

# Cost-effectiveness analysis of erenumab vs onabotulinumtoxinA for chronic migraine in Spain

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Migraine Trust International Symposium, 8–11 September 2022

This study is supported by Novartis Pharma AG, Basel, Switzerland. Erenumab is co-developed by Amgen and Novartis.



# Introduction, Objectives & Methods

## INTRODUCTION

- While the therapeutic benefits of erenumab have been well established in clinical trials<sup>1-3</sup>, the cost-effectiveness of erenumab in the Spanish healthcare setting still needs to be determined.

## OBJECTIVES

- The aim of this study was to compare effectiveness and cost of erenumab 140 mg vs onabotulinumtoxinA for the prophylaxis of chronic migraine after at least one prior preventive treatment failure in Spain.

## METHODS

### Model design

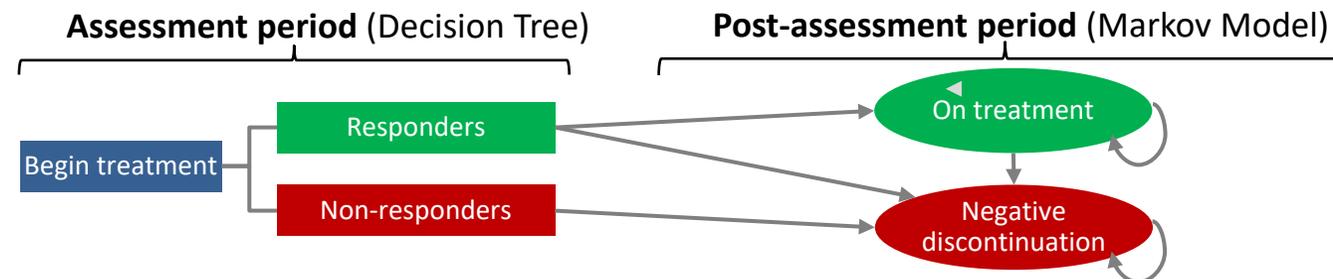
- A 10-year Markov model was designed to evaluate the cost-effectiveness of erenumab as migraine treatment compared to onabotulinumtoxinA from the societal perspective.

### Model inputs

- Health states used were based on responders, defined as having a minimum 50% reduction in the number of monthly migraine days(MMDs).
- Patients included were 80.5% women with a mean age of 41 years.
- Comparative efficacy was obtained from an indirect comparison of clinical trials (NCT02066415,STRIVE, ARISE,LIBERTY & HER-MES for erenumab and PREEMPT I and PREEMPT II for onabotulinumtoxinA)

### Model outputs

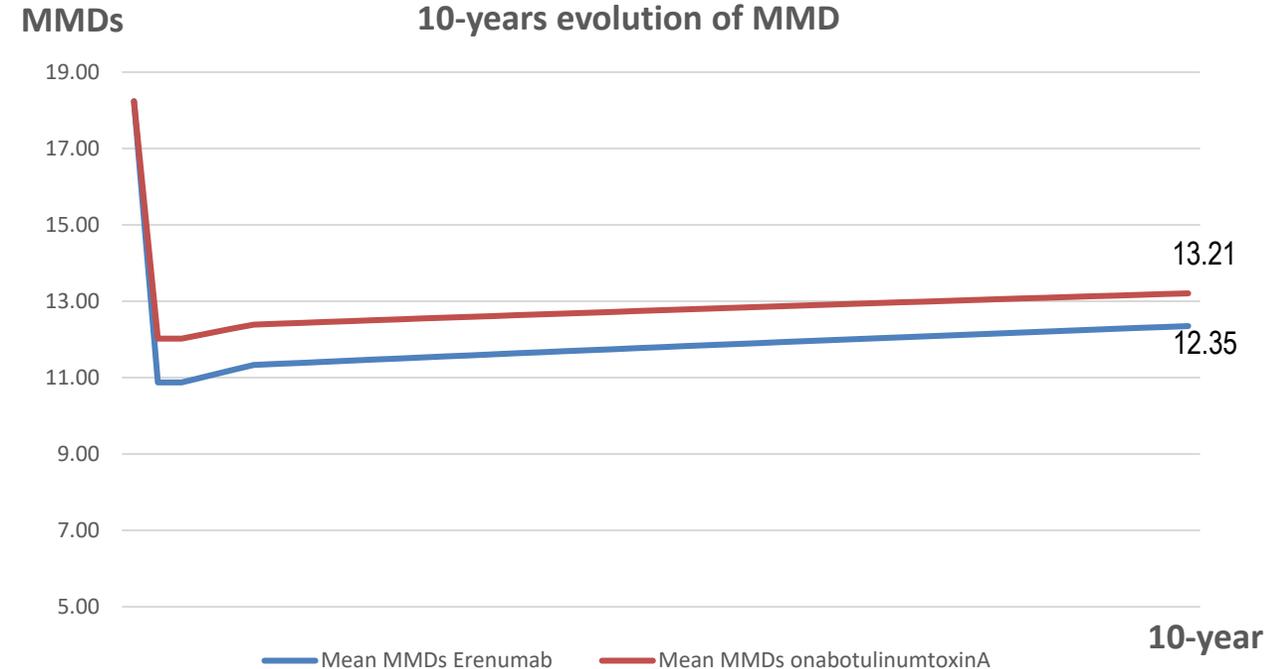
- Primary outcomes were costs, MMD and quality-adjusted life years (QALY). We estimated an incremental cost-effectiveness ratio (ICER) as the cost per QALY gained. The cost per MMD avoided was also estimated, as well as disaggregated direct and indirect costs.
- Sensitivity analysis was performed to validate the robustness.





**Cost-effectiveness Results:**

	Erenumab 140 mg	onabotulinumtoxinA	Incremental	ICER
Costs	46,226	42,728	3,497	
Migraine Days (MD)	1.380	1.491	-111	32€



**Results**

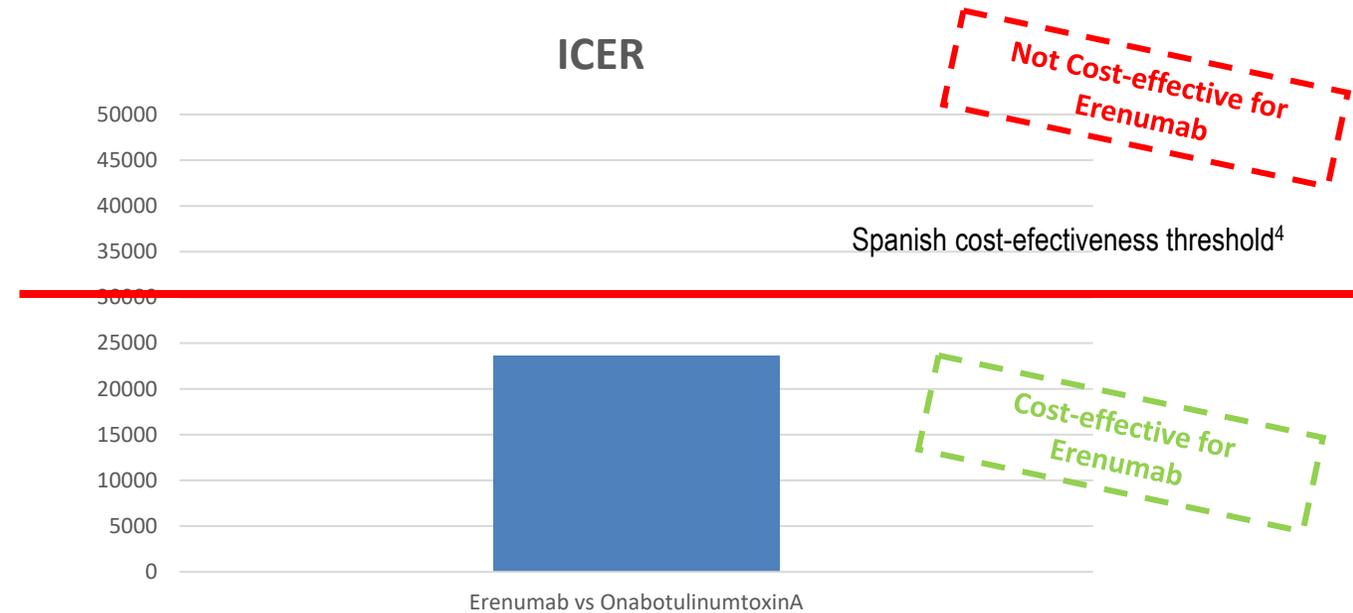
- Patients treated with erenumab showed improved mean MMDs over time, down to 12.35 MMDs at 10 years, while onabotulinumtoxinA patients reduced to 13.21.
- The indirect cost was 16,836.11€ for erenumab and 18,061.51€ for onabotulinumtoxinA, and presenteeism was the main contributor factor (54.15% and 54.04% of the total indirect cost respectively).
- Given the total reduction of migraine days with erenumab, the incremental cost per MMD avoided with erenumab vs onabotulinumtoxinA was 32€.



## Results & Conclusion

### Results

- Mean QALYs were 5.46 for the erenumab cohort and 5.18 for the onabotulinumtoxinA cohort.
- Incremental cost per QALY gained with erenumab vs onabotulinumtoxinA was 23,652€, below the Spanish efficiency threshold<sup>4</sup>.
- Sensitivity analysis with indirect cost using WPAI, showed an incremental cost per QALY gained of 23,375€.



### Conclusion

- This results suggest that from a Spanish societal perspective, erenumab is cost-effective in chronic migraine patients who have failed one or more prior preventive treatments versus onabotulinumtoxinA.