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## **Supplementary Material**

### **Effect of alendronic acid on fracture healing: A multi-centre randomised placebo-controlled trial**

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**Supplementary Table 1. Characteristics of fracture healing by treatment group**

		<b>Alendronic acid (n=215)</b>	<b>Placebo (n=206)</b>	<b>p-value</b>
<b>Week 2</b>		(202)	(189)	
Fracture healed		8 (4.0%)	13 (6.9%)	0.15
Endosteal healed		27 (13.4%)	35 (18.5%)	
Organised trabecular bridging		158 (78.2%)	151 (79.9%)	
Number of cortices bridged	0	67 (33.2%)	54 (28.6%)	
	1	54 (26.7%)	45 (23.8%)	
	2	45 (22.3%)	56 (29.6%)	
	3	25 (12.4%)	22 (11.6%)	
	4	11 (5.4%)	12 (6.3%)	
<b>Week 4</b>		(202)	(187)	
Fracture healed		49 (22.8%)	54 (26.2%)	0.31
Endosteal healed		48 (23.8%)	52 (27.8%)	
Organised trabecular bridging		71 (35.1%)	78 (41.7%)	
Number of cortices bridged		180 (89.1%)	167 (89.3%)	
Number of cortices bridged	0	31 (15.4%)	35 (18.7%)	
	1	26 (12.9%)	27 (14.4%)	
	2	47 (23.4%)	40 (21.4%)	
	3	49 (24.2%)	46 (24.6%)	
	4	48 (23.9%)	39 (20.9%)	
<b>Week 6</b>		(202)	(187)	
Fracture healed		86 (44.6%)	80 (44.2%)	0.88
Endosteal healed		110 (57.0%)	109 (60.2%)	
Organised trabecular bridging		179 (92.7%)	173 (95.6%)	
Number of cortices bridged <sup>1</sup>	0	7 (3.6%)	14 (7.7%)	
	1	15 (7.8%)	11 (6.1%)	
	2	42 (21.8%)	36 (19.9%)	
	3	60 (31.1%)	48 (26.5%)	
	4	69 (35.8%)	72 (39.8%)	
<b>Week 8</b>		(193)	(181)	
Fracture healed		121 (61.7%)	103 (56.3%)	0.19
Endosteal healed		139 (70.9%)	127 (69.4%)	
Organised trabecular bridging		192 (98.0%)	176 (96.2%)	
Number of cortices bridged	0	6 (3.1%)	8 (4.4%)	
	1	12 (6.1%)	13 (7.1%)	
	2	24 (12.2%)	19 (10.4%)	
	3	55 (28.1%)	38 (20.8%)	
	4	99 (50.5%)	105 (57.4%)	

Values are numbers (%). The p-values were generated using logistic regression with covariates of age, ulnar variance at baseline, study site, gender, fracture status and comminution at baseline. <sup>1</sup> Data on cortical bridging was available on 201 subjects in the alendronic acid group

**Supplementary table 2. Patient centred outcomes by treatment group**

	<b>Alendronic acid (n=215)</b>	<b>Placebo (n=206)</b>	<b>p-value</b>
<b>Week 2</b>	(200)	(189)	
Pain score	3.5 ± 2.2	3.4 ± 2.3	0.98
DASH score	48.9 ± 17.4	49.8 ± 18.1	0.57
<b>Week 4</b>	(201)	(186)	
Pain score (with imputation)	3.0 ± 2.0	2.7 ± 2.1	0.13
Pain score	3.0 ± 2.0	2.7 ± 2.2	0.26
DASH score (with imputation)	40.8 ± 18.5	39.8 ± 19.2	0.57
DASH score <sup>1</sup>	40.7 ± 19.1	39.7 ± 19.7	0.62
<b>Week 8</b>	(199)	(183)	
Pain score	2.4 ± 2.1	2.4 ± 2.2	0.98
DASH score	25.7 ± 16.9	25.4 ± 20.2	0.57
Grip strength deficit (Kg) <sup>2</sup>	12.0 ± 7.8	12.1 ± 7.7	0.96
<b>Week 26</b>	(198)	(182)	
Pain score	1.3 ± 1.9	1.3 ± 1.8	0.96
DASH score	12.7 ± 14.7	13.3 ± 16.0	0.65
Grip strength deficit (Kg) <sup>2</sup>	6.0 ± 5.2	5.8 ± 5.9	0.86
Flexion deficit <sup>3</sup>	13.3 ± 14.2	14.5 ± 13.4	0.32
Extension deficit	5.7 ± 11.3	6.6 ± 12.3	0.48
Supination deficit	8.7 ± 14.1	8.4 ± 15.1	0.72
Pronation deficit	3.0 ± 10.8	3.7 ± 25.2	0.75

Values are means ±. The p-values were generated using logistic regression with covariates of age, ulnar variance at baseline, study site, gender, fracture status and comminution at baseline. <sup>1</sup> DASH score was available in 200 subjects in the alendronic acid group and 198 in the placebo group; <sup>2</sup> Grip strength deficit was available in 196 of the alendronic acid group at these time points; <sup>4</sup> Data on flexion, extension, supination and pronation deficit was available on 196 of the alendronic acid group and 181 of the placebo group.

**Supplementary Table 3. Other reason for non-enrolment into FAB study**

<b>Reason</b>	<b>Number</b>
Reason not recorded	226
Did not attend clinic	170
Unable to make contact	22
Patient going on holiday	105
Medical issues	133
Social issues	69
Conflicting trial	13
Patient entered onto database in duplicate	1
Total	739

Supplementary Figure 1. Time to fracture healing

