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Cost-per-Responder Analysis of Bimekizumab (IL-17A/F Inhibitor) Against IL-23 Targeted Therapies for Psoriatic Arthritis in Spain, Based on Matching-Adjusted Indirect Comparisons

Jorge Mestre-Ferrándiz,[1] Victoria Navarro-Compán,[2] Yoana Ivanova-Markova,[3] Almudena González-Domínguez,[3] Stefano Maratia[4]

Objectives

Bimekizumab is a monoclonal IgG1 antibody that selectively inhibits interleukin (IL)-17F in addition to IL-17A, recently approved to treat patients with active psoriatic arthritis (PsA) in the European Union.[1] This study compares the cost-per-responder (CPR) of bimekizumab against IL-23 targeted therapies (guselkumab and risankizumab) for the treatment of patients with PsA in Spain.

Methods

The CPR was calculated by dividing the average annual drug cost per patient (**Table 1**) by the response rates (**Table 2**).

- Spanish list prices were considered, including the Royal Decree Law 8/2010 discount.[2,3]
- Dosing regimens were informed by each treatment´s Summary of Product Characteristics (bimekizumab 160 mg - Q4W, guselkumab 100 mg - Q8W, and risankizumab 150 mg - Q12W).[4]
- Minimal disease activity (MDA), American College of Rheumatology (ACR) 50 and ACR70 response rates at week 52 in patients who are biologic disease-modifying antirheumatic drug (bDMARD)-naïve or who experienced inadequate response or intolerance to tumour necrosis factor inhibitors (TNFi-IR) from two published Matching-Adjusted Indirect Comparisons (MAIC) were used.[5,6]

Results

BDMARD - naïve patients:

- The CPR for bimekizumab (€34,711 for MDA, €29,602 for ACR50 and €37,603 for ACR70) was lower compared to guselkumab (€52,972, €33,928 and €59,069, respectively) **(Figure 1A)**.
- The CPR for bimekizumab (€37,102 for MDA, €31,033 for ACR50 and €43,253 for ACR70) compared to risankizumab (€46,781, €40,947 and €68,455, respectively) was also lower **(Figure 1A)**.
- Bimekizumab has a lower CPR, ranging between -12.7% and -36.3% compared to guselkumab and between -20.7% and -36.8% compared to risankizumab, depending on the selected response rate **(Figure 2)**.

TNFi - IR patients:

- The CPR for bimekizumab (€39,847 for MDA, €33,325 for ACR50 and €48,961 for ACR70) was lower compared to guselkumab (€60,819, €41,891 and €68,997, respectively) **(Figure 1B)**.
- The CPR for bimekizumab (€46,249 for MDA, €36,454 for ACR50 and €55,839 for ACR70) compared to risankizumab (€93,809, €81,705 and €170,480, respectively) was also lower **(Figure 1B)**.
- In other words, bimekizumab has a lower CPR, ranging between -20.4% and -34.5% compared to guselkumab and between -50.7% and -67.2% compared to risankizumab, depending on the selected response rate **(Figure 2)**.

Conclusions

Based on published MAIC response rates for MDA, ACR 50 and ACR70 at week 52, the CPR analyses demonstrate it is more cost-efficient to treat patients with PsA in Spain with bimekizumab than with available IL-23 targeted therapies guselkumab and risankizumab.

Table 1 Average annual drug costs (year 1 and year 2)

Biological drug	List price per unit*	Dose	Average annual units	Average annual drug costs
Bimekizumab 160 mg	**€ 1,236.73**	**160 mg Q4W**	**13.5 units**	**€ 16,695.79**
Guselkumab 100 mg	**€ 2,345.89**	**100 mg wk 0-4 100 mg - Q8W**	**7 units**	**€ 16,421.25**
Risankizumab 150 mg	**€ 3,545.98**	**150 mg wk 0-4 150 mg - Q12W**	**5 units**	**€ 17,729.89**

*The price include the Royal Decree Law 8/2010 discount.[3]

Table 2 Bimekizumab adjusted response rates versus comparators at 52 weeks

		MDA	ACR50	ACR70
bDMARD - naïve	**Bimekizumab 160 mg** versus Guselkumab 100 mg	**48.1%** vs **31.0%** *	**56.4%** vs **48.4%**	**44.4%** vs **27.8%** *
	Bimekizumab 160 mg versus Risankizumab 150 mg	**45.0%** vs **37.9%**	**53.8%** vs **43.3%** *	**38.6%** vs **25.9%** *
TNFi - IR	**Bimekizumab 160 mg** versus Guselkumab 100 mg	**41.9%** vs **27.0%** *	**50.1%** vs **39.2%** *	**34.1%** vs **23.8%** *
	Bimekizumab 160 mg versus Risankizumab 150 mg	**36.1%** vs **18.9%** *	**45.8%** vs **21.7%** *	**29.9%** vs **10.4%** *

*Statistically significant: p ≤ 0.05 ; N.A: not applicable.
Source: Two published MAICs: Warren et al., 2024[5]; Mease et al., 2024[6]

Figure 1 Cost-per-responder of bimekizumab against guselkumab and risankizumab at 52 weeks

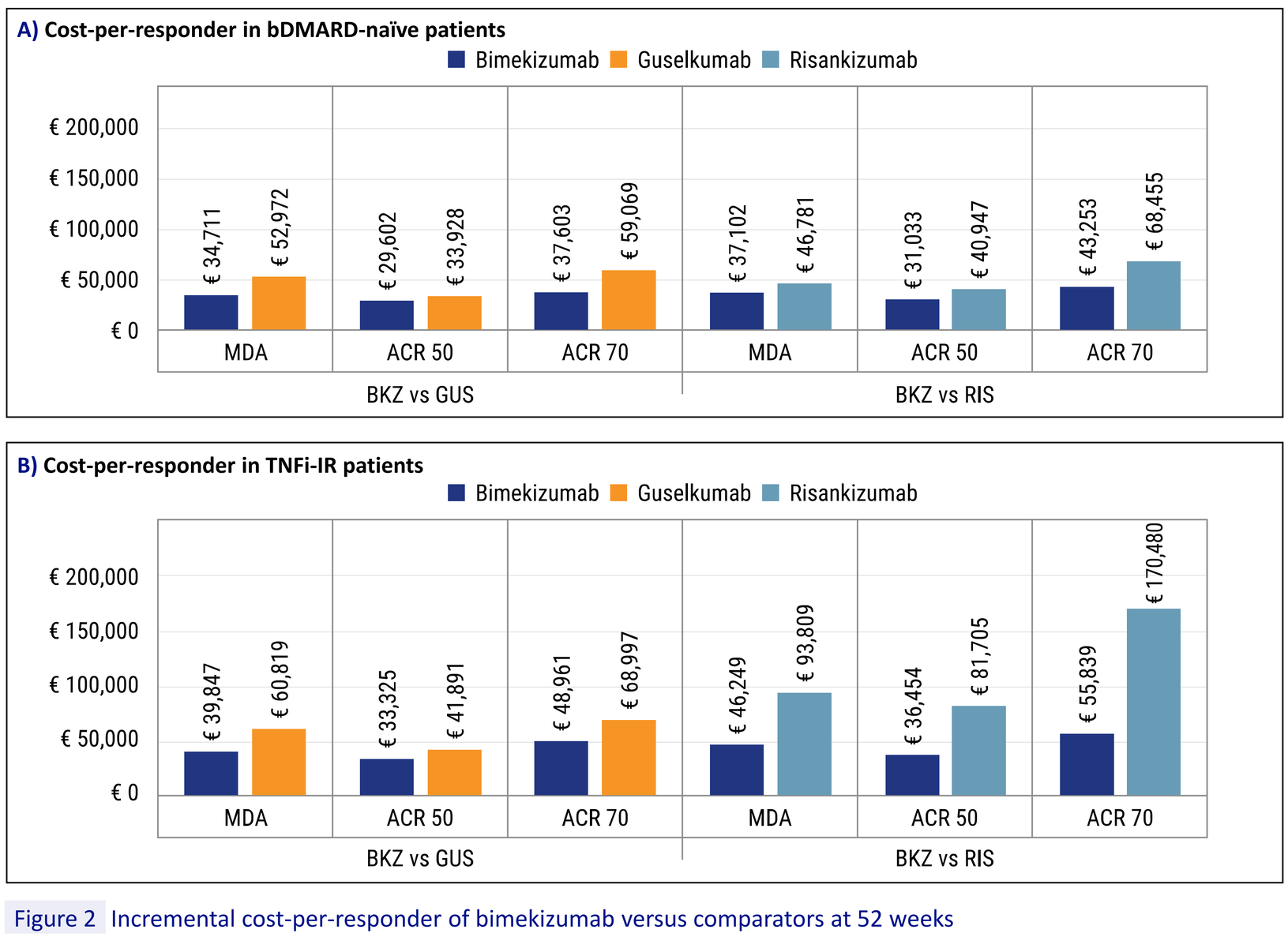
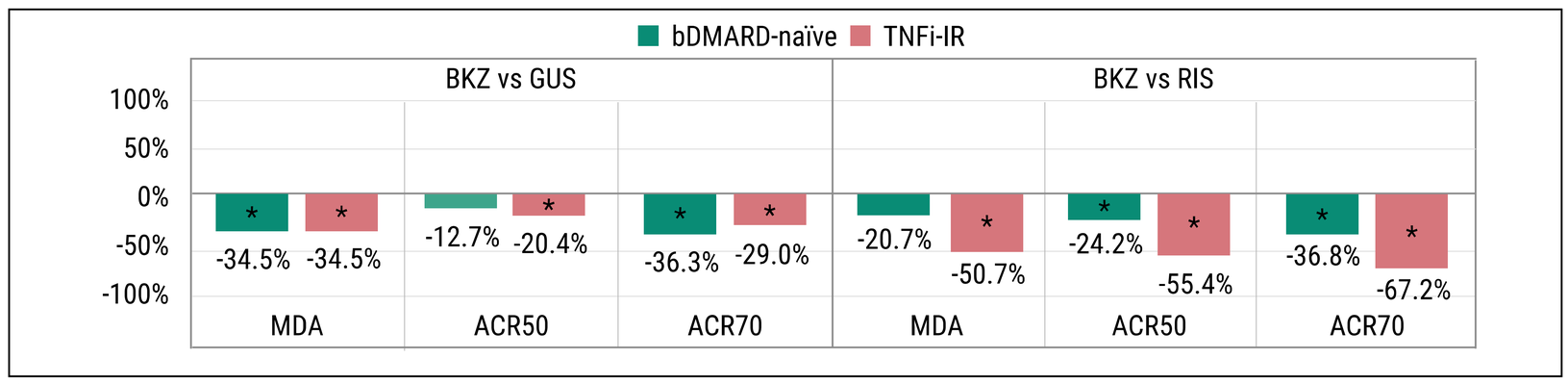


Figure 2 Incremental cost-per-responder of bimekizumab versus comparators at 52 weeks



*Statistically significant: p ≤ 0.05

ACR: American College of Rheumatology; **bDMARD**: biologic disease-modifying antirheumatic drug; **BKZ**: bimekizumab; **CPR**: cost-per-responder; **GUS:** guselkumab; **IL**: interleukin; **MDA**: minimal disease activity; **PsA**: psoriatic arthritis; **Q4W**: every four weeks; **Q8W**: every eight weeks; **Q12W**: every twelve weeks; **RIS:** risankizumab; **TNFi - IR**: tumor necrosis factor inhibitors inadequate response; **wk**: week

Institutions: [1]University Carlos III, Madrid, Spain; [2]University Hospital La Paz, Madrid, Spain; [3]Weber, Madrid, Spain; [4]UCB, Madrid, Spain.

References: [1]European Medicines Agency. European Public Assessment Report: Bimzelx® (Psoriatic Arthritis) [Internet]. 2023 [cited 2023 Jun 16]. Available from: https://www.ema.europa.eu/en/documents/variation-report/bimzelx-h-c-5316-ii-0011-epar-assessment-report-variation_en.pdf; [2]General Council of Pharmaceutical Associations. BOT PLUS. Base de datos de información sanitaria de medicamentos y productos de parafarmacia [Internet]. [cited 2024 Aug 28]. Available from: https://botplusweb.farmaceuticos.com/; [3]Real Decreto-ley 8/2010, de 20 de mayo, por el que se adoptan medidas extraordinarias para la reducción del déficit público. Agencia Estatal Boletín Oficial del Estado [Internet]. Sect. 1, Real Decreto-ley 8/2010 May 24, 2010 p. 45070–128. Available from: https://www.boe.es/eli/es/rdl/2010/05/20/8; [4]Spanish Agency of Medicines and Medical Devices. CIMA. Centro de información de medicamentos [Internet]. [cited 2024 Jul 29]. Available from: https://cima.aemps.es/cima/publico/home.html; [5]Warren RB, McInnes IB, Nash P, Grouin JM, Lyris N, Willems D, et al. Comparative Effectiveness of Bimekizumab and Guselkumab in Patients with Psoriatic Arthritis at 52 Weeks Assessed Using a Matching-Adjusted Indirect Comparison. Rheumatol Ther. 2024;11(3):829–39; [6]Mease PJ, Warren RB, Nash P, Grouin JM, Lyris N, Willems D, et al. Comparative Effectiveness of Bimekizumab and Risankizumab in Patients with Psoriatic Arthritis at 52 Weeks Assessed Using a Matching-Adjusted Indirect Comparison. Rheumatol Ther. 2024;11(5):1403–12.
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