

Table I. Demographic information on the attending physicians who commented on the survey

Characteristic	n (%)
Sex	
Male	28 (48%)
Female	30 (52%)
Age, y	
30-39	13 (22%)
40-49	21 (36%)
50-59	12 (21%)
60-69	7 (12%)
≥70	5 (9%)
Part-time or full-time	
Full-time	49 (91%)
Part-time	4 (7%)
Region	
Northeast	11 (19%)
Midwest	17 (29%)
South	20 (35%)
West	10 (17%)
Title	
Assistant professor	17 (29%)
Associate professor	16 (28%)
Professor	16 (28%)

medical record. The second most common factor, which was noted by 11 dermatologists (19%), was lack of protected time for pursuing academic interests such as research or teaching. This was closely followed by 10 responses (17%) regarding an increased administrative demand for productivity, causing a sense that institutions value finances over proper patient care and academic pursuits. Ten dermatologists (17%) noted bureaucratic tasks, especially those concerning insurance matters, as factors contributing to burnout. Dermatologists also pointed to a lack of support or appreciation shown by administrative bodies to the physicians (12%). Other recurring themes included bringing unfinished work home (9%), inadequate support staff (9%), frustrations with residents (9%), a loss of autonomy (7%), and difficult patients (7%).

Limitations of this study include the small sample size and possible selection bias given that only 18% of the survey recipients responded. The demographic information in [Table I](#), however, shows that attendings over a broad geographic region, age range, and professional title were reached.

The most common causes of burnout for all specialty physicians presented in the 2018 Medscape report included too many bureaucratic tasks (56%), too many hours at work (39%), lack of

respect from administrators and colleagues (26%), increasing computerization (24%), and insufficient compensation (24%).¹ Our study shows that many of these factors also apply to dermatology, but a unique cause of burnout in academic dermatologists was the lack of protected time to teach or conduct research. Academic dermatologists seek a balance between patient care and the other interests that originally attracted them to academic medicine. Institutions may be able to combat burnout by increasing protected time for other scholarly pursuits.

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REFERENCES

1. Medscape. Medscape national physician burnout and depression report 2018. Medscape, <https://www.medscape.com/slideshow/2018-lifestyle-burnout-depression-6009235>; 2018. Accessed June 29, 2018.
2. Medscape. Medscape lifestyle report 2017: race and ethnicity, bias and burnout, <https://www.medscape.com/features/slideshow/lifestyle/2017/overview#page=1>; 2017. Accessed June 29, 2018.
3. Medscape. Medscape lifestyle report 2016: bias and burnout, <https://www.medscape.com/slideshow/lifestyle-2016-overview-6007335>; 2016. Accessed June 29, 2018.
4. Medscape. Physician burnout: it just keeps getting worse, <https://www.medscape.com/viewarticle/838437>; 2015. Accessed June 29, 2018.

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Real-world drug survival of ixekizumab for psoriasis



To the Editor: Although the efficacy of ixekizumab for psoriasis has been demonstrated in phase III trials,¹ few data exist regarding its utility in real-world practice. The objective of this study was to evaluate the use and drug survival of ixekizumab in clinical practice.

Table I. Baseline characteristics and ixekizumab persistence compared to ixekizumab failure

Variable	Drug survival (n = 14)*	Drug failure (n = 8)†	Total (n = 22)	P value
Baseline characteristics				
Male, n (%)	11 (73.3)	3 (50.0)	14 (63.6)	P = .3‡
Female, n (%)	5 (31.3)	3 (50.0)	8 (36.4)	P = .04‡
Mean age ± SD, y	50.8 ± 11.6	44.3 ± 13.1	48.4 ± 12.3	P = .24§
Mean baseline BSA, ± SD, kg/m ²	11.6 ± 16.0	18.1 ± 23.1	11.8 ± 18.6	P = .44§
Survival vs failure				
Rate, %	63.7	36.3		
Mean duration (days ± SD)	379 ± 118	265 ± 131		
Range (days)	104-642	65-473		
History of biologic use, n (%)	14 (100.0)	8 (100.0)	22 (100.0)	
Prior biologics: 1	3 (21.4)	1 (12.5)		
Prior biologics: 2	3 (18.8)	1 (12.5)		
Prior biologics: 3	4 (28.6)	2 (25.0)		
Prior biologics: ≥4	4 (25.0)	4 (50.0)		
Concurrent PsA, n (%)	5 (35.7)	2 (25.0)	6 (27.3)	

BSA, Body surface area; PsA, psoriatic arthritis; SD, standard deviation.

*Two patients were taking methotrexate concurrently during a portion of their ixekizumab treatment.

†Two patients were taking cyclosporine concurrently at the beginning of their treatment with ixekizumab.

‡P value calculated by using the chi-square test.

§P value calculated by using the t test.

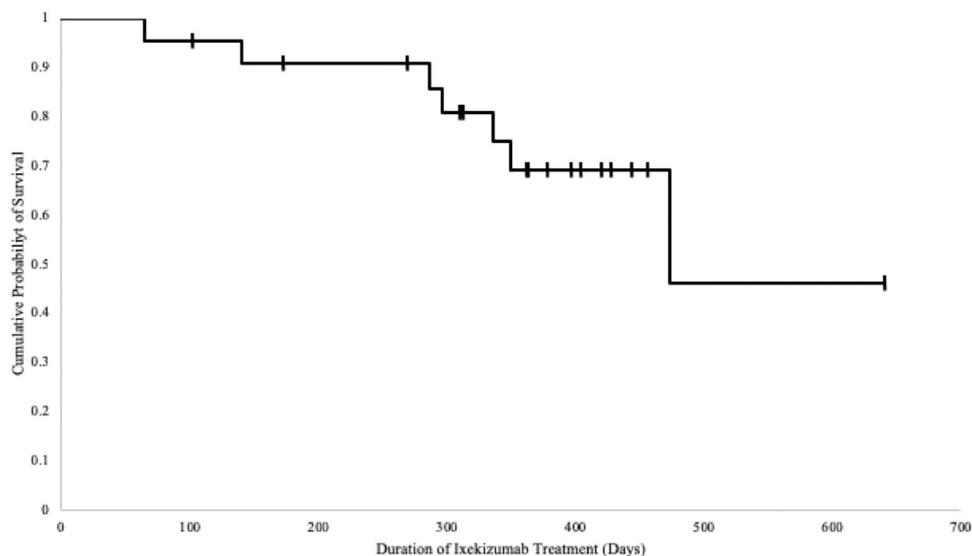


Fig 1. Cumulative probability of drug survival in patients using ixekizumab.

This retrospective cohort study examined drug survival in 22 patients treated for moderate-to-severe psoriasis with standard dosing of ixekizumab at the Kaiser Permanente Los Angeles Medical Center Dermatology Clinic from March 22, 2016, to November 25, 2018 (Table I). Seven of the patients also had diagnoses of psoriatic arthritis. Failure was defined as the need to add an oral medication or phototherapy or switch to a different oral or biologic agent on the basis of clinical judgment. No escalation of ixekizumab dose was observed. Failure

date was set as the date on which the therapy was changed.

Our results found that 14 of 22 patients were still taking ixekizumab at the end of the study period and had been taking it for an average of 379 days (range, 104-642; interquartile range, 101) (Fig 1). All 14 patients had previously failed therapy with other biologics, with 8 previously failing secukinumab therapy and 8 previously failing therapy with 3 or more biologics. Two patients were taking methotrexate concurrently during their treatment

with ixekizumab, and both of them eventually stopped taking methotrexate after achieving symptom improvement while taking ixekizumab. One patient took methotrexate for the first month of ixekizumab therapy, whereas the other took methotrexate for the first 3 months. Two patients were taking cyclosporine concurrently, both of whom eventually failed ixekizumab therapy on account of lack of efficacy. Seven patients who failed ixekizumab therapy did so on account of inefficacy; 1 was lost to follow-up.

The results of this study are consistent with previous findings demonstrating success in real-world patients. Georgakopoulos et al found that 15 of 17 secukinumab nonresponders (88.2%) responded to ixekizumab after 12 weeks of treatment,² suggesting that failure to respond to secukinumab is not a predictor of response to ixekizumab despite their similar mechanisms of action. Additionally, a subanalysis of the UNCOVER-2 and UNCOVER-3 trials found that patients who did not respond to etanercept therapy attained high levels of response with 12 weeks of ixekizumab treatment.³ The results of our study also demonstrate that ixekizumab may be successful in patients who have previously failed treatment with other biologics. The patients in our study who did fail ixekizumab therapy may be particularly resistant to therapy; all had previously failed therapy with at least 2 other biologics.

Although our study is limited by a small sample size and relatively short follow-up duration, the results demonstrate that ixekizumab may be an appealing choice for physicians and patients alike. Moreover, this study is, to our knowledge, the largest to examine the use of ixekizumab in clinical practice. It may be especially useful in those who have previously failed therapy with numerous biologics. Given the chronic nature of psoriasis and the relatively short drug survival of some current biologics,⁴ it is important for patients to continue to have novel options for treatment. Further research is necessary to determine the long-term utility of ixekizumab compared with that of other biologics and its efficacy in patients with difficult-to-treat psoriasis.

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REFERENCES

1. Gordon KB, Blauvelt A, Papp KA, et al, UNCOVER-1 Study Group; UNCOVER-2 Study Group; UNCOVER-3 Study Group. Phase 3 trials of ixekizumab in moderate-to-severe plaque psoriasis. *N Engl J Med.* 2016;375(4):345-356.
2. Georgakopoulos JR, Phung M, Ighani A, Yeung J. Efficacy and safety of switching to ixekizumab in secukinumab non-responders with plaque psoriasis: a multicenter retrospective study of interleukin (IL)-17A antagonist therapies. *J Am Acad Dermatol.* 2018;79(1):155-157.
3. Blauvelt A, Papp KA, Griffiths CEM, et al. Efficacy and safety of switching to ixekizumab in etanercept non-responders: a sub analysis from two phase III randomized clinical trials in moderate-to-severe plaque psoriasis (UNCOVER-2 and -3). *Am J Clin Dermatol.* 2017;18(2):273-280.
4. No DJ, Inkeles MS, Amin M, Wu JJ. Drug survival of biologic treatments in psoriasis: a systematic review. *J Dermatolog Treat.* 2017;1-7.