## **Supplementary materials**

**Supplementary Table 1** 

Incidence of treatment-emergent AEs, all causalities (treatment related).

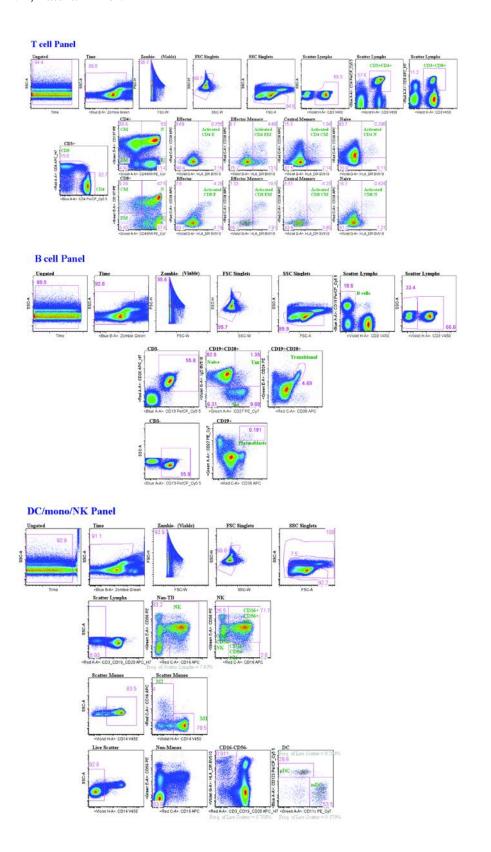
Number of subjects evaluable for AEs by system organ class and MedDRA preferred term	Treatment phase (N=32)	Post-treatment phase (N=29)	Overall (N=32)
Gastrointestinal disorders	4 (3)	2 (1)	4 (3)
Breath odor	1 (0)	1 (0)	1 (0)
Constipation	1 (1)	0 (0)	1 (1)
Diarrhea	1 (1)	1 (1)	1 (1)
Nausea	1 (1)	0 (0)	1 (1)
Rectal hemorrhage	1 (1)	0 (0)	1 (1)
General disorders and administration site conditions	4 (4)	2(1)	5 (4)
Fatigue	4 (4)	1 (1)	4 (4)
Pain	0 (0)	1 (0)	1 (0)
Infections and infestations	3 (3)	2(1)	4 (3)
Herpes simplex	1(1)	0 (0)	1(1)

Number of subjects evaluable for AEs by system organ class and MedDRA preferred term	Treatment	se phase	Overall (N=32)
	phase (N=32)		
Upper respiratory tract infection	1 (1)	1 (0)	2(1)
Musculoskeletal and connective tissue disorders	1 (1)	2 (1)	3 (2)
Arthralgia	0 (0)	1 (0)	1 (0)
Myalgia	1 (1)	1 (1)	2 (2)
Neoplasm benign, malignant and unspecified (incl. cysts and polyps)	0 (0)	1 (0)	1 (0)
Squamous cell carcinoma of the skin	0 (0)	1 (0)	1 (0)
Nervous system disorders	5 (3)	0 (0)	5 (3)
Headache	4 (2)	0 (0)	4 (2)
Tremor	1 (1)	0 (0)	1 (1)
Psychiatric disorders	1 (1)	1 (1)	1 (1)
Depression	1 (1)	1 (1)	1 (1)
Respiratory, thoracic and mediastinal disorders	3 (2)	2 (2)	3 (2)
Oropharyngeal pain	2(1)	1 (1)	2(1)
Rhinorrhea	1 (1)	1 (1)	1 (1)
Skin and subcutaneous tissue disorders	1 (1)	0 (0)	1 (1)
Rash	1 (1)	0 (0)	1(1)

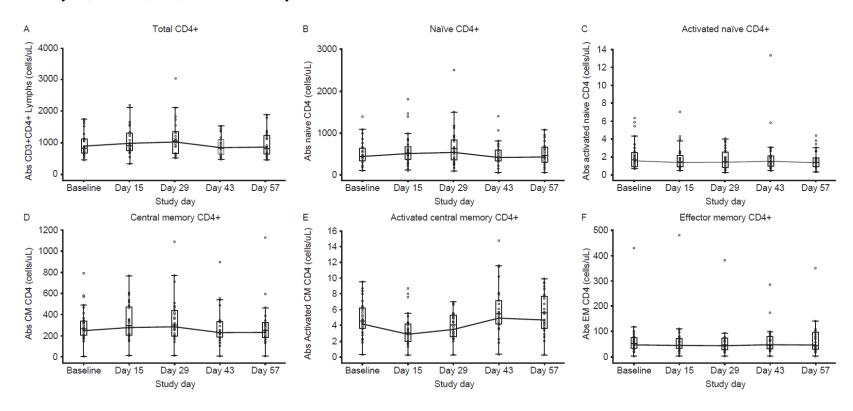
Number of subjects evaluable for AEs by system organ class and MedDRA preferred term	Treatment phase (N=32)	Post-treatment phase (N=29)	Overall (N=32)
Vascular disorders	1 (1)	0 (0)	1 (1)
Hot flush	1 (1)	0 (0)	1 (1)
Total preferred term events	24 (20)	13 (8)	29 (21)

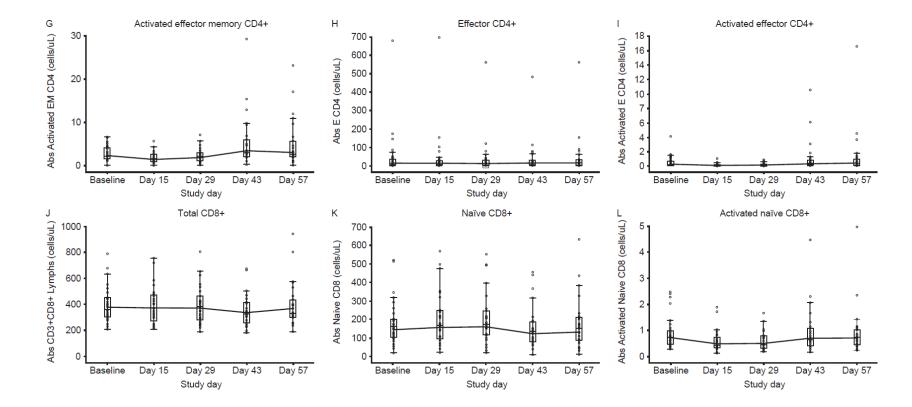
AE, adverse event; MedDRA, Medical Dictionary for Regulatory Activities (Version 18.1).

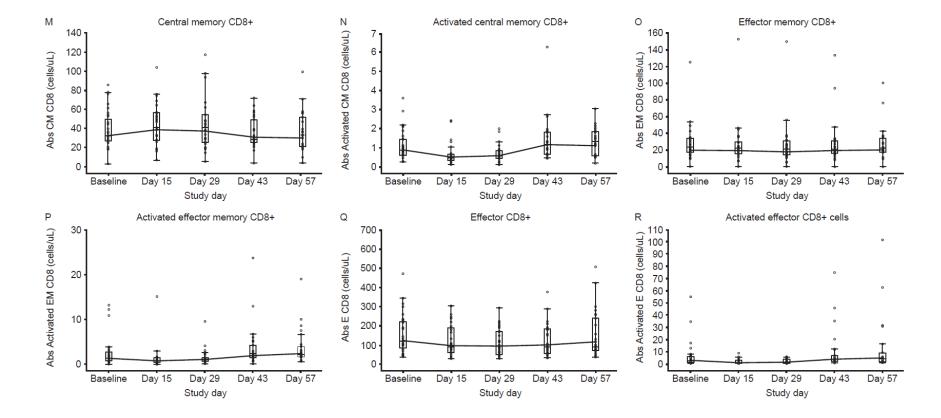
**Supplementary Fig. 1.** Gating strategy for each of the three polychromatic flow cytometry panels (T cell, B cell, and dendritic cell/monocyte/NK). DC, dendritic cell; NK, natural killer.



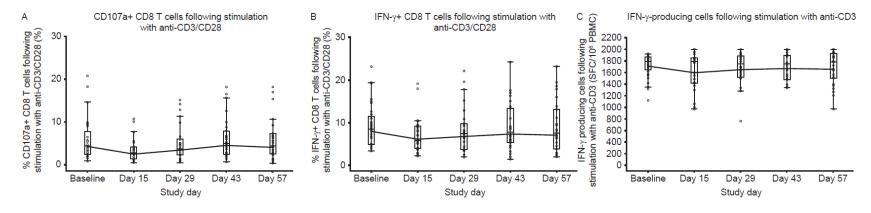
**Supplementary Fig. 2.** T-cell counts during and following treatment with tofacitinib. Note that box plots provide medians and 25%/75% quartiles, with whiskers to the last point within 1.5 × interquartile range; baseline is defined as the average (mean of non-missing) of the three pre-dose measurements; the connecting lines are for geometric means; the dots represent the geometric means; and the circles represent individual values. Study Day 43 is Day 14 post-treatment; Study Day 57 is Day 28 post-treatment. CD, cluster of differentiation; CM, central memory; E, effector; EM, effector memory.

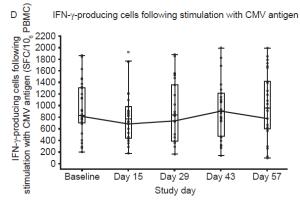




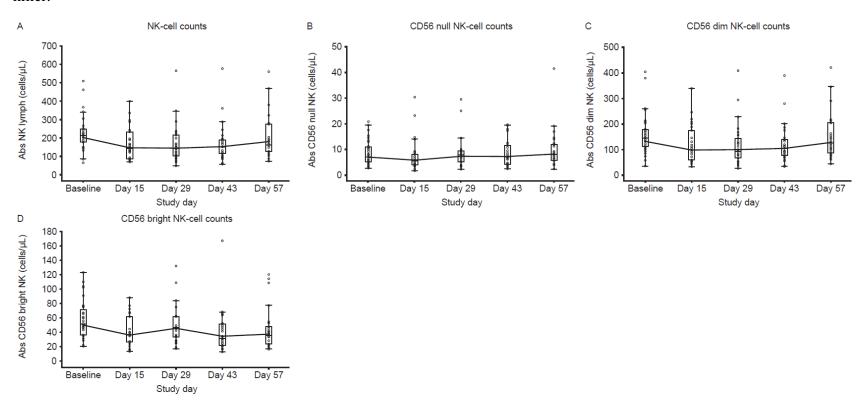


**Supplementary Fig. 3.** T-cell function during and following treatment with tofacitinib. Note that box plots provide medians and 25%/75% quartiles, with whiskers to the last point within 1.5 × interquartile range; baseline is defined as the average (mean of non-missing) of the three pre-dose measurements; the connecting lines are for geometric means; the dots represent the geometric means; and the circles represent individual values. Study Day 43 is Day 14 post-treatment; Study Day 57 is Day 28 post-treatment. CD, cluster of differentiation; CMV, cytomegalovirus; IFN-γ, interferon-gamma; PBMCs, peripheral blood mononuclear cells; SFC, spot-forming cells.





**Supplementary Fig. 4.** NK-cell counts during and following treatment with tofacitinib. Note that box plots provide medians and 25%/75% quartiles, with whiskers to the last point within 1.5 × interquartile range; baseline is defined as the average (mean of non-missing) of the three pre-dose measurements; the connecting lines are for geometric means; the dots represent the geometric means; and the circles represent individual values. Study Day 43 is Day 14 post-treatment; Study Day 57 is Day 28 post-treatment. CD, cluster of differentiation; NK, natural killer.



**Supplementary Fig. 5.** NK-cell function during and following treatment with tofacitinib. Note that box plots provide medians and 25%/75% quartiles, with whiskers to the last point within 1.5 × interquartile range; baseline is defined as the average (mean of non-missing) of the three pre-dose measurements; the connecting lines are for geometric means; the dots represent the geometric means; and the circles represent individual values. Study Day 43 is Day 14 post-treatment; Study Day 57 is Day 28 post-treatment. ADCC, antibody-dependent cell-mediated cytotoxicity; CD, cluster of differentiation; IFN-γ, interferon-gamma; NK, natural killer.

