Mengying Wang^{1,2}, Xiaoyang Xu^{1,2}, Xiaoning He^{1,2}, Jing Wu^{1,2*}

1 School of Pharmaceutical Science and Technology, Tianjin University, Tianjin, China 2 Center for Social Science Survey and Data, Tianjin University, Tianjin, China

- BACKGROUND
- > Psoriasis and ankylosing spondylitis significantly impair patients' quality of life. Secukinumab, a monoclonal antibody targeting IL-17A, provides an alternative to conventional therapies.
- > However, in China, there is limited evidence on the patient characteristics, treatment patterns, and economic burden associated with the use of biologics—particularly Secukinumab—for the management of psoriasis and ankylosing spondylitis.

To evaluate the patient characteristics, treatment pattern, and economic burden of patients with psoriasis and ankylosing spondylitis in China treated with biologics of Secukinumab.

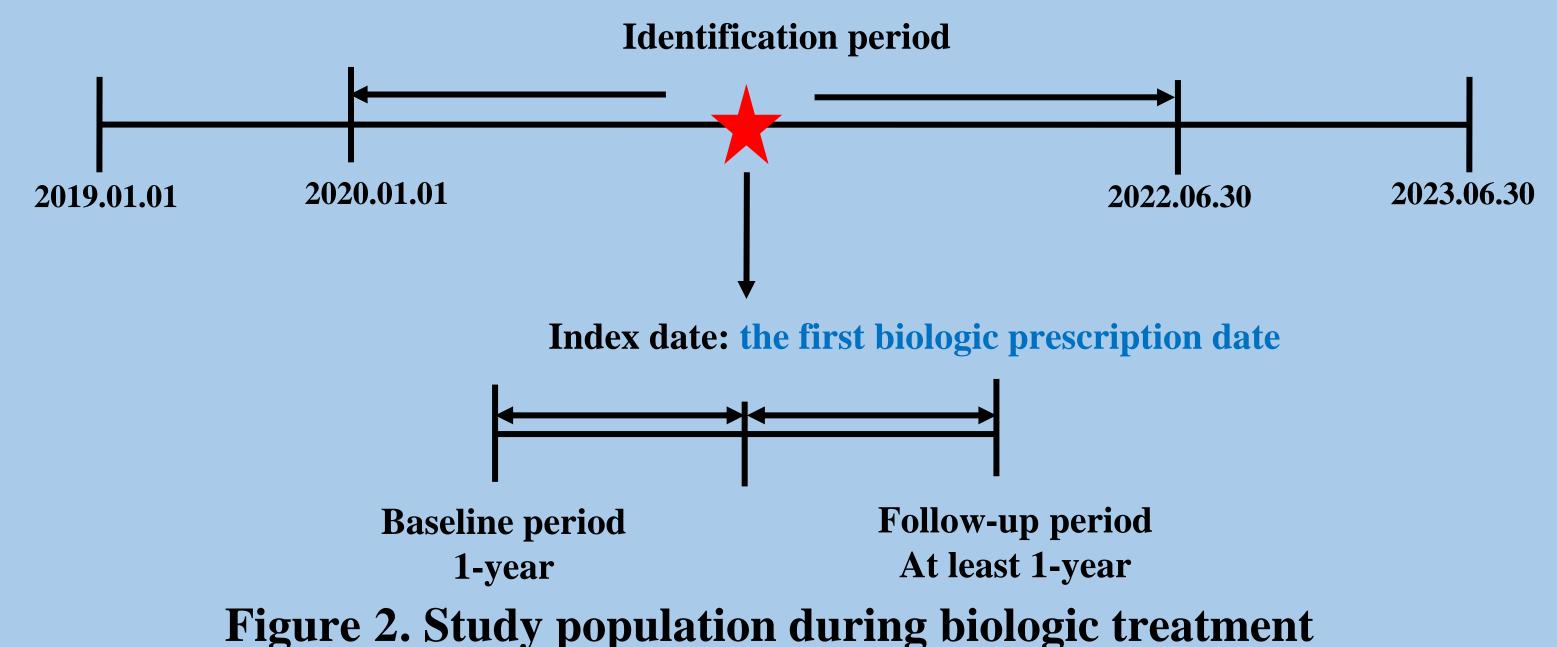
METHODS

This study used electronic medical records (EMR) from more than 80 secondary and tertiary hospitals in Tianjin, China. It identified patients who started Secukinumab treatment for psoriasis or ankylosing spondylitis between 2017 and 2023 (**Figure 1**).



Figure 1. Study data overview

The index date was the first use of Secukinumab. The baseline period was the year before enrollment, and the follow-up period covered the first year of treatment (Figure 2).



RESULTS

1. Patient characteristics

A total of 1,306 psoriasis patients were included, with a mean age of 44.1±14.0 years, and 66.8% were male. For ankylosing spondylitis, 215 patients were included, with a mean age of 36.0±9.7 years (Table 1).

Table 1. Patient characteristics

Variables	Psoriasis (N=1306)	Ankylosing Spondylitis (N=215)
Gender, n (%)		
Male	66.8%	85.6%
Female	33.2%	14.4%
Age, mean (SD)	44.1 (14.0)	36.0 (9.7)
Age group, n (%)		
18–29 years	14.2%	30.6%
30–39 years	33.2%	46.8%
40–49 years	19.4%	12.7%
50–59 years	16.8%	6.5%
60–69 years	12.3%	2.6%
70+ years	4.1%	0.8%

2. Treatment pattern

For psoriasis patients, the annual average number of Secukinumab prescriptions per patient was 12.9 ± 9.2 . For ankylosing spondylitis patients, the annual average number of Secukinumab prescriptions per patient was considerably lower, at 6.6 ± 3.7 (Table 2).

Table 2. Number of Secukinumab prescriptions

Variables	Psoriasis (N=1306)	Ankylosing Spondylitis (N=215)
Number of prescriptions p	er	
patient		
Mean	12.9	6.6
Standard Deviation	9.2	3.7
Median	12	6
Quartile	[4, 20]	[4, 9]
Annual distribution of dru	ıg	
doses		
≤ 5 doses	29.6%	42.3%
≤ 10 doses	48.7%	85.1%
≤ 15 doses	61.1%	96.7%
≤ 20 doses	76.7%	100.0%
≤ 25 doses	87.5%	100.0%
≤ 30 doses	96.8%	100.0%

3. Economic burden

> The outpatient costs for both psoriasis and ankylosing spondylitis were higher than the inpatient costs (Figure 3).

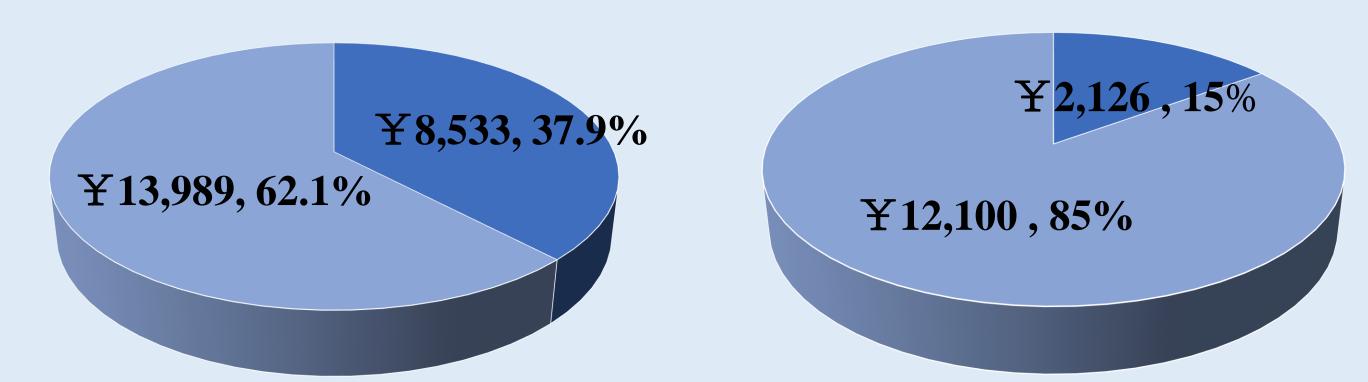


Figure 3. Total cost structure

> Psoriasis patients' disease-specific costs in the first follow-up year were $\$19,771 \pm \$13,175$. For ankylosing spondylitis, disease-specific costs were $\$10,799 \pm \$6,516$, lower than psoriasis (Table 3).

Table 3. Direct Medical Costs and Resource Utilization

Variable	Psoriasis (N=1306)	Ankylosing Spondyliti (N=215)
Follow up on the direct medical costs in the first year		
Total Disease Costs (¥)	22523	14226
Annual Inpatient Costs	8533	2126
Average Inpatient Costs per Visit	3846	1468
Annual Outpatient Costs	13989	12100
Average Outpatient Costs per Visit	1350	751
Disease-Specific Costs(Y)	19771	10799
Annual Inpatient Costs	7048	1267
Average Inpatient Costs per Visit	3191	1056
Annual Outpatient Costs	12722	9532
Average Outpatient Costs per Visit	1772	1272
Healthcare Resource Utilization in the First Year of Follow-up		
All-Cause Disease		
Inpatients (%)	34.4%	15.8%
Outpatients (%)	98.7%	100%
Disease-Specific Costs		
Inpatients (%)	31%	12.1%
Outpatients (%)	95.6%	100%

CONCLUSIONS

Overall, patients with both psoriasis and ankylosing spondylitis faced a significant economic burden, highlighting the need for optimized treatment plans and efficient use of medical resources.

References

- 1. Langley R G, Elewski B E, Lebwohl M, et al. Secukinumab in plaque psoriasis Results of two phase 3 trials[J]. The New England journal of medicine, 2014, 371(4) 2. Paul, LeMoigne, Molinier, et al. Healthcare cost impact of biological drugs compared with traditional systemic treatments in psoriasis: A cohort analysis in the French i
- nsurance database[J].Journal of the European Academy of Dermatology and Venereology: JEADV, 2014, 28(9):1235-1244 3. Feldman S R, Yang Z, Prakash N,et al. Patterns of medication utilization and costs associated with the use of etanercept, adalimumab, and ustekinumab in the manage
- ment of moderate-to-severe psoriasis.[J].Journal of Managed Care & Specialty Pharmacy, 2015, 21(3):201-209.
- 4. Gottlieb A B, Deodhar A, Mcinnes I B,et al.Long-term Safety of Secukinumab Over Five Years in Patients with Moderate-to-severe Plaque Psoriasis, Psoriatic Arthr itis and Ankylosing Spondylitis: Update on Integrated Pooled Clinical Trial and Post-marketing Surveillance Data[J]. Acta Dermato-Venereologica, 2022, 102.