

SUPPLEMENT

Minimal important difference and patient acceptable symptom state for common outcome instruments in patients with a closed humeral shaft fracture

Analysis of the FISH randomized clinical trial data

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Fig. S1. ROC curves for the outcomes using data from all follow-up time points	2
Table S1. MID estimates of all follow-up time points from the ROC analysis	3
Table S2. MID values of all follow-up time points using mean change, mean difference of change, and predictive methods	4

Fig. S1. ROC curves for the outcomes using data from all follow-up time points

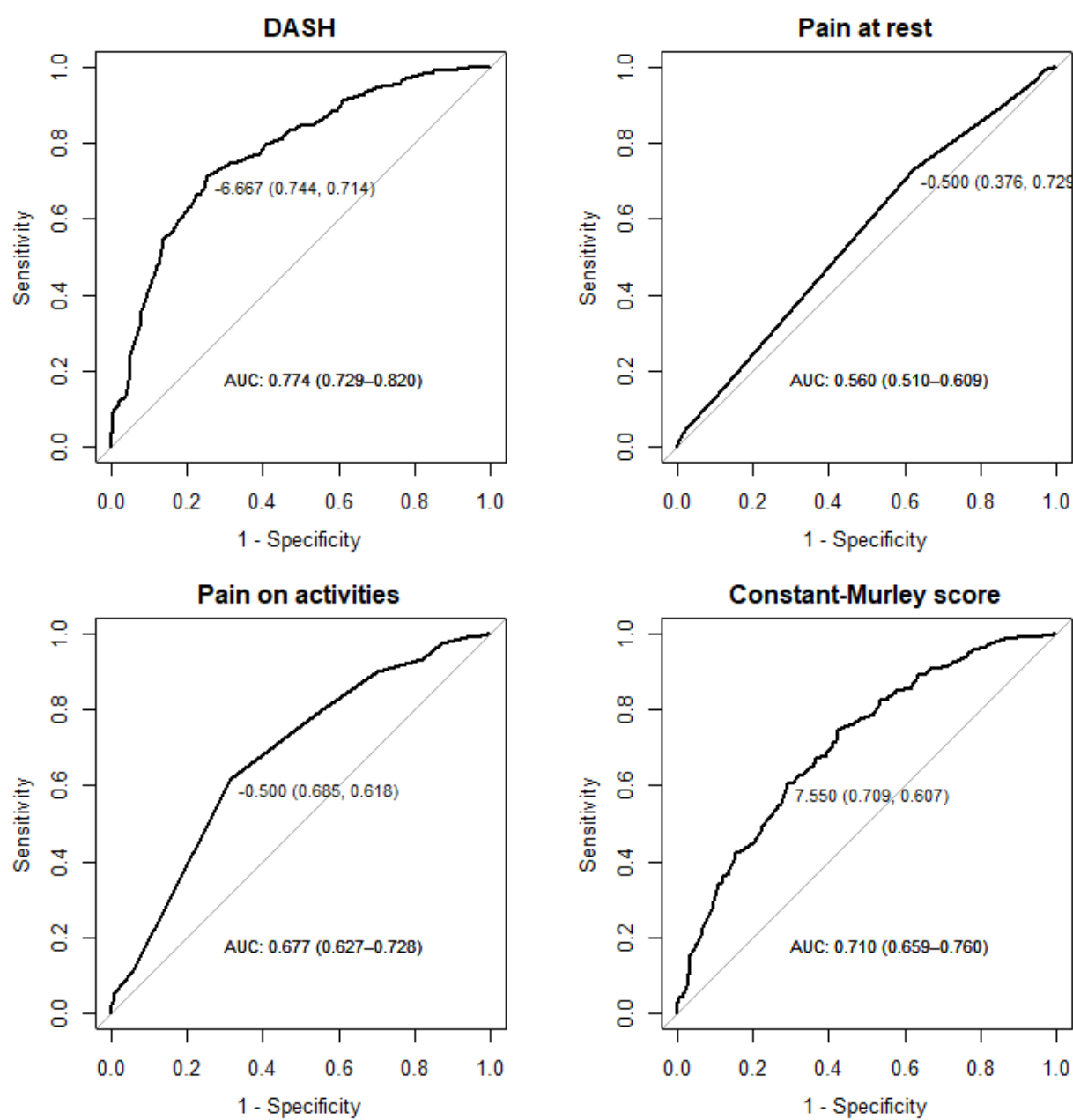


Table S1. MID estimates of all follow-up time points from the ROC analysis

Outcome measure	MID (95% CI)	Sensitivity	Specificity	AUC (95% CI)	N
12 weeks					
DASH	-17.3 (-19.6 to -12.1)	0.72	0.69	0.74 (0.65 to 0.84)	107
Pain rest	-0.5 (-0.5 to -0.5)	0.56	0.49	0.52 (0.42 to 0.62)	112
Pain active	-1.5 (-1.5 to 0.5)	0.67	0.56	0.63 (0.53 to 0.74)	111
Constant Score	16.9 (13.1 to 21.5)	0.60	0.69	0.71 (0.61 to 0.80)	113
26 weeks					
DASH	-7.9 (-12.9 to -7.9)	0.59	0.82	0.73 (0.63 to 0.82)	104
Pain rest	-0.5 (-0.5 to -0.5)	0.72	0.33	0.55 (0.45 to 0.65)	107
Pain active	-0.5 (-1.5 to -0.5)	0.51	0.74	0.71 (0.61 to 0.81)	106
Constant Score	18.8 (3.4 to 18.8)	0.8	0.45	0.65 (0.54 to 0.75)	111
52 weeks					
DASH	-4.2 (-6.7 to -2.9)	0.73	0.76	0.82 (0.73 to 0.91)	105
Pain rest	-0.5 (-0.5 to 0.5)	0.76	0.32	0.55 (0.45 to 0.65)	105
Pain active	-0.5 (-0.5 to -0.5)	0.70	0.74	0.71 (0.61 to 0.81)	105
Constant Score	7.6 (5.6 to 12.5)	0.67	0.62	0.67 (0.56 to 0.79)	105
104 weeks					
DASH	-2.9 (-4.2 to -0.8)	0.81	0.58	0.69 (0.56 to 0.82)	106
Pain rest	-0.5 (-0.5 to 0.5)	0.82	0.31	0.57 (0.46 to 0.68)	105
Pain active	-0.5 (-0.5 to -0.5)	0.72	0.46	0.62 (0.50 to 0.74)	105
Constant Score	3.9 (1.9 to 9.3)	0.61	0.67	0.64 (0.50 to 0.77)	103
All timepoints					
DASH	-6.7 (-7.9 to -5.4)	0.71	0.74	0.77 (0.73 to 0.82)	420
Pain rest	-0.5 (-0.5 to -0.5)	0.73	0.38	0.56 (0.51 to 0.61)	429
Pain active	-0.5 (-0.5 to -0.5)	0.62	0.69	0.68 (0.63 to 0.73)	427
Constant Score	7.6 (7.4 to 13.2)	0.61	0.71	0.71 (0.66 to 0.76)	416

DASH score from 0 to 100 (0 = optimal outcome)

Pain scores are NRS with score from 0 to 10 (0 = optimal outcome)

Constant-Murley Score from 0 to 100 (100 = optimal outcome)

Table S2. MID values of all follow-up time points using mean change, mean difference of change, and predictive methods

Outcome measure	Mean difference of change	Mean change	Predictive	N1	N2
12 weeks					
DASH	-8.4 (-14.4 to -2.3)	-19.5 (-24.5 to -14.7)	-16.5 (-18.7 to -14.2)	28	53
Pain rest	0.0 (-0.6 to 0.6)	-0.5 (-0.9 to -0.2)	-0.6 (-0.8 to -0.3)	30	55
Pain active	-1.1 (-2.3 to 0.0)	-1.7 (-2.5 to -0.9)	-1.2 (-1.7 to -0.7)	30	54
Constant Score	11.6 (4.5 to 18.8)	24.9 (19.7 to 30.2)	19.6 (16.6 to 22.6)	28	55
26 weeks					
DASH	-3.8 (-8.2 to 0.7)	-11.2 (-14.2 to -8.3)	-12.0 (-14.2 to -9.9)	28	49
Pain rest	-0.2 (-0.9 to 0.5)	-0.4 (-1.0 to 0.2)	-0.4 (-0.6 to -0.2)	29	50
Pain active	-0.5 (-1.5 to 0.5)	-1.3 (-2.1 to -0.6)	-1.4 (-1.8 to -1.0)	29	49
Constant Score	0.0 (-5.4 to 5.4)	9.8 (6.3 to 13.4)	13.8 (11.1 to 16.6)	28	49
52 weeks					
DASH	-6.6 (-9.5 to -3.7)	-8.0 (-10.3 to -5.8)	-5.3 (-6.2 to -4.2)	27	67
Pain rest	-0.1 (-0.6 to 0.3)	-0.3 (-0.6 to 0.1)	-0.2 (-0.4 to 0.0)	27	67
Pain active	-1.0 (-1.7 to -0.4)	-1.2 (-1.7 to -0.8)	-0.8 (-1.1 to -0.6)	27	67
Constant Score	5.6 (0.2 to 10.9)	10.7 (6.1 to 15.3)	8.6 (6.5 to 10.7)	27	64
104 weeks					
DASH	-3.9 (-8.1 to 0.2)	-4.3 (-8.0 to -0.6)	-2.7 (-4.2 to -1.2)	22	79
Pain rest	-0.5 (-1.4 to 0.4)	-0.5 (-1.4 to 0.3)	-0.3 (-0.5 to -0.0)	22	79
Pain active	-0.7 (-1.4 to 0.1)	-0.7 (-1.3 to -0.1)	-0.4 (-0.7 to -0.1)	22	79
Constant Score	4.0 (-0.4 to 8.5)	6.8 (2.9 to 10.7)	4.8 (2.9 to 6.6)	21	76
All timepoints					
DASH	-6.8 (-9.2 to -4.3)	-11.2 (-13.3 to -9.0)	-9.4 (-10.5 to -8.3)	105	248
Pain rest	-0.2 (-0.5 to 0.1)	-0.4 (-0.7 to -0.2)	-0.4 (-0.5 to -0.3)	108	251
Pain active	-0.9 (-1.4 to -0.5)	-1.3 (-1.6 to -0.9)	-1.0 (-1.2 to -0.8)	108	249
Constant Score	6.3 (3.2 to 9.4)	13.5 (10.9 to 16.2)	12.1 (10.8 to 13.4)	104	244

Values are MIDs with 95 % CI.

DASH score from 0 to 100 (0 = optimal outcome)

Pain scores are NRS with score from 0 to 10 (0 = optimal outcome)

Constant-Murley Score from 0 to 100 (100 = optimal outcome)

N1 = patients whose condition was one point better on the 7-item Likert scale compared to previous follow-up visit

N2 = whose condition was not better compared to previous follow-up visit