

## Supplementary Materials

**Supplementary Table S1** Baseline characteristics of patients whose primary and secondary tocilizumab treatment failed due to efficacy reasons and patients who remained on tocilizumab at month 12

<b>Parameter</b>	<b>Primary treatment failed<sup>a</sup> n = 9</b>	<b>Secondary treatment failed<sup>b</sup> n = 4</b>	<b>Patients receiving tocilizumab at month 12 N = 93</b>
Age, years	51.8 (14.5)	61.9 (10.7)	55.0 (13.7)
Female, n (%)	7 (77.8)	3 (75.0)	79 (84.9)
Anti-CCP positive, n (%)	2 (22.2)	1 (25.0)	28 (30.1)
Previous RA-related surgery, n (%)	4 (44.4)	2 (50.0)	16 (17.2)
RF positive, n (%)	4 (66.7)	3 (100.0)	50 (63.3)
Structural joint damage, n (%)	7 (77.8)	4 (100.0)	44 (47.3)
Disease duration, years	13.3 (10.1)	23.5 (19.0)	11.3 (9.4)
Morning stiffness VAS, mm	57.7 (16.7)	56.3 (30.5)	59.4 (23.2)
Pain VAS, mm	67.3 (11.5)	73.0 (26.4)	61.1 (23.8)
Fatigue VAS, mm	62.7 (20.1)	79.3 (19.1)	61.8 (24.4)
PtGA VAS, mm	57.4 (24.9)	70.8 (14.5)	63.0 (20.7)
PGA VAS, mm	57.2 (13.1)	54.0 (30.5)	64.8 (23.3)
CRP, mg/L	6.3 (4.8)	3.6 (1.5)	19.6 (31.1)
ESR, mm/h	26.1 (12.1)	22.3 (14.4)	26.1 (19.7)
TJC28	15.3 (7.7)	11.8 (3.8)	12.5 (7.4)
SJC28	9.0 (6.3)	12.0 (6.2)	11.4 (6.1)

DAS28	5.8 (0.9)	5.6 (0.8)	5.5 (1.2)
SDAI	34.7 (12.2)	35.1 (6.1)	35.9 (14.1)
CDAI	34.4 (11.6)	33.0 (6.0)	34.8 (13.5)

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Data are mean (SD) unless otherwise stated.

<sup>a</sup>Patients whose primary treatment failed discontinued tocilizumab between baseline and month 6 because of efficacy reasons.

<sup>b</sup>Patients whose secondary treatment failed discontinued tocilizumab between months 6 and 12 because of efficacy reasons.

CCP, cyclic citrullinated peptide; CDAI, Clinical Disease Activity Index; CRP, C-reactive protein; DAS, Disease Activity Score based on 28 joints; ESR, erythrocyte sedimentation rate; PGA, Physician Global Assessment of disease activity; PtGA, Patient Global Assessment of disease activity; RA, rheumatoid arthritis; RF, rheumatoid factor; SDAI, Simplified Disease Activity Index; SJC28, swollen joint count based on 28 joints; TJC28, tender joint count based on 28 joints; VAS, visual analog scale.

**Supplementary Table S2** Serious adverse events according to system organ class and preferred term (all tocilizumab-treated patients; N = 198)

<b>System organ class</b> <b>Preferred term</b>	<b>Number of events (rate/100 PY)</b>
Infections and infestations	8 (4.23)
Pneumonia	2 (1.06)
Cellulitis	1 (0.53)
Cystitis	1 (0.53)
Postoperative wound infection	1 (0.53)
Pyelonephritis	1 (0.53)
Subcutaneous abscess	1 (0.53)
Urosepsis	1 (0.53)
Injury, poisoning, and procedural complications	7 (3.70)
Fall	3 (1.59)
Hip fracture	2 (1.06)
Fat embolism	1 (0.53)
Lumbar vertical fracture	1 (0.53)
Cardiac disorders	4 (2.12)
Acute myocardial infarction	1 (0.53)
Chest discomfort	1 (0.53)
Myocardial infarction	1 (0.53)
Stress cardiomyopathy	1 (0.53)
Musculoskeletal and connective tissue disorders	4 (2.12)
Arthralgia	2 (1.06)

Back pain	1 (0.53)
Joint instability	1 (0.53)
Gastrointestinal disorders	2 (1.06)
Small intestinal obstruction	1 (0.53)
Vomiting	1 (0.53)
Immune system disorders	2 (1.06)
Anaphylactic reaction	2 (1.06)
Neoplasms; benign, malignant, and unspecified	2 (1.06)
Lung adenocarcinoma	2 (1.06)
Psychiatric disorders	2 (1.06)
Delerium	1 (0.53)
Depression	1 (0.53)
Renal and urinary disorders	2 (1.06)
Bladder prolapse	1 (0.53)
Nephrolithiasis	1 (0.53)
Vascular disorders	2 (1.06)
Hypersensitivity vasculitis	1 (0.53)
Obstructive shock	1 (0.53)
Blood and lymphatic system disorders	1 (0.53)
Neutropenia	1 (0.53)
General disorders and administration site conditions	1 (0.53)
Mass	1 (0.53)
Hepatobiliary disorders	1 (0.53)
Drug-induced liver injury	1 (0.53)
Pregnancy, puerperium, and perinatal conditions	1 (0.53)

Pregnancy	1 (0.53)
Reproductive system and breast disorders	1 (0.53)
Menorrhagia	1 (0.53)
Respiratory, thoracic, and mediastinal disorders	1 (0.53)
Chronic obstructive pulmonary disease	1 (0.53)
Skin and subcutaneous tissue disorders	1 (0.53)
Petechiae	1 (0.53)
Surgical and medical prodedures	1 (0.53)
Knee arthroplasty	1 (0.53)

**Supplementary Fig. S1** Lipid profile over time (safety population, n = 198). HDL-C: high-density lipoprotein-cholesterol; LDL-C: low-density lipoprotein-cholesterol.

