

Supplementary Material for:

**Discontinuation and Switchback After Non-medical Switching from Originator
Tumor Necrosis Factor Alpha (TNF) Inhibitors to Biosimilars: A Meta-Analysis of
Real-World Studies from 2012 to 2018**

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SUPPLEMENTARY MATERIAL:

Supplementary Table 1. Sensitivity Analysis Results

	Discontinuation rate (95% CI)		Q ¹	p-value	I ²
All-cause discontinuation rate (all therapeutic areas)					
Only include studies where median FU was at least 6 months	0.22	(0.18,0.26)	1068.3	<0.001**	94.94524
Only include studies with greater than 100 patients	0.23	(0.17,0.28)	731.025	<0.001**	96.99053
Only include studies where treatment was etanercept ²	0.23	(0.18,0.27)	49.3318	< 0.001**	81.75618
Only include non-Turkish studies	0.19	(0.16, 0.21)	497.2827	< 0.001**	88.13552
All-cause discontinuation rate (rheumatology)					
Only include studies where median FU was at least 6 months	0.27	(0.21,0.33)	817.021	<0.001**	96.81771
Only include studies with greater than 100 patients	0.29	(0.20,0.37)	489.042	<0.001**	97.95518
Only include studies where treatment was etanercept ²	0.23	(0.18,0.27)	49.3318	< 0.001**	81.75618
Only include non-Turkish studies	0.22	(0.18, 0.25)	243.3284	< 0.001**	88.49292
All-cause discontinuation rate (gastroenterology)					
Only include studies where median FU was at least 6 months	0.17	(0.14,0.20)	203.058	<0.001**	85.22586
Only include studies with greater than 100 patients	0.18	(0.13,0.23)	199.272	<0.001**	92.97443
Only include non-Turkish studies	0.17	(0.14, 0.20)	250.317	< 0.001**	86.81672
Switchback rate among all switchers (all therapeutic areas)					
Only include studies where median FU was at least 6 months	0.14	(0.10,0.17)	740.632	<0.001**	97.02956
Only include studies with greater than 100 patients	0.20	(0.14,0.27)	281.343	<0.001**	96.44562
Only include studies where treatment was etanercept ²	0.12	(0.08,0.15)	22.1644	0.001	72.92957
Only include non-Turkish studies	0.11	(0.08, 0.13)	563.9853	<0.001**	95.38995
Switchback rate among all switchers (rheumatology)					

Only include studies where median FU was at least 6 months	0.17	(0.12,0.22)	372.603	<0.001**	95.16912
Only include studies with greater than 100 patients	0.23	(0.15,0.32)	269.94	<0.001**	97.03638
Only include studies where treatment was etanercept ²	0.12	(0.08,0.15)	22.1644	0.001	72.92957
Only include non-Turkish studies	0.13	(0.10, 0.17)	197.3329	<0.001**	89.86484
Switchback rate among all switchers (gastroenterology)					
Only include studies where median FU was at least 6 months	0.09	(0.04,0.13)	160.603	<0.001**	96.26408
Only include studies with greater than 100 patients	0.14	(0.07,0.21)	45.6625	<0.001**	91.24007
Only include non-Turkish studies	0.08	(0.05, 0.12)	188.9173	<0.001**	95.76534
Switchback rate among discontinuers (all therapeutic areas)					
Only include studies with greater than 100 patients	0.69	(0.55,0.83)	135.729	<0.001**	93.36916
Only include studies where treatment was etanercept ²	0.61	(0.38,0.84)	97.6925	<0.001**	93.85828
Only include non-Turkish studies	0.61	(0.42, 0.80)	3667.16482	<0.001**	99.23647
Switchback rate among discontinuers (rheumatology)					
Only include studies with greater than 100 patients	0.69	(0.55,0.83)	99.2254	<0.001**	92.94536
Only include studies where treatment was etanercept ²	0.61	(0.38,0.84)	97.6925	<0.001**	93.85828
Only include non-Turkish studies	0.70	(0.59, 0.82)	396.7699	<0.001**	94.45522
Switchback rate among discontinuers (gastroenterology)					
Only include studies with greater than 100 patients	0.75	(0.58,0.91)	26.3863	<0.001**	84.84064
Only include non-Turkish studies	0.47	(0.23, 0.71)	636.2474	<0.001**	98.74263

Notes:

[69] All studies that evaluate etanercept biosimilar were in the rheumatology therapeutic area. The same results are included for all therapeutic areas and rheumatology.

[2] A random effect model was used in the sensitivity analysis to account for potential heterogeneity in study type, region, patient population, and sample size among the included studies.