**Appendix Table 1**. Statistical difference (p value) for each kinematics variable and associated angle

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Flexion (°) | Internal tibial rotation | Valgus | MFCC IS | LFCC IS | MFCC AP | LFCC AP |
| 41 | 0.976 | 0.981 | 0.981 | 0.970 | 0.831 | 0.808 |
| 42 | 0.946 | 0.953 | 0.974 | 0.948 | 0.727 | 0.674 |
| 43 | 0.901 | 0.917 | 0.993 | 0.948 | 0.708 | 0.608 |
| 44 | 0.864 | 0.883 | 0.998 | 0.936 | 0.654 | 0.522 |
| 45 | 0.861 | 0.890 | 0.853 | 0.793 | 0.503 | 0.390 |
| 46 | 0.839 | 0.918 | 0.720 | 0.676 | 0.445 | 0.325 |
| 47 | 0.808 | 0.895 | 0.605 | 0.552 | 0.437 | 0.295 |
| 48 | 0.761 | 0.868 | 0.549 | 0.487 | 0.460 | 0.278 |
| 49 | 0.716 | 0.867 | 0.522 | 0.461 | 0.421 | 0.222 |
| 50 | 0.678 | 0.865 | 0.527 | 0.465 | 0.370 | 0.170 |
| 51 | 0.662 | 0.835 | 0.544 | 0.469 | 0.276 | 0.113 |
| 52 | 0.647 | 0.839 | 0.517 | 0.446 | 0.231 | 0.087 |
| 53 | 0.623 | 0.897 | 0.489 | 0.445 | 0.212 | 0.072 |
| 54 | 0.597 | 0.937 | 0.462 | 0.436 | 0.197 | 0.060 |
| 55 | 0.555 | 0.921 | 0.447 | 0.414 | 0.183 | 0.046 |
| 56 | 0.500 | 0.887 | 0.396 | 0.352 | 0.184 | 0.036 |
| 57 | 0.453 | 0.919 | 0.360 | 0.329 | 0.187 | 0.030 |
| 58 | 0.425 | 0.978 | 0.331 | 0.322 | 0.173 | 0.023 |
| 59 | 0.388 | 0.987 | 0.290 | 0.292 | 0.135 | 0.014 |
| 60 | 0.350 | 0.989 | 0.245 | 0.239 | 0.100 | 0.007 |
| 61 | 0.317 | 0.961 | 0.231 | 0.218 | 0.080 | 0.004 |
| 62 | 0.294 | 0.955 | 0.221 | 0.206 | 0.069 | 0.003 |
| 63 | 0.269 | 0.967 | 0.213 | 0.202 | 0.060 | 0.002 |
| 64 | 0.244 | 0.988 | 0.205 | 0.200 | 0.054 | < 0.001 |
| 65 | 0.224 | 0.968 | 0.200 | 0.206 | 0.047 | < 0.001 |
| 66 | 0.210 | 0.917 | 0.203 | 0.221 | 0.045 | < 0.001 |
| 67 | 0.198 | 0.858 | 0.211 | 0.246 | 0.038 | < 0.001 |
| 68 | 0.191 | 0.810 | 0.218 | 0.270 | 0.027 | < 0.001 |
| 69 | 0.175 | 0.753 | 0.188 | 0.251 | 0.023 | < 0.001 |
| 70 | 0.157 | 0.733 | 0.161 | 0.223 | 0.024 | < 0.001 |
| 71 | 0.136 | 0.750 | 0.148 | 0.203 | 0.025 | < 0.001 |
| 72 | 0.123 | 0.784 | 0.152 | 0.199 | 0.020 | < 0.001 |
| 73 | 0.113 | 0.776 | 0.138 | 0.184 | 0.018 | < 0.001 |
| 74 | 0.109 | 0.752 | 0.115 | 0.160 | 0.017 | < 0.001 |
| 75 | 0.094 | 0.824 | 0.076 | 0.097 | 0.018 | < 0.001 |
| 76 | 0.080 | 0.780 | 0.068 | 0.093 | 0.017 | < 0.001 |
| 77 | 0.072 | 0.599 | 0.093 | 0.162 | 0.013 | < 0.001 |
| 78 | 0.063 | 0.511 | 0.105 | 0.205 | 0.011 | < 0.001 |
| 79 | 0.049 | 0.592 | 0.088 | 0.154 | 0.011 | < 0.001 |
| 80 | 0.038 | 0.610 | 0.077 | 0.134 | 0.010 | < 0.001 |
| 81 | 0.031 | 0.565 | 0.065 | 0.124 | 0.008 | < 0.001 |
| 82 | 0.024 | 0.582 | 0.049 | 0.094 | 0.008 | < 0.001 |
| 83 | 0.017 | 0.643 | 0.037 | 0.066 | 0.009 | < 0.001 |
| 84 | 0.011 | 0.607 | 0.038 | 0.071 | 0.010 | < 0.001 |
| 85 | 0.007 | 0.622 | 0.030 | 0.057 | 0.011 | < 0.001 |
| 86 | 0.005 | 0.680 | 0.027 | 0.046 | 0.015 | < 0.001 |
| 87 | 0.004 | 0.800 | 0.017 | 0.023 | 0.020 | < 0.001 |
| 88 | 0.004 | 0.842 | 0.009 | 0.012 | 0.032 | < 0.001 |
| 89 | 0.002 | 0.751 | 0.006 | 0.010 | 0.042 | < 0.001 |
| 90 | < 0.001 | 0.588 | 0.008 | 0.017 | 0.040 | < 0.001 |
| 91 | < 0.001 | 0.486 | 0.015 | 0.039 | 0.031 | < 0.001 |
| 92 | < 0.001 | 0.473 | 0.019 | 0.049 | 0.030 | < 0.001 |
| 93 | < 0.001 | 0.468 | 0.019 | 0.050 | 0.035 | < 0.001 |
| 94 | < 0.001 | 0.471 | 0.018 | 0.047 | 0.044 | < 0.001 |
| 95 | < 0.001 | 0.490 | 0.015 | 0.040 | 0.060 | < 0.001 |
| 96 | < 0.001 | 0.491 | 0.013 | 0.035 | 0.075 | < 0.001 |
| 97 | < 0.001 | 0.492 | 0.013 | 0.034 | 0.069 | < 0.001 |
| 98 | < 0.001 | 0.446 | 0.009 | 0.026 | 0.077 | < 0.001 |
| 99 | < 0.001 | 0.372 | 0.004 | 0.017 | 0.090 | < 0.001 |

Statistical analyses were performed with a linear mixed-model method.

p < 0.05.

The statistical analyses between the implants were performed using difference of pre-UKA and post-UKA conditions: Post(UKAMB) – PreRight (Native) and Post(UKAFB) – PreLeft (Native).

The p values in red represent statistically significant differences; MFCC = medial femoral condyle center; LFCC = lateral femoral condyle center; IS = inferior-superior.