Supplementary Tables

Supplementary Table 1

DAS28 mean	DAS28 true	DAS28 bias (%)	method	t
	5.16		LOCF	0
	5.16		LFE	0
3.19 (3.12;3.25)	5.16	-38.23 (-39.36;-37.09)	NAO	0
3.49 (3.29;3.69)	5.16	-32.38 (-36.21;-28.56)	LE	0
3.87 (3.68;4.06)	5.16	-25.03 (-28.71;-21.35)	PE	0
3.79 (3.73;3.86)	5.16	-26.43 (-28.08;-24.79)	LME3	0
3.53 (3.47;3.58)	5.16	-31.66 (-33.27;-30.05)	MICE	0
3.81 (3.71;3.91)	3.20	18.94 (15.86;22.01)	LOCF	6
2.06 (1.87;2.24)	3.20	-35.7 (-41.39;-30)	LFE	6
3.37 (3.3;3.44)	3.20	5.29 (3.14;7.44)	NAO	6
3.04 (2.87;3.2)	3.20	-5.19 (-10.26;-0.13)	LE	6
3.54 (3.39;3.7)	3.20	10.6 (5.79;15.41)	PE	6
3.62 (3.58;3.66)	3.20	13.13 (11.08;15.18)	LME3	6
3.31 (3.26;3.36)	3.20	3.4 (0.95;5.84)	MICE	6
3.47 (3.38;3.56)	3.00	15.7 (13.02;18.38)	LOCF	12
2.84 (2.65;3.03)	3.00	-5.46 (-11.71;0.79)	LFE	12
3.17 (3.1;3.23)	3.00	5.54 (3.52;7.56)	NAO	12
3.07 (2.87;3.26)	3.00	2.2 (-4.18;8.57)	LE	12
3.3 (3.14;3.46)	3.00	9.99 (4.64;15.34)	PE	12
3.28 (3.24;3.31)	3.00	9.23 (7.35;11.11)	LME3	12
3.23 (3.19;3.28)	3.00	7.83 (5.23;10.42)	MICE	12
3.08 (3.01;3.15)	2.94	4.93 (2.74;7.12)	LOCF	24
2.66 (2.49;2.83)	2.94	-9.44 (-15.05;-3.83)	LFE	24
2.96 (2.9;3.02)	2.94	0.69 (-1.23;2.62)	NAO	24
2.21 (1.97;2.44)	2.94	-24.79 (-32.71;-16.86)	LE	24
3.2 (3.02;3.37)	2.94	8.85 (2.81;14.88)	PE	24
2.77 (2.73;2.81)	2.94	-5.62 (-7.49;-3.75)	LME3	24
3.04 (2.99;3.08)	2.94	3.43 (0.8;6.06)	MICE	24

Supplementary Table S1: relative bias (mean (CI)) of the mean DAS for 60% missing data at follow-up time, several follow-up (t) and imputation methods (method): Last Observation Carried Forward (LOCF), Linear Forward Extrapolation (LFE), Nearest Available Observation (NAO), Linear Extrapolation (LE), Polynomial Extrapolation (PE), Linear Mixed Effect cubic regression (LME3) and Multiple Imputation by Chained Equation (MICE).

Supplementary Table 2

HAQ mean	HAQ true	HAQ bias (%)	method	t
	1.22		LOCF	0
	1.22		LFE	0
0.84 (0.8;0.87)	1.22	-31.3 (-33.24;-29.35)	NAO	0
0.77 (0.67;0.86)	1.22	-36.94 (-44.53;-29.34)	LE	0
0.9 (0.86;0.95)	1.22	-25.95 (-29.22;-22.68)	PE	0
0.92 (0.89;0.95)	1.22	-24.28 (-26.62;-21.94)	LME3	0
0.9 (0.87;0.92)	1.22	-26.3 (-29.87;-22.72)	MICE	0
0.93 (0.89;0.98)	0.83	11.79 (7.54;16.05)	LOCF	6
0.73 (0.65;0.8)	0.83	-12.98 (-21.65;-4.31)	LFE	6
0.87 (0.84;0.91)	0.83	4.6 (2.17;7.02)	NAO	6
0.78 (0.73;0.83)	0.83	-6.14 (-11.12;-1.17)	LE	6
0.88 (0.84;0.92)	0.83	6.01 (2.72;9.3)	PE	6
0.91 (0.88;0.94)	0.83	9.31 (6.62;12)	LME3	6
0.87 (0.84;0.9)	0.83	4.33 (0.43;8.24)	MICE	6
0.9 (0.86;0.94)	0.81	10.86 (7.38;14.34)	LOCF	12
0.82 (0.76;0.89)	0.81	1.53 (-5.54;8.61)	LFE	12
0.86 (0.83;0.89)	0.81	5.99 (3.59;8.38)	NAO	12
0.8 (0.76;0.84)	0.81	-1.65 (-5.51;2.21)	LE	12
0.83 (0.8;0.87)	0.81	2.85 (-0.53;6.23)	PE	12
0.88 (0.85;0.9)	0.81	7.91 (5.47;10.36)	LME3	12
0.87 (0.84;0.9)	0.81	7.32 (3.39;11.24)	MICE	12
0.84 (0.81;0.88)	0.82	2.59 (-0.16;5.35)	LOCF	24
0.83 (0.78;0.89)	0.82	1.61 (-4.07;7.29)	LFE	24
0.82 (0.79;0.86)	0.82	0.32 (-1.89;2.52)	NAO	24
0.73 (0.67;0.79)	0.82	-10.91 (-17.42;-4.39)	LE	24
0.87 (0.82;0.91)	0.82	5.68 (1.47;9.88)	PE	24
0.79 (0.76;0.82)	0.82	-4.1 (-6.41;-1.8)	LME3	24
0.82 (0.79;0.85)	0.82	0.63 (-3.52;4.77)	MICE	24

Supplementary Table S3: relative bias (mean (CI)) of the mean HAQ for 60% missing data at follow-up time, several follow-up (t) and imputation methods (method): Last Observation Carried Forward (LOCF), Linear Forward Extrapolation (LFE), Nearest Available Observation (NAO), Linear Extrapolation (LE), Polynomial Extrapolation (PE), Linear Mixed Effect cubic regression (LME3) and Multiple Imputation by Chained Equation (MICE).

Supplementary Table 3

Remission		LDA			
Imputed	**True**	Imputed	**True**	method	t0
	3.7%		8%	LOCF	0
	3.7%		8%	LFE	0
23.1% (21.7%;24.6%)	3.7%	35.2% (33.6%;36.8%)	8%	NAO	0
23.3% (21.8%;24.8%)	3.7%	32% (30.4%;33.5%)	8%	LE	0
23.7% (22.2%;25.3%)	3.7%	31.5% (29.9%;33.1%)	8%	PE	0
4.6% (3.1%;6.1%)	3.7%	15% (12.5%;17.5%)	8%	LME3	0
2.9% (1.9%;3.9%)	3.7%	17.6% (14.9%;20.2%)	8%	MICE	0
29.7% (27.8%;31.6%)	34.9%	45.7% (43.5%;47.8%)	52.4%	LOCF	6
43.3% (40.5%;46.1%)	34.9%	58.4% (55.4%;61.3%)	52.4%	LFE	6
35% (33.5%;36.5%)	34.9%	50.9% (49.2%;52.6%)	52.4%	NAO	6
37.5% (35.8%;39.2%)	34.9%	52.3% (50.5%;54.1%)	52.4%	LE	6
35% (33.3%;36.7%)	34.9%	51.4% (49.5%;53.2%)	52.4%	PE	6
18.7% (17%;20.4%)	34.9%	39.6% (37.6%;41.6%)	52.4%	LME3	6
21.7% (19.7%;23.7%)	34.9%	47.3% (44.5%;50%)	52.4%	MICE	6
36.1% (34.3%;37.9%)	42.3%	51.7% (49.8%;53.6%)	57.9%	LOCF	12
45.1% (42.6%;47.6%)	42.3%	58.9% (56.4%;61.4%)	57.9%	LFE	12
39.6% (38%;41.3%)	42.3%	56.4% (54.7%;58.1%)	57.9%	NAO	12
40.7% (39%;42.5%)	42.3%	55.9% (54.2%;57.6%)	57.9%	LE	12
40.8% (39%;42.7%)	42.3%	56.9% (55.1%;58.7%)	57.9%	PE	12
27.9% (26.2%;29.6%)	42.3%	52.2% (50.5%;53.9%)	57.9%	LME3	12
26.1% (24%;28.3%)	42.3%	52% (49.1%;54.9%)	57.9%	MICE	12
42% (40.3%;43.7%)	43.4%	60.2% (58.5%;61.8%)	63.4%	LOCF	24
50.6% (48.4%;52.7%)	43.4%	66.1% (64%;68.2%)	63.4%	LFE	24
43.8% (42.2%;45.4%)	43.4%	62.8% (61.3%;64.3%)	63.4%	NAO	24
47.2% (45.4%;48.9%)	43.4%	64.7% (63.1%;66.4%)	63.4%	LE	24
45.9% (44.1%;47.7%)	43.4%	62.9% (61.2%;64.6%)	63.4%	PE	24
43% (41.1%;44.8%)	43.4%	70.4% (68.6%;72.3%)	63.4%	LME3	24
33.4% (31.2%;35.5%)	43.4%	61.8% (59.2%;64.5%)	63.4%	MICE	24

Supplementary Table 4 : remission rate (mean (CI)) of DAS for several follow-up (t) and imputation methods (method): Last Observation Carried Forward (LOCF), Linear Forward Extrapolation (LFE), Nearest Available Observation (NAO), Linear Extrapolation (LE), Polynomial Extrapolation (PE), Linear Mixed Effect cubic regression (LME3) and Multiple Imputation by Chained Equation (MICE).