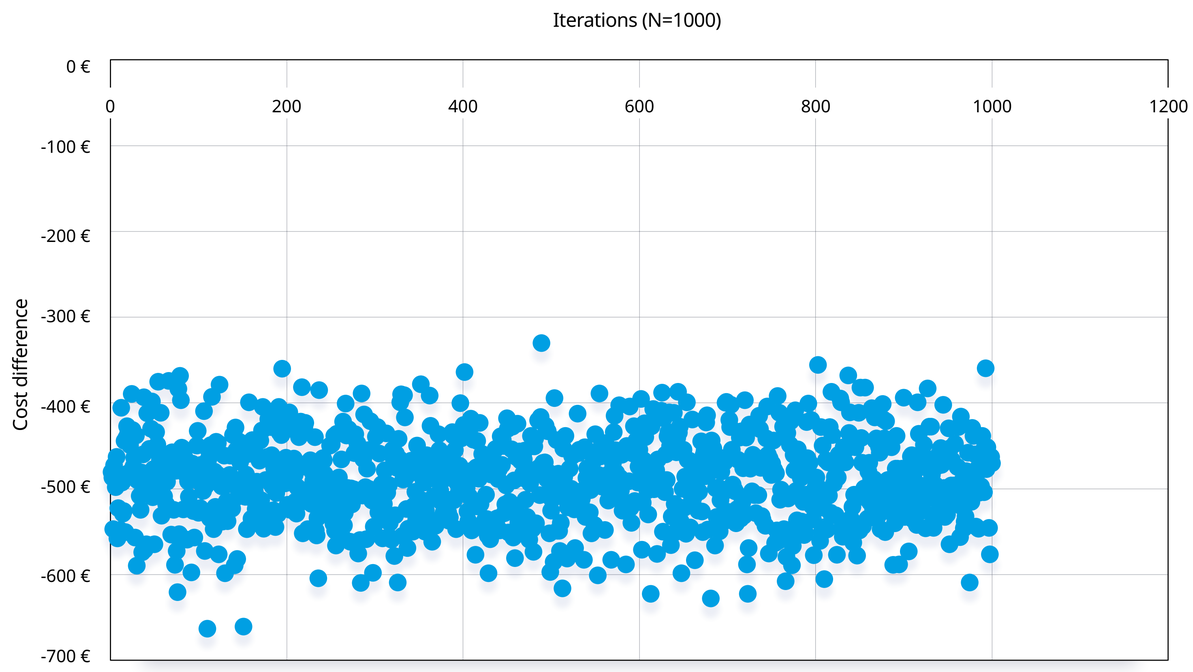
The mean cost per patient of managing AEs was €1,657.47 (95% CI: €1,323.28; €2,002.62) with ISA and €2,148.46 (95% CI: €1,715.27; €2,595.85) with VORI. Therefore, the improved tolerability of ISA vs VORI would result in an average saving per patient of €491 (95% CI: €392–€593), with a 100% probability of saving (savings occurred in all 1,000 analyses performed) (Table 1, Figure 1). The NNT to prevent 1 episode of AEs with ISA vs VORI would be 6.7 patients.

Table 1. Economic impact of adverse events associated with ISA and VORI treatment.

Item	ISA	VORI	Savings
Mean	**1,657 €**	**2,148 €**	**-491 €**
95% CI LL	1,323 €	1,715 €	-593 €
95% CI UL	2,003 €	2,596 €	-392 €
SD	172 €	223 €	51 €
Savings probability		100%	

Abbreviations: CI LL / CI UL: confidence interval lower limit/upper limit; ISA: isavuconazole; SD: standard deviation; VORI: voriconazole.

Figure 1. Probabilistic analysis results. Incremental cost per patient (ISA vs VORI).



CONCLUSIONS

According to this analysis, the lower cost of managing AEs with administration of ISA versus VORI for IFI in Spain results in a significant savings per patient treated from the perspective of the SNHS.

REFERENCES

1. Maertens JA et al. Lancet. 2016; 387: 760–9. https://clinicaltrials.gov/study/NCT00412893?intr=Isavuconazole%20voriconazole&rank=1&tab=results#adverse-events
2. Bongomin F et al. Mycoses. 2019; 62: 217-22.
3. Van Matre ET et al. Ann Clin Microbiol Antimicrob. 2019; 18: 13.
4. Kohno S et al. J Infect Chemother. 2023; 29: 163-70.
5. Batista MV et al. J Fungi. 2023; 9: 166.
6. Qin J et al. Microorganisms. 2025; 13: 55.

ACKNOWLEDGMENTS

This study was sponsored by Pfizer SLU, Madrid, Spain.
The support provided by Health Value S.L. was funded by Pfizer.

RTC is director of Health Value SL. MAC and GSM are employees of Pfizer S.L.U., Madrid, Spain. BE is an employee of Pfizer Inc, New York, USA. AJR, II, MV and SJT received compensation from Pfizer SLU for their services as members of the study Panel of Experts.