

Supplementary Table 1. Additional demographics and baseline characteristics of study population

Variables	<i>Before IPTW</i>			<i>After IPTW</i>		
	JAKi (n=1,064)	TNFi (n=3,865)	ASD	JAKi (n=4,101)	TNFi (n=5,131)	ASD
<b>Age group</b>			0.13			0.11
< 30 years	36 (3.4)	160 (4.1)		182 (4.5)	198 (3.9)	
30~39 years	81 (7.6)	428 (11.1)		445 (10.9)	517 (10.1)	
40~49 years	190 (17.9)	722 (18.7)		709 (17.3)	981 (19.1)	
50~59 years	347 (32.6)	1,165 (30.1)		1,253 (30.6)	1,583 (30.8)	
60~69 years	264 (24.8)	912 (23.6)		1,034 (25.2)	1,216 (23.7)	
70~79 years	132 (12.4)	411 (10.6)		426 (10.4)	555 (10.8)	
80 years or more	14 (1.3)	67 (1.7)		50 (1.2)	81 (1.6)	
<b>Region</b>			0.18			0.02
Capital	287 (27.0)	788 (20.4)		948 (23.1)	1,176 (22.9)	
Metropolitan city	220 (20.7)	943 (24.4)		1,020 (24.9)	1,224 (23.9)	
Others	557 (52.4)	2,134 (55.2)		2,133 (52.0)	2,732 (53.2)	
<b>Income</b>			0.08			<0.01
1 <sup>st</sup> quintile	243 (22.8)	812 (21.0)		842 (20.5)	1,072 (20.9)	
2 <sup>nd</sup> quintile	136 (12.8)	557 (14.4)		572 (14.0)	695 (13.6)	
3 <sup>rd</sup> quintile	166 (15.6)	656 (17.0)		646 (15.7)	835 (16.3)	
4 <sup>th</sup> quintile	211 (19.8)	854 (22.1)		861 (21.0)	1,081 (21.1)	
5 <sup>th</sup> quintile	308 (29.0)	986 (25.5)		1,180 (28.8)	1,448 (28.2)	
<b>Healthcare utilisation</b>						
Outpatient visit	1,063 (99.9)	3,861 (99.9)	<0.01	4,091 (99.8)	5,126 (99.9)	0.03
Hospitalisation	300 (28.2)	1,366 (35.3)	0.15	1,597 (38.9)	1,692 (33.0)	0.12
Emergency department visits	157 (14.8)	546 (14.1)	0.02	626 (15.3)	714 (13.9)	0.04

Values are presented as numbers (%). IPTW, inverse probability of treatment weighting; JAKi, Janus kinase inhibitor; TNFi, tumour necrosis factor inhibitor; ASD, absolute standardised difference.

Supplementary Table 2. Adjusted HR of malignancy in RA patients treated with JAKi compared with those treated with TNFi

	Weighted HR (95% CI)	Adjusted HR* (95% CI)
<b>Overall malignancy</b>	0.83 (0.55–1.27)	0.76 (0.49–1.20)
<b>Solid malignancy</b>	0.77 (0.50–1.19)	0.71 (0.44–1.13)
<b>Haematological malignancy</b>	2.86 (0.41–20.00)	3.51 (0.81–15.20)

Incidence rate per 100 person-years was calculated. HR, hazard ratio; RA, rheumatoid arthritis; JAKi, Janus kinase inhibitor; TNFi, tumour necrosis factor inhibitor.

\*Adjusted for age group, year of initiating JAKi or TNFi, seropositivity, mild liver disease, cerebrovascular disease, previous use of methotrexate, hydroxychloroquine, cyclosporine, azathioprine and oral corticosteroids, and concomitant use of methotrexate and oral corticosteroids

Supplementary Table 3. The risk of malignancy in RA patients treated with tofacitinib versus TNFi

	Type of targeted therapy	Number of patients	Number of events	Total observation periods (person-year)	IR (95% CI)	HR (95% CI)
<i>Before IPTW</i>						
Overall malignancy	Tofacitinib	984	7	1,238.4	0.57 (0.27–1.19)	0.71 (0.32–1.61)
	TNFi	3,865	58	6,823.8	0.85 (0.66–1.10)	
Solid malignancy	Tofacitinib	984	6	1,238.4	0.48 (0.22–1.08)	0.64 (0.27–1.52)
	TNFi	3,865	56	6,823.8	0.82 (0.63–1.07)	
Haematological malignancy	Tofacitinib	984	1	1,238.4	0.08 (0.01–0.57)	2.48 (0.16–38.01)
	TNFi	3,865	2	6,823.8	0.03 (0.01–0.12)	
<i>After IPTW</i>						
Overall malignancy	Tofacitinib	3,872	34	4,841.8	0.69 (0.49–0.97)	0.85 (0.56–1.29)
	TNFi	5,131	72	8,457.1	0.85 (0.67–1.07)	
Solid malignancy	Tofacitinib	3,872	30	4,841.8	0.63 (0.44–0.89)	0.79 (0.51–1.21)
	TNFi	5,131	70	8,457.1	0.82 (0.65–1.04)	
Haematological malignancy	Tofacitinib	3,872	3	4,841.8	0.07 (0.02–0.20)	2.90 (0.42–19.93)
	TNFi	5,131	2	8,457.1	0.02 (0.01–0.10)	

Incidence rate per 100 person-years was calculated. RA, rheumatoid arthritis; TNFi, tumour necrosis factor inhibitor; IR, incidence rate; HR, hazard ratio; IPTW, inverse probability of treatment weighting.