

**American College of Rheumatology (ACR) Pediatric core set criteria: at ACR30, ACR50, ACR70, ACR90 and ACR100 levels**

Table 1: ACR – Physician Global assessment of disease activity – Summary Statistics

Visit	n	Missing	Mean (SD)	Median (range)
Baseline	21	0	2.00 (2.04)	1.60 (0.00, 7.50)
4 weeks	20	1	0.96 (1.46)	0.56 (0.00, 6.00)
8 weeks	19	0	0.95 (1.02)	0.93 (0.00, 4.00)
12 Weeks	15	0	1.33 (1.61)	0.72 (0.00, 5.00)
16 Weeks	6	0	0.72 (1.20)	0.31 (0.00, 3.13)
20 Weeks	6	0	0.93 (1.22)	0.57 (0.00, 3.13)
24 Weeks	4	0	0.41 (0.28)	0.50 (0.00, 0.63)

Table 2: ACR – Parent/Patient Assessment of overall well-being – Summary Statistics

Visit	n	Missing	Mean (SD)	Median (range)
Baseline	13	8	16.92 (27.60)	0.00 (0.00,75.00)
4 weeks	14	7	9.93 (16.49)	4.50 (0.00,60.00)
8 weeks	12	7	9.17 (14.69)	3.00 (0.00,50.00)
12 Weeks	9	6	27.89 (27.33)	30.00 (0.00,75.00)
16 Weeks	4	2	19.00 (27.87)	7.50 (1.00,60.00)
20 Weeks	5	1	17.60 (25.30)	5.00 (0.00,60.00)
24 Weeks	3	1	17.33 (28.29)	1.00 (1.00,50.00)

Table 3: ACR – Functional ability – Summary Statistics

Visit	n	Missing	Mean (SD)	Median (range)
Baseline	21	0	0.37 (0.58)	0.00 (0.00, 2.13)
4 weeks	21	0	0.30 (0.54)	0.00 (0.00, 2.13)
8 weeks	19	0	0.48 (0.71)	0.13 (0.00, 2.25)
12 Weeks	15	0	0.51 (0.80)	0.00 (0.00, 2.25)
16 Weeks	6	0	0.23 (0.37)	0.00 (0.00, 0.88)
20 Weeks	6	0	0.25 (0.40)	0.00 (0.00, 0.88)
24 Weeks	4	0	0.31 (0.41)	0.19 (0.00, 0.88)

Table 4: ACR – Number of joints with active arthritis – Summary Statistics

Visit	n	Missing	Mean (SD)	Median (range)
Baseline	21	0	0.86 (1.68)	0.00 (0.00, 6.00)
4 weeks	20	1	0.40 (0.82)	0.00 (0.00, 3.00)
8 weeks	19	0	0.63 (1.26)	0.00 (0.00, 5.00)

12 Weeks	15	0	0.67 (1.59)	0.00 (0.00, 6.00)
16 Weeks	6	0	0.17 (0.41)	0.00 (0.00, 1.00)
20 Weeks	6	0	0.33 (0.82)	0.00 (0.00, 2.00)
24 Weeks	4	0	0.75 (1.50)	0.00 (0.00, 3.00)

Table 5: ACR – Number of joints with limited range of motion – Summary Statistics

Visit	n	Missing	Mean (SD)	Median (range)
Baseline	21	0	1.10 (1.89)	0.00 (0.00, 6.00)
4 weeks	20	1	1.00 (1.65)	0.00 (0.00, 6.00)
8 weeks	19	0	0.84 (1.64)	0.00 (0.00, 5.00)
12 Weeks	15	0	0.47 (0.83)	0.00 (0.00, 2.00)
16 Weeks	6	0	0.33 (0.52)	0.00 (0.00, 1.00)
20 Weeks	6	0	0.83 (1.17)	0.50 (0.00, 3.00)
24 Weeks	4	0	0.25 (0.50)	0.00 (0.00, 1.00)

Table 6: ACR – Erythrocyte sedimentation rate – Summary Statistics

Visit	n	Missing	Mean (SD)	Median (range)
Baseline	16	5	20.88 (15.62)	14.50 (4.00,62.00)
4 weeks	20	1	5.40 (3.42)	4.50 (1.00,12.00)
8 weeks	17	2	6.47 (6.97)	5.00 (1.00,30.00)
12 Weeks	15	0	6.00 (5.62)	4.00 (1.00,19.00)
16 Weeks	6	0	3.67 (2.94)	2.50 (1.00, 9.00)
20 Weeks	6	0	4.83 (4.83)	2.00 (1.00,12.00)
24 Weeks	4	0	5.25 (4.65)	4.50 (1.00,11.00)

Table 7: ACR Pedi response

Visit	ACR Pedi Response	n (%)	Missing
4 weeks		N=13	
	30	6/12 (50%)	1
	50	5/12 (41.7%)	1
	70	2/12 (16.7%)	1
	90	1/12 (8.3%)	1
	100	0/12 (0%)	1
8 weeks		N=12	
	30	7/12 (58.3%)	0
	50	6/12 (50%)	0
	70	3/12 (25%)	0
	90	0/12 (0%)	0
	100	0/12 (0%)	0
12 weeks		N=9	

Visit	ACR Pedi Response	n (%)	Missing
	30	5/9 (55.6%)	0
	50	4/9 (44.4%)	0
	70	4/9 (44.4%)	0
	90	1/9 (11.1%)	0
	100	1/9 (11.1%)	0
16 Weeks		N=4	
	30	3/4 (75%)	0
	50	3/4 (75%)	0
	70	2/4 (50%)	0
	90	1/4 (25%)	0
	100	0/4 (0%)	0
20 Weeks		N=4	
	30	3/4 (75%)	0
	50	3/4 (75%)	0
	70	2/4 (50%)	0
	90	2/4 (50%)	0
	100	2/4 (50%)	0
24 Weeks		N=2	
	30	2/2 (100%)	0
	50	2/2 (100%)	0
	70	1/2 (50%)	0
	90	1/2 (50%)	0
	100	0/2 (0%)	0

Figure 1: ACR – Mean profile plot for % of patients obtaining ACR30

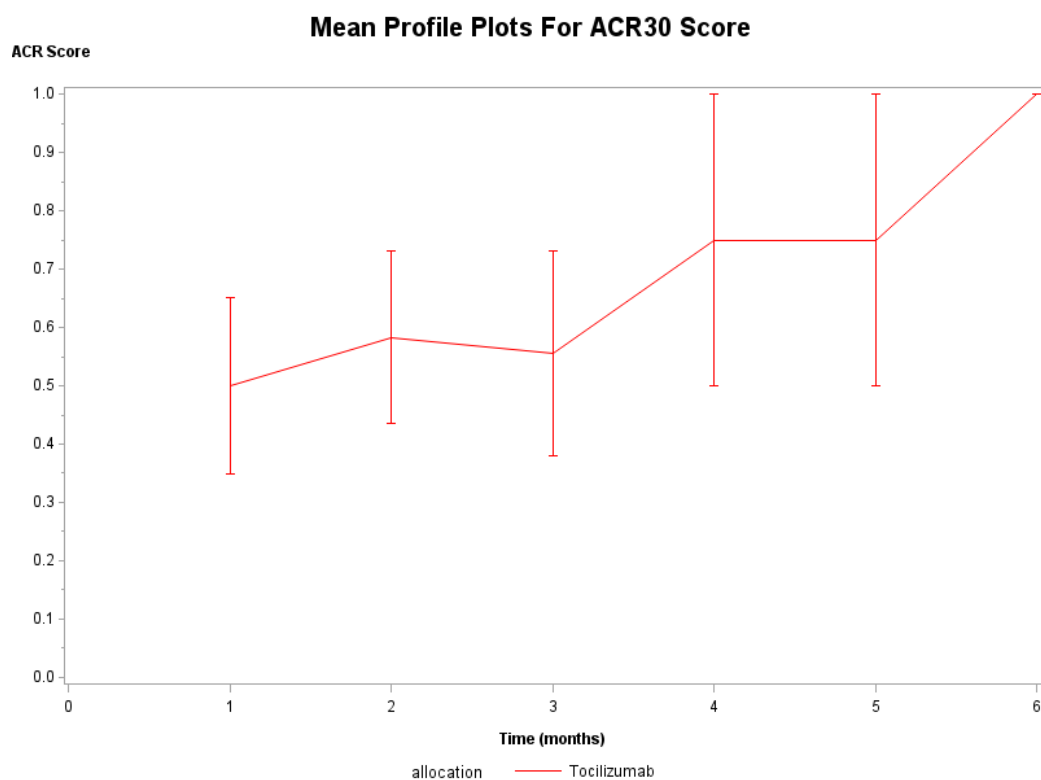


Figure 2: ACR – Mean profile plot for % of patients obtaining ACR50

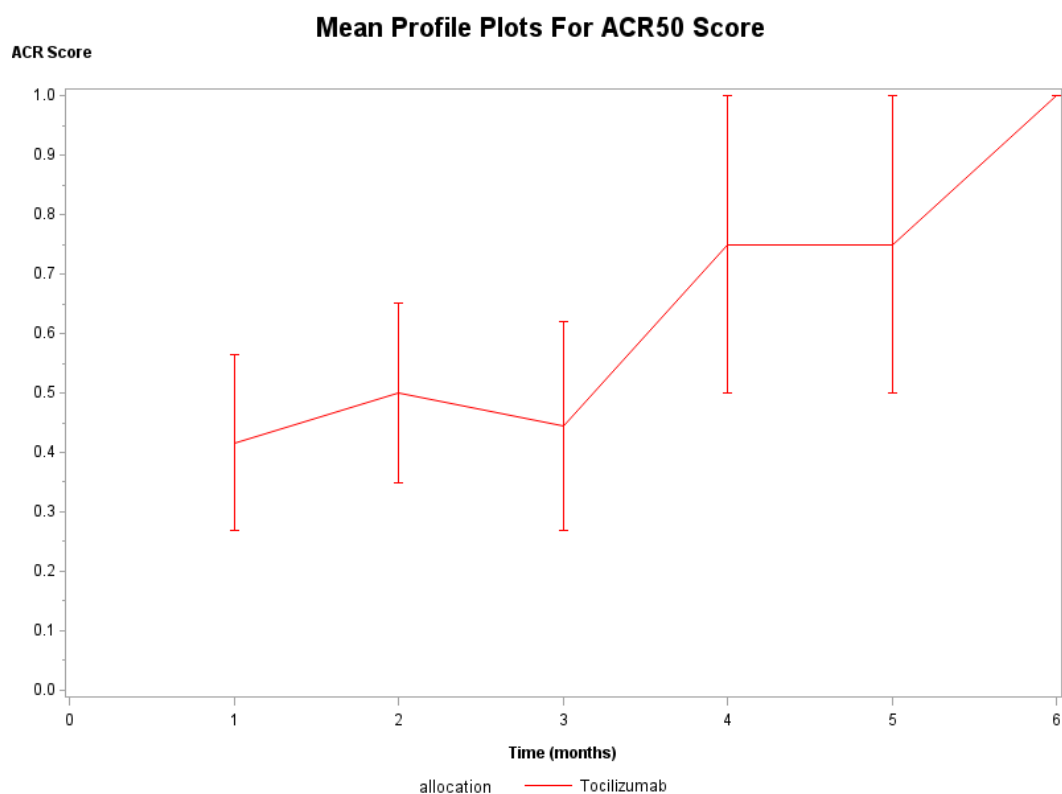


Figure 3: ACR – Mean profile plot for % of patients obtaining ACR70

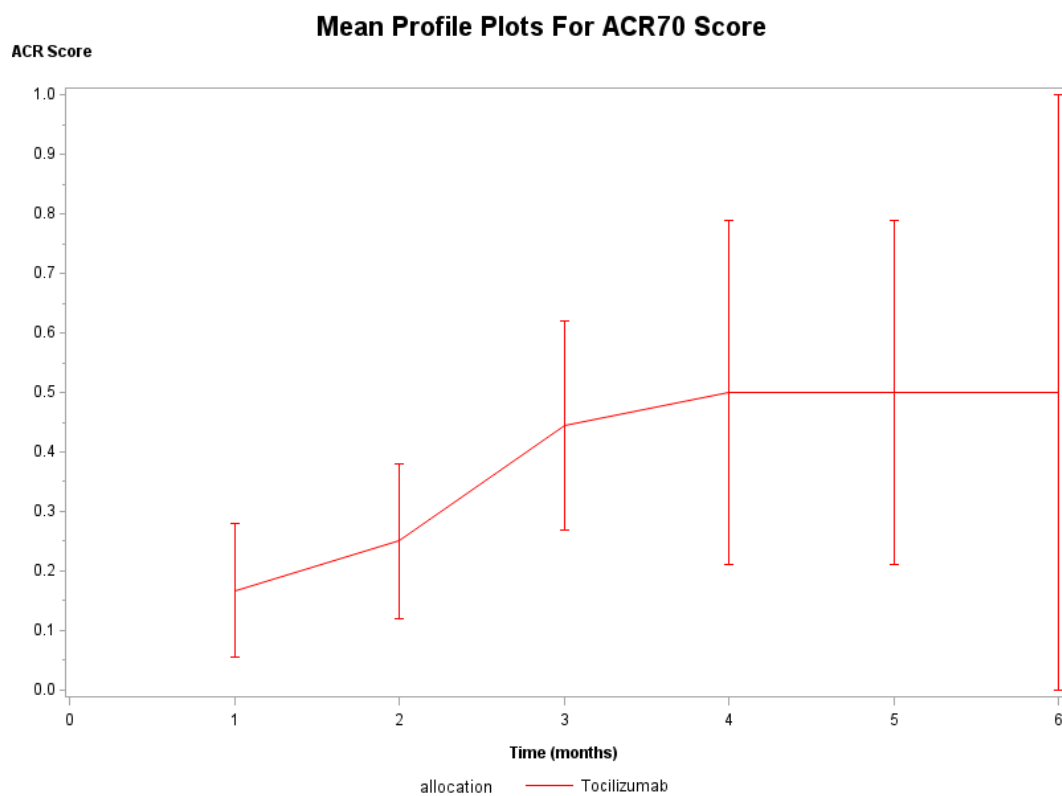


Figure 4: ACR – Mean profile plot for % of patients obtaining ACR90

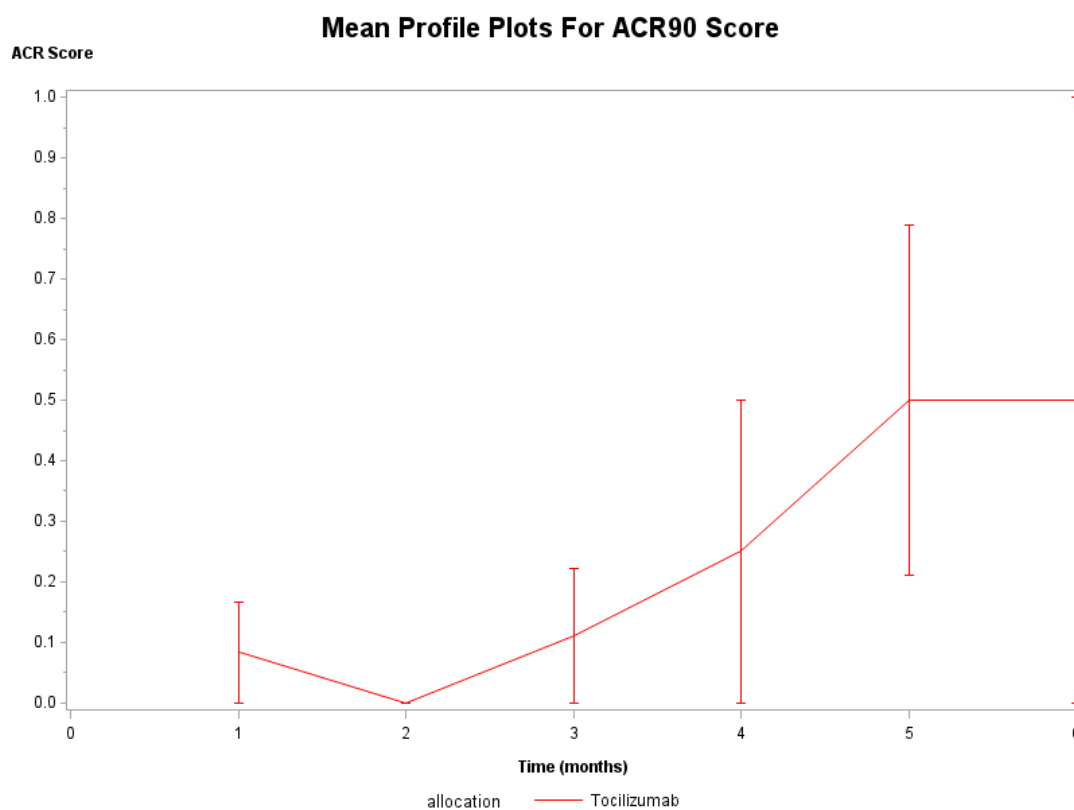
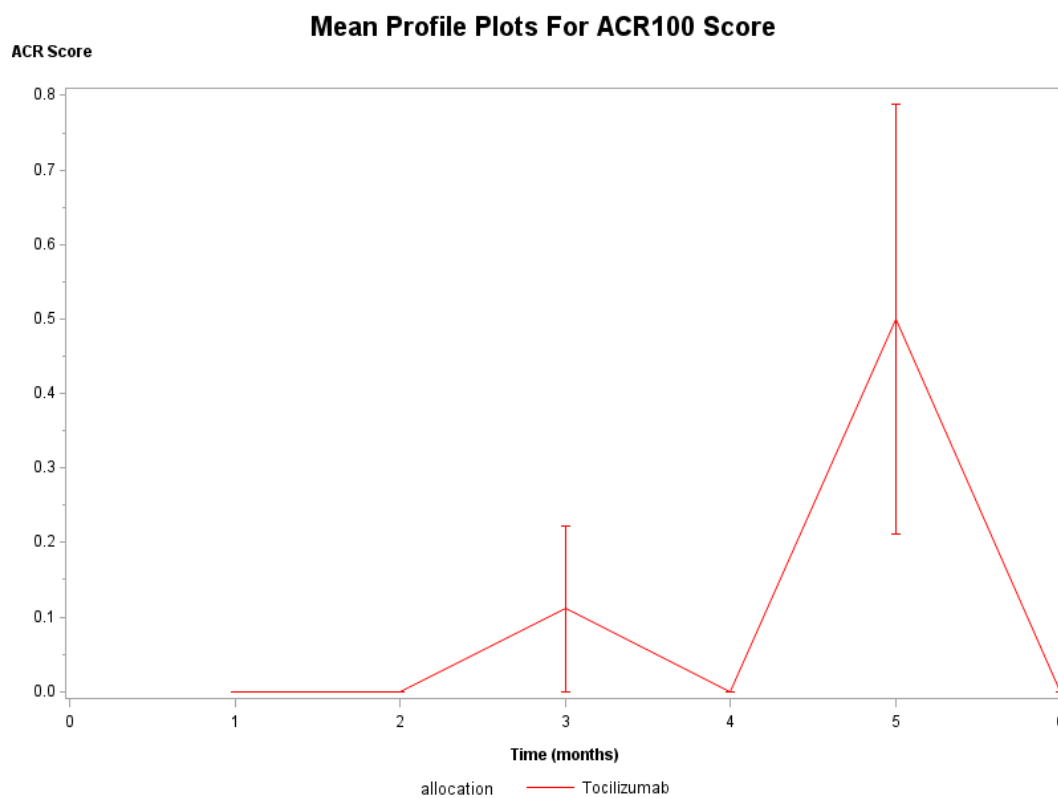


Figure 5: ACR – Mean profile plot for % of patients obtaining ACR100



### Joint modelling of ACR data and time to treatment failure

Number of observations: 43

Number of subjects: 13

Number of events: 9 (69.2%)

	Parameter	Estimate	95% CI*	p-value
ACR30	Association	-1.44	-3.77, -0.31	0.003
	Time	-0.04	-0.62, 0.43	0.950
ACR50	Association	-1.23	-4.45, -0.13	0.006
	Time	0.25	-0.23, 0.72	0.296
ACR70	Association	-1.64	-5.36, 1.94	0.195
	Time	0.40	-0.04, 0.79	0.071
ACR90	Association	-3.03	Std.Err NaN	<0.001
	Time	0.88	0.22, 1.66	0.011
ACR100	Association	0.03	-0.02, 0.09	0.253
	Time	16.99	12.90, 23.50	<0.001

\*Credible intervals, rather than confidence intervals, due to Bayesian approach