ONLINE SUPPLEMENTARY DATA

Supplementary Table 1. Changes in disease activity in each group

		total	young	elderly	old elderly
All patients	N	309	174	86	49
	DAS28ESR at 0w	4.9 ± 4.9	4.7 ± 1.4	5.2 ± 1.3	5.2 ± 1.5
	DAS28ESR at the last observation	3.3 ± 1.8	3.0 ± 1.7	3.5 ± 1.8	3.8 ± 1.7
	p value	<0.0001	<0.0001	<0.0001	<0.0001
	Observation period (weeks)		67.0	58.8	64.8
Patients with discontinuation due to AEs	N	37	13	14	10
	DAS28ESR at 0w	4.8 ± 1.6	4.4 ± 1.5	5.1 ± 1.5	4.9 ± 2.0
	DAS28ESR at the last observation	3.6 ± 1.8	3.1 ± 1.5	3.8 ± 2.1	4.2 ± 1.7
	p value	0.001	0.03	0.02	0.37
	Observation period (weeks)		30.3	18.8	35.2

DAS28, disease activity score for 28 joints; AE, adverse events

Supplementary Table 2. All adverse events in each groups

	Young N = 174	Elderly N = 86	Old elderly N = 49
1,000 patients per year	53	154	164
Death	0	2 (Unknown causes)	0
Infusion reaction	5	3	1
Local injection reaction	1	0	2
Infection	1 (Nail candidiasis)	2 (Bronchitis, PCP)	2 (Arthritis purulenta, Bacterial pneumonia)
Malignancy	1 (Lung cancer)	1 (Lung cancer)	0
Thrombocytopenia	1	0	0
Transaminase increase	2	1	0
Renal function impairment	0	1	0
Cerebro-cardiovascular event	0	0	3 (Cerebral infarction, Subcortical hemorrhage, Aortic dissection)
Fracture	0	2	0
Others	1 (Skin rash)	3 (Psoriasis, Cough, Skin rash)	2 (Ileus, Vertigo)

PCP, *Pneumocystis jirovecii*

Supplementary Table 3. Comparison between elderly/old elderly patients with biologics and those without

		Biologics (n=135)	DMARDs (n=135)	p value*
	Age (years old)	72.8 ± 5.1	73.8 ± 6.5	0.18
	disease duration (weeks)	528.9 ± 647.9	536.6 ± 524.0	0.91
	DAS28ESR	5.2 ± 1.4	3.3 ± 1.4	**<0.01**
	HAQ-DI	1.3 ± 0.9	0.6 ± 0.8	**<0.01**
Background	Current smoking n (%)	75 (25.1)	23 (31.5)	0.27
	PSL usage n (%)	48 (35.6)	20 (14.8)	**<0.01**
	Complications n (%)			
	Pulmonary diseases n (%)	33 (24.4)	17 (12.6)	**0.02**
	Cardiovascular diseases n (%)	17 (12.6)	8 (5.9)	0.09
	Renal function (eGFR)	71.2 ± 21.7	64.9 ± 16.2	**<0.01**
	Total n (%)	20 (14.8)	10 (7.4)	0.08
	Death	2 (2 unknown causes)	2 (1 breast cancer, 1 unkown)	
AEs	Infection	4 (bronchitis, PCP, Arthritis purulenta, bacterial pneumonia)		

Malignancy	2 (lung cancer, breast cancer)	6 (3 lung cancer, 3 breast cancer)
Transaminase increase	1	0
Renal function impairment	1	0
Cerebro-cardiovascular event	3 (cerebral infarction, subcortical hemorrhage, aortic dissection)	2 (cerebral infarction, cardiac infarction)
Fracture	2	0
Others	5 (PsA, cough, skin rash, ileus, vertigo)	0

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