**Appendix, Supplemental Digital Content 2.**

**FUNCTIONAL OUTCOMES AFTER TIBIAL NAILING: REPEATED MEASURES ANALYSIS**

Values for repeated measures analysis. HRQL at 2-weeks, 3-, 6-, and 12-months were the dependent variables. Treatment, time, treatment by time interaction, baseline HRQL, open vs closed, open vs closed by time interaction, **open vs closed by treatment interaction** and centre were the independent variables. Only patients with the HRQL value for at least one of 3-, 6-, or 12-months are included in the analyses.

**SF-36 PCS.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **N** | **Reamed** | **Nonreamed** | **Difference** |
| **Mean (95% CI)** | **Mean (95% CI)** | **Mean (95% CI)** |
| **All patients** |  |  |  |  |
| 2-weeks | 826 | 27.6 (26.9, 28.3) | 28.0 (27.3, 28.8) | 0.42 (-0.61, 1.46) |
| 3 month | 943 | 34.1 (33.3, 34.9) | 33.3 (32.4, 34.1) | -0.84 (-1.98, 0.30) |
| 6 month  | 813 | 38.7 (37.8, 39.7) | 39.3 (38.4, 40.3) | 0.57 (-0.76, 1.91) |
| 12 month | 721 | 42.4 (41.4, 43.4) | 43.4 (42.4, 44.4) | 0.98 (-0.43, 2.38) |
| **OPEN** |  |  |  |  |
| 2-weeks | 228 | 26.7 (25.5, 28.0) | 28.2 (26.9, 29.5) | 1.47 (-0.18, 3.12) |
| 3 month | 273 | 31.8 (30.5, 33.1) | 32.0 (30.6, 33.4) | 0.20 (-1.48, 1.88) |
| 6 month  | 237 | 36.0 (34.5, 37.5) | 37.6 (36.1, 39.1) | 1.61 (-0.20, 3.43) |
| 12 month | 213 | 38.5 (36.9, 40.1) | 40.5 (38.9, 42.2) | 2.02 (0.15, 3.89) |
| **CLOSED** |  |  |  |  |
| 2-weeks | 598 | 27.9 (27.1, 28.8) | 27.9 (27.1, 28.8) | 0.004 (-1.15, 1.16) |
| 3 month | 670 | 35.0 (34.1, 36.0) | 33.8 (32.8, 34.7) | -1.26 (-2.53, 0.008) |
| 6 month  | 576 | 39.9 (38.8, 40.9) | 40.0 (38.9, 41.1) | 0.15 (-1.30, 1.60) |
| 12 month | 508 | 44.0 (42.9, 45.1) | 44.5 (43.4, 45.7) | 0.56 (-0.96, 2.07) |

**SF-36 PCS: ANALYSIS OF INTERACTIONS**

|  |  |
| --- | --- |
|  | **p-value** |
| Treatment  | 0.80 |
| Time | <0.001 |
| Treatment by time interaction | 0.040 |
| Open vs closed | <0.001 |
| Open by treatment interaction | 0.11 |
| Open by time interaction | <0.001 |

**SF-36 MCS.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **N** | **Reamed** | **Nonreamed** | **Difference** |
| **Mean (95% CI)** | **Mean (95% CI)** | **Mean (95% CI)** |
| **All patients** |  |  |  |  |
| 2-weeks | 826 | 45.0 (43.9, 46.2) | 46.0 (44.9, 47.1) | 0.94 (-0.64, 2.52) |
| 3 month | 943 | 50.4 (49.3, 51.4) | 50.7 (49.6, 51.7) | 0.26 (-1.23, 1.75) |
| 6 month  | 813 | 50.6 (49.6, 51.7) | 51.3 (50.3, 52.4) | 0.73 (-0.76, 2.22) |
| 12 month | 721 | 51.6 (50.6, 52.7) | 51.9 (50.8, 52.9) | 0.25 (-1.22, 1.72) |
| **OPEN** |  |  |  |  |
| 2-weeks | 228 | 44.8 (42.9, 46.8) | 45.2 (43.3, 47.2) | 0.41 (-1.96, 2.78) |
| 3 month | 273 | 48.7 (46.9, 50.5) | 48.4 (46.6, 50.3) | -0.27 (-2.57, 2.02) |
| 6 month  | 237 | 49.5 (47.7, 51.3) | 49.7 (47.9, 51.6) | 0.20 (-2.10, 2.50) |
| 12 month | 213 | 50.7 (48.9, 52.5) | 50.4 (48.6, 52.2) | -0.28 (-2.57, 2.01) |
| **CLOSED** |  |  |  |  |
| 2-weeks | 598 | 45.1 (43.9, 46.4) | 46.3 (45.0, 47.6) | 1.16 (-0.58, 2.89) |
| 3 month | 670 | 51.1 (49.9, 52.3) | 51.5 (50.3, 52.8) | 0.47 (-1.19, 2.14) |
| 6 month  | 576 | 51.0 (49.8, 52.2) | 52.0 (50.8, 53.2) | 0.95 (-0.72, 2.61) |
| 12 month | 508 | 52.0 (50.8, 53.2) | 52.5 (51.3, 53.7) | 0.47 (-1.18, 2.11) |

**SF-36 MCS: ANALYSIS OF INTERACTIONS**

|  |  |
| --- | --- |
|  | **p-value** |
| Treatment  | 0.27 |
| Time | <0.001 |
| Treatment by time interaction | 0.77 |
| Open vs closed | 0.01 |
| Open by treatment interaction | 0.56 |
| Open by time interaction | 0.17 |

**SMFA Dysfunction.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **N** | **Reamed** | **Nonreamed** | **Difference** |
| **Mean (95% CI)** | **Mean (95% CI)** | **Mean (95% CI)** |
| **All patients** |  |  |  |  |
| 3 month | 893 | 31.0 (29.5, 32.5) | 32.6 (31.0, 34.1) | 1.55 (-0.60, 3.70) |
| 6 month  | 776 | 23.4 (21.8, 25.0) | 22.8 (21.2, 24.4) | -0.60 (-2.84, 1.63) |
| 12 month | 689 | 18.2 (16.7, 19.8) | 17.4 (15.8, 18.9) | -0.86 (-3.08, 1.36) |
| **OPEN** |  |  |  |  |
| 3 month | 262 | 35.7 (33.0, 38.5) | 36.0 (33.2, 38.7) | 0.25 (-3.39, 3.88) |
| 6 month  | 232 | 28.0 (25.2, 30.8) | 26.1 (23.3, 28.9) | -1.91 (-5.58, 1.76) |
| 12 month | 205 | 22.3 (19.5, 25.1) | 20.1 (17.4, 22.9) | -2.17 (-5.84, 1.50) |
| **CLOSED** |  |  |  |  |
| 3 month | 631 | 29.0 (27.3, 30.8) | 31.1 (29.3, 33.0) | 2.10 (-0.40, 4.59) |
| 6 month  | 544 | 21.4 (19.6, 23.3) | 21.4 (19.5, 23.3) | -0.06 (-2.63, 2.52) |
| 12 month | 484 | 16.5 (14.7, 18.3) | 16.2 (14.3, 18.1) | -0.32 (-2.88, 2.24) |

**SMFA DYSFUNCTION: ANALYSIS OF INTERACTIONS**

|  |  |
| --- | --- |
|  | **p-value** |
| Treatment  | 0.63 |
| Time | <0.001 |
| Treatment by time interaction | 0.03 |
| Open vs closed | <0.001 |
| Open by treatment interaction | 0.39 |
| Open by time interaction | 0.65 |

**SMFA Bother.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **N** | **Reamed** | **Nonreamed** | **Difference** |
| **Mean (95% CI)** | **Mean (95% CI)** | **Mean (95% CI)** |
| **All patients** |  |  |  |  |
| 3 month | 727 | 33.7 (31.5, 35.8) | 33.2 (31.1, 35.3) | -0.50 (-3.51, 2.50) |
| 6 month  | 639 | 26.7 (24.5, 28.9) | 24.7 (22.5, 26.8) | -2.04 (-5.12, 1.05) |
| 12 month | 574 | 21.8 (19.6, 24.0) | 19.9 (17.7, 22.0) | -1.96 (-5.04, 1.11) |
| **OPEN** |  |  |  |  |
| 3 month | 215 | 38.0 (34.2, 41.8) | 37.0 (33.2, 40.8) | -1.01 (-6.06, 4.05) |
| 6 month  | 191 | 31.7 (27.8, 35.6) | 29.1 (25.3, 33.0) | -2.54 (-7.63, 2.55) |
| 12 month | 173 | 26.8 (22.9, 30.7) | 24.4 (20.6, 28.2) | -2.47 (-7.56, 2.62) |
| **CLOSED** |  |  |  |  |
| 3 month | 512 | 31.8 (29.3, 34.4) | 31.6 (29.1, 34.1) | -0.29 (-3.76, 3.18) |
| 6 month  | 448 | 24.6 (22.0, 27.1) | 22.8 (20.2, 25.3) | -1.82 (-5.37, 1.73) |
| 12 month | 401 | 19.7 (17.2, 22.3) | 18.0 (15.4, 20.5) | -1.75 (-5.29, 1.79) |

**SMFA BOTHER: ANALYSIS OF INTERACTIONS**

|  |  |
| --- | --- |
|  | **p-value** |
| Treatment  | 0.43 |
| Time | <0.001 |
| Treatment by time interaction | 0.43 |
| Open vs closed | <0.001 |
| Open by treatment interaction | 0.81 |
| Open by time interaction | 0.75 |