

**Supplement 3.a. Performance score, procedure time and number of errors of Intracorporeal Suture at test time T1-T5.**

| Test Time | P-Score                                 |                                               |                                         |                                       | Time (sec)                             |                                        |                                        |                                        | Errors (n)                      |                                 |                                 |                                 |
|-----------|-----------------------------------------|-----------------------------------------------|-----------------------------------------|---------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|           | Group I                                 | Group II                                      | Group III                               | Group IV                              | Group I                                | Group II                               | Group III                              | Group IV                               | Group I                         | Group II                        | Group III                       | Group IV                        |
|           | Mean ± SD<br>(Range;<br>Median)         | Mean ± SD<br>(Range;<br>Median)               | Mean ± SD<br>(Range;<br>Median)         | Mean ± SD<br>(Range;<br>Median)       | Mean ± SD<br>(Range;<br>Median)        | Mean ± SD<br>(Range;<br>Median)        | Mean ± SD<br>(Range;<br>Median)        | Mean ± SD<br>(Range;<br>Median)        | Mean ± SD<br>(Range;<br>Median) | Mean ± SD<br>(Range;<br>Median) | Mean ± SD<br>(Range;<br>Median) | Mean ± SD<br>(Range;<br>Median) |
| T1        | 80.2±151.5<br>(-154-331;<br>143)        | -98.1<br>±204.6<br>(-380-258;<br>-180)        | 99±142.3<br>(-120-324;<br>91)           | 1±179.3<br>(-380-<br>264.5;<br>26.8)  | 451.7±122<br>(264-600;<br>407.5)       | 521.3<br>±134.9<br>(242-600;<br>600)   | 411.4<br>±159.9<br>(176-600;<br>407.5) | 460.7<br>±135.5<br>(188-600;<br>477)   | 0.34±0.9<br>(0-3; 0)            | 1.58±1.39<br>(0-4; 2)           | 1.46±2.39<br>(0-8; 0.5)         | 2.2±3.47<br>(0-11;<br>0.88)     |
| T2        | 207.8±93.7<br>(29-350;<br>194)          | 19.3±180.1<br>(-260-279;<br>3.3)              | 242.1<br>±110.4<br>(44-405.5;<br>267.5) | 70.4±228.3<br>(-380-409;<br>58.5)     | 294.9±99.3<br>(150-471;<br>302)        | 458±161<br>(221-600;<br>521.5)         | 262.5±97.9<br>(154-446;<br>246.5)      | 393.6<br>±165.8<br>(181-600;<br>401.5) | 0.32±0.78<br>(0-2.5; 0)         | 1.94±2.63<br>(0-6.5; 1)         | 1.21±1.6<br>(0-4.5;<br>0.63)    | 1.23±1.85<br>(0-6; 0.63)        |
| T3        | 257.1±95<br>(63-396;<br>278)            | -38.2<br>±237.2<br>(-380-317;<br>-92)         | 321.8±43.3<br>(277.5-<br>422;<br>304.8) | 172.8<br>±203.8<br>(-140-398;<br>234) | 238.2±94.2<br>(104-427;<br>217.5)      | 468.4<br>±166.6<br>(173-600;<br>576)   | 179.1±44.6<br>(78-240;<br>188)         | 314.9<br>±175.4<br>(142-600;<br>208.5) | 0.5±0.67<br>(0-2; 0)            | 0.86±1.26<br>(0-3; 0.25)        | 0.74±1.27<br>(0-4.25; 0)        | 2.68±4.86<br>(0-16;<br>1.13)    |
| T4        | 255.9<br>±113.6<br>(-4-419.5;<br>232.5) | 189.6<br>±124.4<br>(-105-<br>353.5;<br>236)   | 218.7<br>±172.1<br>(-38-521;<br>316.5)  | 269±116.5<br>(83-441;<br>282.5)       | 249.3<br>±103.8<br>(123-504;<br>250.5) | 305.8<br>±121.5<br>(144-600;<br>264)   | 224.6<br>±153.8<br>(79-538;<br>166.5)  | 239.6<br>±106.1<br>(105-412;<br>220.5) | 0.31±0.9<br>(0-3; 0)            | 0.53±0.99<br>(0-3; 0)           | 1.04±1.32<br>(0-4; 0.25)        | 0.83±1.6<br>(0-5; 0)            |
| T5        | 305±100.5<br>(7-401;<br>32.,8)          | 147.3<br>±191.5<br>(-202.5-<br>384;<br>202.5) | 319.7<br>±149.8<br>(-15-473;<br>380)    | 294.4<br>±153.3<br>(-119-435;<br>348) | 188.1±82.7<br>(99-423;<br>177)         | 329.8<br>±165.4<br>(116-600;<br>287.5) | 185.1<br>±137.5<br>(65-505;<br>123.5)  | 198.5<br>±145.8<br>(65-599;<br>152)    | 0.75±2.09<br>(0-7; 0)           | 0.97±1.03<br>(0-2.75;<br>0.5)   | 0.35±0.96<br>(0-3.25; 0)        | 0.65±1.33<br>(0-4; 0)           |

Group I: 2D visualization with straight instruments. Group II: 2D visualization with curved instruments. Group III: 3D visualization with straight instruments. Group IV: 3D visualization with curved instruments. SD: Standard deviation. P-Score: Performance score. Sec: Seconds.