REAL-WORLD CHARACTERISTICS AND HEALTHCARE RESOURCE USE IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS TREATED WITH BIMEKIZUMAB IN SWEDEN: THE BIMENORDIX STUDY

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Objective

To describe patient characteristics and healthcare resource use (HCRU) in patients with axial spondyloarthritis (axSpA) initiating bimekizumab (BKZ) in Sweden.

Background

- BKZ, a dual interleukin (IL)-17A/F inhibitor, is approved for the treatment of axSpA, a chronic immune-mediated inflammatory disease associated with impaired quality of life [1,2]. This study is one of the first to depict real-world evidence from Swedish clinical practice, including patient characteristics, HCRU and associated costs*.

Methods

- Adult patients (≥18 years) initiating BKZ with an axSpA diagnosis (International Classification of Diseases [ICD]–10: M45, M46.0–1, M46.8–9) within two years before BKZ initiation (index) were identified in national registries between 1 January 2023 and 30 June 2024. Additional inclusion and exclusion criteria are shown in **Figure 1**.
- Baseline co-diagnoses and treatment history were described from 1 January 2005 up to and including BKZ initiation date.
- HCRU (outpatient visits, rheumatology visits, inpatient visits) and associated costs were assessed during the six months before and after BKZ initiation.

Results

Patient characteristics

- A total of 101 patients were included (mean age 50.5 [standard deviation, SD 14.3] years; 57% female).
- Common co-diagnoses were joint pain (28%) and hypertension (26%); 8% had a history of anterior uveitis.
- 98% had prior b/tsDMARDs exposure and 77% received ≥2 previous b/tsDMARDs.
- BKZ was prescribed by a rheumatologist in most (83%) patients (**Table 1**).

HCRU and associated costs

- Mean total (in- and outpatient) visits per six months decreased from 4.1 (SD 4.3; Median 3; inter-quartile range [IQR] 4) pre-BKZ initiation to 3.7 (SD 3.8; Median 2; IQR 3) visits post-BKZ initiation.
- Outpatient rheumatology visits showed the greatest reduction, with >60% of patients having ≤ 1 visit post-BKZ initiation (**Figure 2**).
- Mean (SD) costs per six months changed from €1611 (1654) pre-BKZ initiation to €1564 (1652) post-BKZ initiation for outpatient visits, €790 (2903) to €753 (2285) for inpatient visits, and €3609 (3764) to €6585 (2518) for dispensed medications (**Figure 3B**).

Conclusion

- **BKZ is utilized in a high-need axSpA population with extensive prior b/tsDMARD exposure and co-diagnostic burden, reflecting use in patients with limited remaining treatment options.**
- **Higher drug acquisition costs following BKZ initiation, were partly offset by stable or reduced HCRU, including outpatient care.**
- **These findings support a total cost of care perspective, suggesting BKZ may improve disease control without increasing overall healthcare burden. However, further research with extended follow-up is warranted.**

*At the time of the study period, BKZ was used in Swedish clinical practice for axSpA, although reimbursement within the Swedish pharmaceutical benefits scheme had not been established for this indication.

Summary

Patient characteristics at baseline

57.4% **42.6%**

101 BKZ initiators with axSpA

No pre-exposure: 2.0% **Pre-exposure: 98.0%**

Majority had prior b/tsDMARD exposure

8% had a history of anterior uveitis

Healthcare resource use

Healthcare visits decreased moderately from 6 months pre-BKZ initiation to post-BKZ initiation, particularly in total outpatient and rheumatology visits.

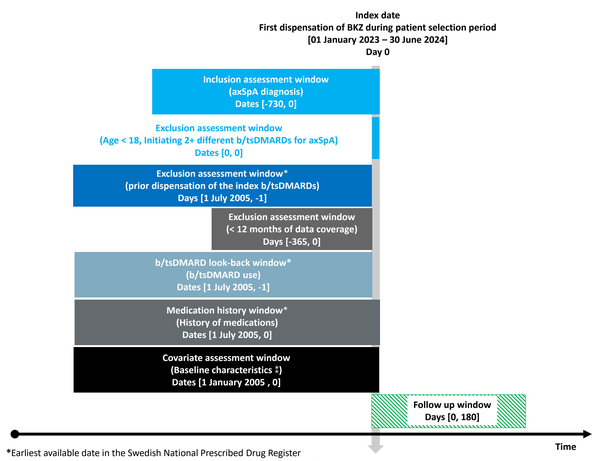
Healthcare costs

From 6 months pre-BKZ initiation to post-BKZ initiation, healthcare visitation costs declined modestly, while medication costs increased.

Conclusion

Patients with axSpA initiating BKZ had notable prior b/tsDMARD exposure and co-diagnostic burden. In this higher-needs population, costs shifted toward effective treatment, while outpatient HCRU was maintained or reduce.

Figure 1 Study design



*Earliest available date in the Swedish National Prescribed Drug Register
‡ Baseline characteristics include demographic and clinical patient characteristics.

Table 1 Characteristics of patients with axSpA

	Total cohort
N	101
Female, n (%)	58 (57.43)
Age, mean (SD)	50.48 (14.33)
Prescriber specialty[a], n (%)	
Rheumatologist	84 (83.17)
Missing	16 (15.84)
Number of prior b/tsDMARDs, n (%)	
0–1[b]	23 (22.77)
≥2	78 (77.23)
History of medications[c]	
Number of medications[d], mean (SD)	1.41 (1.03)
Medications[a], n (%)	
NSAIDs	71 (71.29)
Opioids	26 (25.74)
Corticosteroids	26 (25.74)
Methotrexate	14 (13.86)
Years since first axSpA diagnosis[e], mean (SD)	8.31 (6.33)
History of co-diagnoses[a], n (%)	
Joint pain	28 (27.72)
Hypertension	26 (25.74)
Osteoarthritis	26 (25.74)
Cardiovascular comorbidity	22 (21.78)
Rheumatoid arthritis	21 (20.79)
Anxiety	14 (13.86)
Obesity	14 (13.86)
Depression	12 (11.88)
Psoriasis	11 (10.89)
Malignancies	10 (9.90)
Asthma	9 (8.91)
Sleep apnea	9 (8.91)
Anterior Uveitis[f]	8 (7.92)
Fibromyalgia	8 (7.92)
Psoriatic arthritis	8 (7.92)
Dactylitis	7 (6.93)
Inflammatory bowel disease	7 (6.93)
Allergy	6 (5.94)
Lower back pain	5 (4.95)

*Select prescriber specialties (dermatologist, orthopedist, general practitioner, and other), prior medications (hydroxychloroquine, leflunomide, and sulfasalazine), and co-diagnoses (chronic kidney disease, diabetes, enthesitis, fatigue, hidradenitis suppurativa, hyperlipidaemia, liver disease, oligoarthritis, osteoporosis, Systemic lupus erythematosus, urethritis, and metabolic syndrome) are not shown due to low patient counts in the total cohort (n <5).
[b]Results were consolidated into a single category because fewer than five patients had no prior b/tsDMARD exposure.
[c]Assessed during the 90 days before and including BKZ initiation date (index date).
[d]Defined as at least one dispensation for a medication in any of the following seven categories: NSAIDs, opioids, corticosteroids (excluding topicals), hydroxychloroquine, leflunomide, methotrexate, sulfasalazine.
[e]Defined as the time in years from the first recorded diagnosis of axSpA during the covariate assessment period (from 1 January 2005 up to index date).
[f]Defined as having a diagnosis of anterior uveitis (ICD-10: H20, H22.1) within 12 months prior to the index date.

Figure 2 Outpatient rheumatology visits per patient during the 6 months before and after BKZ treatment initiation

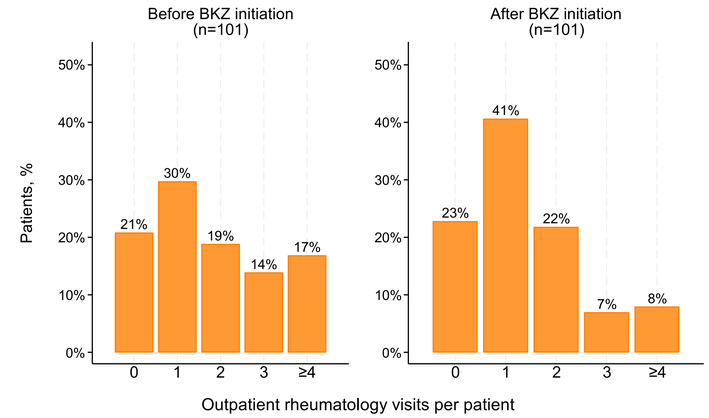
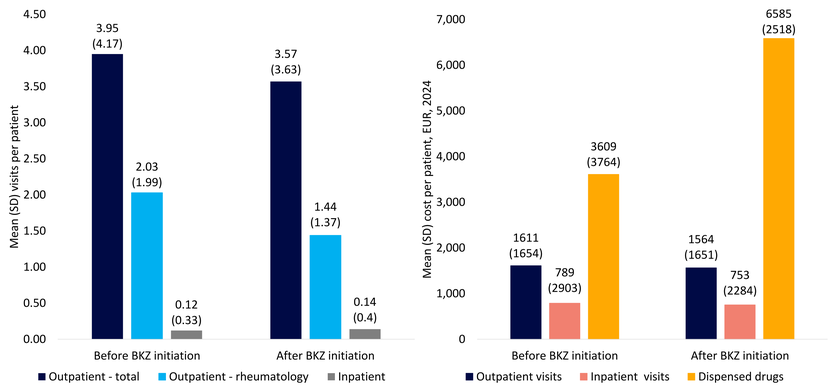


Figure 3 Healthcare resource use and costs during the 6 months before and after BKZ treatment initiation



axSpA: axial spondyloarthritis; **b/tsDMARD:** biologic and targeted synthetic disease-modifying anti-rheumatic drug; **BKZ:** Bimekizumab; **HCRU:** healthcare resource use; **ICD:** international classification of diseases; **IL:** interleukin; **IQR**: interquartile range; **NR:** not reported; **SD:** standard deviation.

References: [1]UCB receives new European Commission approvals for bimekizumab for the treatment of psoriatic arthritis and axial spondyloarthritis [press release]. 2023; [2]Strand, V. and J.A. Singh, Patient Burden of Axial Spondyloarthritis. Journal of clinical rheumatology: practical reports on rheumatic & musculoskeletal diseases, 2017. 23(7): p. 383-391.

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