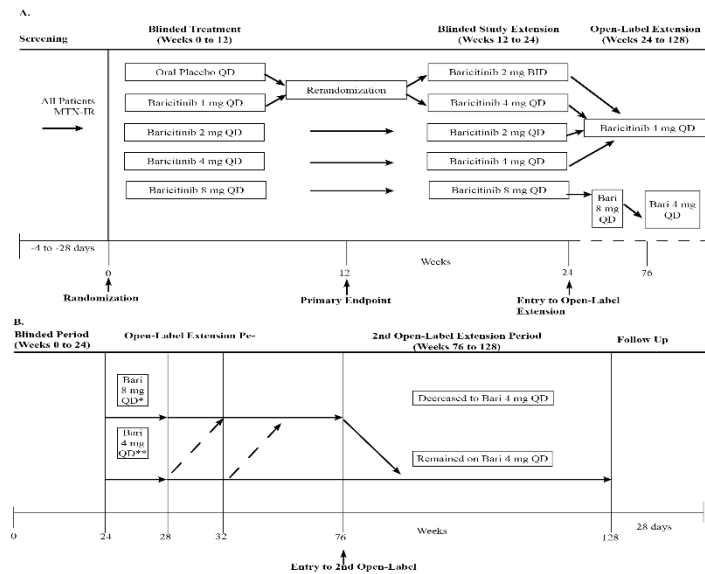
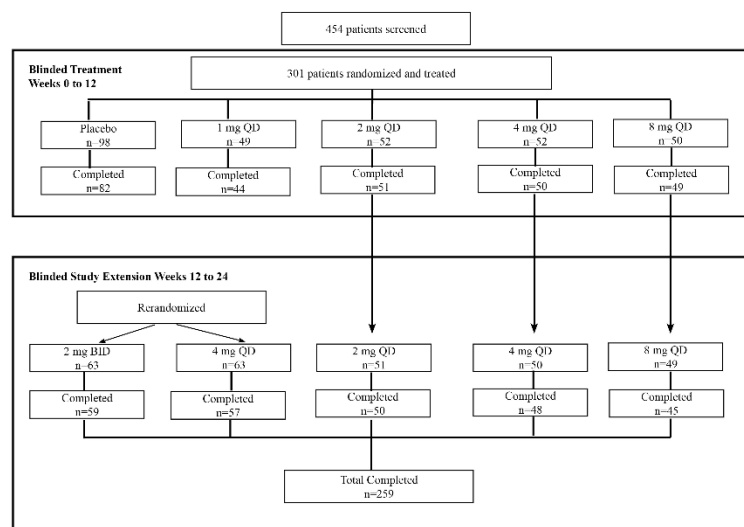


## Supplementary Figure 1. Study design, weeks 0-128.



(A) Study design for blinded period (Weeks 0-24). Patients completing Week 24 are eligible to enter the first optional open-label extension (OLE). Patients not entering the OLE proceed to follow-up visit. (B) Study design for first OLE (Weeks 24-76) and second OLE (Weeks 76-128). Patients completing Week 76 are eligible to enter the second optional OLE. Patients not entering the OLE proceed to follow-up visit. Dashed arrow in (B) represents optional dose escalation at Weeks 28 and 32. Patients with  $\geq 6$  tender and  $\geq 6$  swollen joints were eligible for escalation. Solid arrow in (B) represents required dose reduction at Week 76.

**Supplementary Figure 2. Patient disposition, weeks 0-24.**



BID: twice-daily; QD: once daily.

**Supplementary Table 1.** Incidence of selected SAE, weeks 0-24, weeks 24-76, and weeks 76-128.

	Blinded Period Weeks 0-24			First OLE Weeks 24-76				Second OLE Weeks 76-128		
	Randomized dose			4:8 mg				4/4	4:8/4	8/4
	2 mg	4 mg	8 mg	4 mg	Pre-Rescue	Post-Rescue	8 mg	mg	mg	mg
	N=5	N=5	N=5	N=10	N=6	N=6	N=3	N=7	N=4	N=1
n (%)	2	2	0	8	1	1	2	9	7	8
Blood and lymphatic system disorders	0	0	2 (4)	1 (1)	0	1 (2)	0	0	0	0
Anemia	0	0	1 (2)	1 (1)	0	0	0	0	0	0
Normochromic normocytic anemia	0	0	0	0	0	1 (2)	0	0	0	0
Pancytopenia	0	0	1 (2)	0	0	0	0	0	0	0
Cardiac disorders	0	0	0	0	0	0	1 (3)	0	0	0
Myocardial infarction	0	0	0	0	0	0	1 (3)	0	0	0
Eye disorders	0	0	0	2 (2)	0	0	1 (3)	0	0	0

Cataract	0	0	0	2 (2)	0	0	0	0	0	0
Ulcerative keratitis	0	0	0	0	0	0	1 (3)	0	0	0
Gastrointestinal disorders	0	0	1 (2)	0	0	2 (3)	1 (3)	1 (1)	0	0
General disorders	0	0	0	0	0	0	0	1 (1)	0	0
Hepatobiliary disorders	0	0	0	0	0	0	0	1 (1)	0	0
Cholelithiasis	0	0	0	0	0	0	0	1 (1)	0	0
Infections and infestations	2 (4)	0	1 (2)	5 (5)	1 (2)	1 (2)	2 (6)	2 (3)	2 (4)	0
Acute hepatitis B	0	0	0	0	0	0	1 (3)	0	0	0
Bronchitis	1 (2)	0	0	0	0	0	0	0	0	0
Gastroenteritis	0	0	0	1 (1)	0	0	0	0	1 (2)	0
Gastroenteritis, viral	0	0	0	0	1 (2)	0	0	0	0	0
Herpes simplex	0	0	0	0	0	1 (2)	0	1 (1)	0	0
Herpes zoster	0	0	0	4 (4)	0	0	1 (3)	1 (1)	0	0
Pneumonia	1 (2)	0	0	0	0	0	0	0	2 (4)	0
Pneumonia, bacterial	0	0	1 (2)	0	0	0	0	0	0	0

Injury,										
poisoning, and	1 (2)	0	0	2 (2)	0	1 (2)	0	0	0	0
procedural										
complications										
Investigations	0	0	0	4 (4)	0	0	0	0	0	0
ALT										
increased	0	0	0	2 (2)	0	0	0	0	0	0
AST										
increased	0	0	0	1 (1)	0	0	0	0	0	0
Blood CPK										
increased	0	0	0	1 (1)	0	0	0	0	0	0
Transaminases	0	0	0	1 (1)	0	0	0	0	0	0
increased										
Metabolism and										
nutrition	0	0	0	1 (1)	0	0	1 (3)	0	1 (2)	0
disorders										
Musculoskeleta										
l and	0	0	0	2 (2)	0	1 (2)	0	2 (3)	0	0
connective										
tissue disorders										
Nervous system										
disorders	0	0	0	1 (1)	0	0	1 (3)	0	1 (2)	0
Pregnancy,										
puerperium,	0	0	0	0	0	1 (2)	0	0	0	0

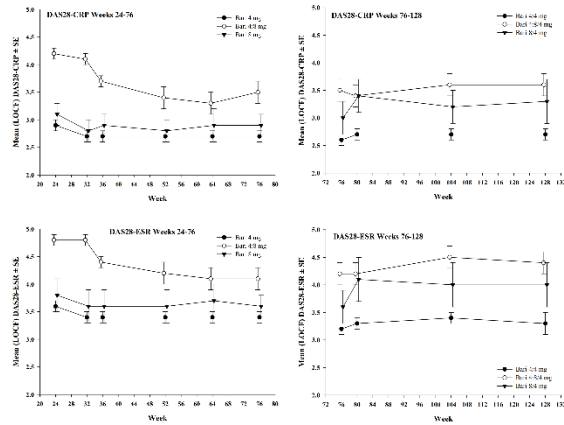
and perinatal conditions										
Psychiatric disorders	0	0	0	0	0	0	0	0	1 (2)	0
Renal and urinary disorders	0	0	1 (2)	0	0	0	0	0	0	0
Renal failure	0	0	1 (2)	0	0	0	0	0	0	0
Respiratory, thoracic, and mediastinal disorders	1 (2)	0	0	0	0	1 (2)	0	0	0	0
Skin and subcutaneous tissue disorders	0	0	0	1 (1)	0	0	0	0	0	0

4/4 mg = 4 mg baricitinib for Weeks 24-76 and Weeks 76-128

4:8/4 = 4 mg baricitinib through Week 28 or 32 then 8 mg through Week 76 and 4 mg for Weeks 76-128. 8/4 mg = 8 mg baricitinib for Weeks 24-76 and 4 mg for Weeks 76-128

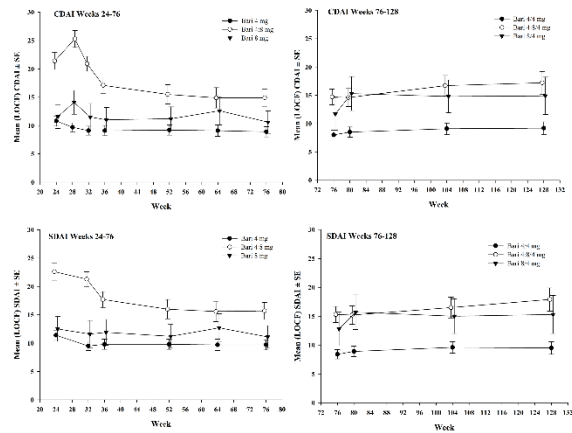
Pre-Rescue includes all SAEs that began on or before the date of dose escalation. Post-Rescue includes all SAEs that began after the date of dose escalation. SAEs coded using MedDRA version 16.1. *N* number of patients treated with stated dose regimen in the study period; *n* number of patients with event, OLE open-label extension, *SAE* serious adverse event.

**Supplementary Figure 3.** Mean (LOCF) DAS28-CRP  $\pm$  SE and DAS28-ESR  $\pm$  SE for weeks 24-76 and weeks 76-128.



Baricitinib, CRP C-reactive protein, DAS28-CRP Disease Activity Score for 28-joint counts based on the CRP level, DAS28-ESR Disease Activity Score for 28-joint counts based on the ESR, ESR erythrocyte sedimentation rate, LOCF last observation carried forward, SE standard error.

**Supplementary Figure 4.** Mean (LOCF) CDAI  $\pm$  SE and SDAI  $\pm$  SE for weeks 24-76 and weeks 76-128.



Baricitinib, CDAI Clinical Disease Activity Index, LOCF last observation carried forward, SDAI Simplified Disease Activity Index, SE standard error.