Supplemental material

Table S1: Cortical width (Ct.Wi) was measured from the periosteal border to the endosteal border and computed by taking the average of the minimum and maximum Ct.Wi. Initial measurements were taken in µm and translated to mm for osteon population density (OPD) analysis. Min.: minimum, Max.: maximum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Ct.Wi** | | | |
| **Skeletal element** | **Min** | **Max** | **Mean µm** |
| humerus | 9614.583 | 16949.36 | 13281.972 |
| rib | 2860.083 | 9125.336 | 5992.7095 |
| vertebra 5 | 4314.838 | 6199.113 | 5256.9755 |
| vertebra 7 | 1757.197 | 5708.434 | 3732.8155 |

Table S2: Osteon population density (OPD) is a unitless value. We show the uncorrected and corrected values against the Ct.Wi (mm). HUM = humerus, VERT = vertebrae (n=2).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Uncorrected OPD** | | | **Ct.Wi (mm) corrected OPD** | | |
| **HUM** | **RIB** | **VERT** | **HUM** | **RIB** | **VERT** |
| 10.10333 | 5.653333 | 11.93 | 0.76068 | 0.943368 | 2.269366 |
| 8.45 | 16.9 | 9.95 | 0.636201 | 2.820093 | 1.892723 |
| 7.793333 | 18.38 | 6.126667 | 0.58676 | 3.06706 | 1.165436 |
| 7.46 | 15.57333 | 13.57333 | 0.561664 | 2.598713 | 2.581966 |
| 7.456667 | 17.4 | 6.46 | 0.561413 | 2.903528 | 1.228843 |
| 5.47 | 10.94 | 8.616667 | 0.411836 | 1.825552 | 1.639092 |
| 3.64 | 13.42 | 14.91 | 0.274056 | 2.239388 | 2.836232 |
| 8.446667 | 16.56667 | 9.276667 | 0.63595 | 2.76447 | 1.76464 |
| 7.116667 | 15.39 | 4.306667 | 0.535814 | 2.56812 | 0.819229 |
| 8.943333 | 17.71667 | 9.44 | 0.673344 | 2.95637 | 2.528922 |
| 6.96 | 12.58667 | 5.47 | 0.524019 | 2.10033 | 1.465382 |
| 7.45 | 9.773333 | 4.806667 | 0.560911 | 1.630871 | 1.287679 |
| 4.47 | 16.72333 | 11.26333 | 0.336546 | 2.790613 | 3.017383 |
| 6.793333 | 8.783333 | 11.26333 | 0.51147 | 1.46567 | 3.017383 |
| 9.773333 | 9.44 | 9.596667 | 0.735835 | 1.575247 | 2.570892 |
| 9.273333 | 9.606667 | 6.96 | 0.698189 | 1.603059 | 1.864544 |
| 9.433333 | 12.93 | 5.46 | 0.710236 | 2.157622 | 1.462703 |
| 10.27333 | 14.41 | 3.813333 | 0.77348 | 2.404588 | 1.02157 |
| 7.613333 | 10.27333 |  | 0.573208 | 1.714305 |  |
| 5.633333 | 13.4 |  | 0.424134 | 2.23605 |  |
| 6.96 | 12.75667 |  | 0.524019 | 2.128698 |  |

Table S3: Osteon area (On.Ar) and Haversian canal area (HCa.Ar) in µm2 are shown in uncorrected and corrected values (against Ct.Wi in µm). HUM = humerus, VERT = vertebrae (n=2).

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Uncorrected On.Ar** | | | **Ct.Wi (µm2) Corrected On.Ar** | | | **Uncorrected HCa.Ar** | | | **Ct.Wi (µm2) Corrected HCa.Ar** | | |
| **HUM** | **RIB** | **VERT** | **HUM** | **RIB** | **VERT** | **HUM** | **RIB** | **VERT** | **HUM** | **RIB** | **VERT** |
| 77103.52 | 62745.21 | 88277.46 | 5.805126 | 10.47026 | 16.79244 | 3037.547 | 4941.134 | 2181.415 | 0.228697 | 0.824524 | 0.414956 |
| 33254.84 | 66541.99 | 41669.01 | 2.503758 | 11.10382 | 7.926422 | 708.2753 | 5119.83 | 1095.996 | 0.053326 | 0.854343 | 0.208484 |
| 42140.6 | 26164.67 | 10560.04 | 3.172767 | 4.366084 | 2.008767 | 614.2077 | 1258.276 | 633.277 | 0.046244 | 0.209968 | 0.120464 |
| 77649.94 | 38711.18 | 32875.88 | 5.846266 | 6.459712 | 6.253764 | 1738.362 | 1249.943 | 1984.742 | 0.130881 | 0.208577 | 0.377544 |
| 75433.96 | 116129 | 56464.1 | 5.679425 | 19.37838 | 10.7408 | 2739.034 | 2042.308 | 2613.353 | 0.206222 | 0.340799 | 0.497121 |
| 21457.66 | 30333.43 | 60847.8 | 1.615548 | 5.061722 | 11.57468 | 222.501 | 1816.068 | 1051.688 | 0.016752 | 0.303046 | 0.200056 |
| 20081.59 | 104903.2 | 22373.89 | 1.511943 | 17.50514 | 4.256038 | 3055.021 | 7510.568 | 2099.945 | 0.230013 | 1.253284 | 0.399459 |
| 21424.46 | 65465.6 | 39379.25 | 1.613048 | 10.92421 | 7.490856 | 1355.101 | 4357.892 | 2399.242 | 0.102026 | 0.727199 | 0.456392 |
| 39295.72 | 74528.13 | 97457.99 | 2.958575 | 12.43647 | 18.53879 | 2682.621 | 1024.212 | 2170.782 | 0.201975 | 0.17091 | 0.412934 |
| 32720.47 | 81872.89 | 45434.39 | 2.463525 | 13.66208 | 8.642685 | 1469.998 | 1692.833 | 3603.109 | 0.110676 | 0.282482 | 0.685396 |
| 35733.54 | 34104.15 | 105556.7 | 2.690379 | 5.690941 | 20.07936 | 2046.176 | 5867.292 | 5526.978 | 0.154057 | 0.979072 | 1.051361 |
| 57391.62 | 17222.31 | 27728.93 | 4.321016 | 2.873877 | 5.274693 | 2036.859 | 3142.983 | 1680.871 | 0.153355 | 0.524468 | 0.319741 |
| 22633.13 | 45326.12 | 86800.95 | 1.704049 | 7.563543 | 16.51158 | 1864.019 | 1930.76 | 2530.167 | 0.140342 | 0.322185 | 0.481297 |
| 19241.56 | 46282.48 | 105191.9 | 1.448698 | 7.723132 | 20.00997 | 1417.591 | 1446.104 | 6607.707 | 0.10673 | 0.241311 | 1.256941 |
| 41350.78 | 34202.23 | 69774.7 | 3.113301 | 5.707307 | 13.27278 | 4548.707 | 2696.773 | 9153.026 | 0.342472 | 0.450009 | 1.74112 |
| 20550.21 | 35377.14 | 40976.08 | 1.547226 | 5.903363 | 7.79461 | 2593.066 | 1436.492 | 3412.91 | 0.195232 | 0.239707 | 0.649216 |
| 33820.75 | 41339.94 | 46959.17 | 2.546365 | 6.898372 | 8.932736 | 2415.809 | 1509.599 | 5872.469 | 0.181886 | 0.251906 | 1.117081 |
| 36078.51 | 47907.84 | 60700.29 | 2.716352 | 7.994354 | 11.54662 | 5612.828 | 1684.937 | 3613.586 | 0.42259 | 0.281164 | 0.687389 |
| 23308.04 | 36556 | 14256.24 | 1.754863 | 6.100078 | 2.711871 | 1950.026 | 1217.174 | 782.405 | 0.146818 | 0.203109 | 0.148832 |
| 41256.04 | 54621.14 | 36554.64 | 3.106168 | 9.114598 | 6.95355 | 1742.51 | 2724.623 | 2368.369 | 0.131194 | 0.454656 | 0.450519 |
| 55370.77 | 15335.12 | 92930.12 | 4.168867 | 2.558962 | 17.67749 | 1084.52 | 1189.928 | 3669.329 | 0.081654 | 0.198563 | 0.697992 |
| 31540.46 | 53673.18 | 30527.81 | 2.374682 | 8.956413 | 5.807105 | 839.957 | 1163.644 | 3482.375 | 0.06324 | 0.194177 | 0.662429 |
| 21531.43 | 34310.41 | 110069 | 1.621102 | 5.725359 | 20.9377 | 2320.145 | 1107.933 | 2981.544 | 0.174684 | 0.18488 | 0.56716 |
| 31635.95 | 30358.23 | 51211.73 | 2.381871 | 5.06586 | 9.741672 | 3686.494 | 1235.068 | 2103.092 | 0.277556 | 0.206095 | 0.400057 |
| 223411.4 | 28835.06 | 45707.99 | 16.82065 | 4.811689 | 8.694732 | 8319.213 | 1614.378 | 1764.722 | 0.626354 | 0.26939 | 0.335692 |
| 70539.13 | 36479.36 | 24656.45 | 5.310893 | 6.087289 | 4.690236 | 3250.432 | 1607.045 | 2847.684 | 0.244725 | 0.268167 | 0.541696 |
| 99209.1 | 35835.31 | 23462.67 | 7.469456 | 5.979818 | 4.46315 | 3968.869 | 896.231 | 1605.925 | 0.298816 | 0.149554 | 0.305485 |
| 121164.6 | 57752.34 | 67025.22 | 9.122485 | 9.6371 | 12.74977 | 3581.681 | 3067.242 | 4254.973 | 0.269665 | 0.511829 | 0.809396 |
| 60991.35 | 30656.44 | 95575.78 | 4.59204 | 5.115622 | 18.18075 | 2746.965 | 1726.467 | 2580.479 | 0.206819 | 0.288095 | 0.490868 |
| 52472.12 | 38065.27 | 98966.96 | 3.950627 | 6.35193 | 18.82584 | 1901.476 | 443.8157 | 6140.894 | 0.143162 | 0.074059 | 1.168142 |
| 113387.2 | 33528.52 | 35683.91 | 8.536925 | 5.594885 | 6.787916 | 804.7283 | 974.129 | 3738.507 | 0.060588 | 0.162552 | 0.711152 |
| 25467.14 | 39899.98 | 64610.45 | 1.917422 | 6.658086 | 12.29042 | 468.1633 | 2051.04 | 4475.654 | 0.035248 | 0.342256 | 0.851374 |
| 35817.88 | 40462.11 | 22496.14 | 2.696729 | 6.751888 | 4.279293 | 445.9743 | 1462.906 | 633.6863 | 0.033577 | 0.244114 | 0.120542 |
| 123990.9 | 42328.82 | 43738.1 | 9.335277 | 7.063386 | 8.320011 | 2305.66 | 2349.394 | 2791.531 | 0.173593 | 0.392042 | 0.531015 |
| 76587.25 | 23557.67 | 74519.02 | 5.766256 | 3.931055 | 14.17526 | 4538.156 | 1015.661 | 2772.728 | 0.341678 | 0.169483 | 0.527438 |
| 54962.01 | 31608.37 | 15070.67 | 4.138091 | 5.27447 | 2.866795 | 1151.774 | 2486.292 | 2582.173 | 0.086717 | 0.414886 | 0.49119 |
| 63055.29 | 25444.82 | 77795.43 | 4.747434 | 4.245963 | 14.79851 | 3449.501 | 1588.711 | 3603.58 | 0.259713 | 0.265107 | 0.685485 |
| 38254.45 | 51583.63 | 33549.09 | 2.880179 | 8.607731 | 6.381823 | 1943.692 | 2433.679 | 2960.104 | 0.146341 | 0.406107 | 0.563081 |
| 55644.45 | 44294.03 | 51623.02 | 4.189472 | 7.39132 | 9.819908 | 2629.633 | 2273.835 | 10142.68 | 0.197985 | 0.379434 | 1.929376 |
| 63949.4 | 17735.17 | 68945.7 | 4.814752 | 2.959458 | 13.11509 | 5223.746 | 638.5153 | 12444.44 | 0.393296 | 0.106549 | 2.367225 |
| 27486.53 | 122421.2 | 54294.12 | 2.069462 | 20.42836 | 10.32801 | 3038.111 | 3301.898 | 10447.41 | 0.228739 | 0.550986 | 1.987342 |
| 56464.9 | 18344.19 | 125210.3 | 4.251244 | 3.061085 | 23.81794 | 3212.508 | 621.8567 | 2851.223 | 0.24187 | 0.103769 | 0.542369 |
| 88577.46 | 25762.28 | 113897.5 | 6.668999 | 4.298936 | 21.66597 | 5240.341 | 1559.905 | 7092.764 | 0.394545 | 0.2603 | 1.34921 |
| 47645.79 | 33381.92 | 89586.11 | 3.587253 | 5.570421 | 23.99961 | 4946.575 | 1267.432 | 1954.441 | 0.372428 | 0.211496 | 0.523584 |
| 96546.13 | 58500.8 | 47201.01 | 7.268961 | 9.761995 | 12.64488 | 13785.77 | 3128.041 | 2371.799 | 1.037931 | 0.521974 | 0.635392 |
| 53234.34 | 20844.48 | 35433.49 | 4.008015 | 3.478306 | 9.49243 | 2893.703 | 1927.026 | 1959.3 | 0.217867 | 0.321562 | 0.524885 |
| 66892.31 | 29736.98 | 61730.34 | 5.036323 | 4.962193 | 16.53721 | 2144.001 | 1383.687 | 2587.915 | 0.161422 | 0.230895 | 0.693288 |
| 33408.16 | 14791.11 | 85529.26 | 2.515301 | 2.468184 | 22.9128 | 856.5523 | 763.512 | 1428.612 | 0.06449 | 0.127407 | 0.382717 |
| 31576.56 | 46107.09 | 13888.32 | 2.3774 | 7.693863 | 3.720601 | 1239.992 | 1161.828 | 1494.341 | 0.093359 | 0.193874 | 0.400326 |
| 61202.73 | 30539.21 | 49829.39 | 4.607955 | 5.09606 | 13.34901 | 4408.245 | 256.693 | 1080.819 | 0.331897 | 0.042834 | 0.289545 |
| 98271.17 | 94771.11 | 58578.25 | 7.398839 | 15.8144 | 15.69278 | 5034.501 | 1272.628 | 14233.82 | 0.379048 | 0.212363 | 3.813161 |
| 53732.79 | 77252.03 | 129086.6 | 4.045543 | 12.891 | 34.58158 | 4578.566 | 1341.428 | 20824.76 | 0.34472 | 0.223843 | 5.578834 |
| 75811.57 | 8308.687 | 156502.5 | 5.707855 | 1.386466 | 41.92612 | 7734.882 | 176.1727 | 2429.258 | 0.582359 | 0.029398 | 0.650784 |
| 27680.73 | 56626.64 | 18546.75 | 2.084083 | 9.449256 | 4.968568 | 4106.618 | 2039.925 | 1034.25 | 0.309187 | 0.340401 | 0.27707 |
| 29493.53 | 30812.87 | 14055.56 | 2.220568 | 5.141725 | 3.765405 | 2806.121 | 1417.658 | 909.042 | 0.211273 | 0.236564 | 0.243527 |
| 30393.49 | 67771.7 | 85002.59 | 2.288326 | 11.30902 | 22.77171 | 1642.459 | 3151.757 | 6343.57 | 0.123661 | 0.525932 | 1.699406 |
| 34578.37 | 29655.62 | 42016.33 | 2.603406 | 4.948616 | 11.25593 | 4156.063 | 1165.879 | 4173.59 | 0.31291 | 0.19455 | 1.118081 |
| 17306.5 | 65885.5 | 28852.37 | 1.303007 | 10.99428 | 7.729385 | 2071.192 | 1734.823 | 1363.563 | 0.15594 | 0.289489 | 0.365291 |
| 26520.63 | 18824.84 | 60008.84 | 1.996739 | 3.14129 | 16.07603 | 6148.959 | 621.7827 | 445.0877 | 0.462955 | 0.103757 | 0.119236 |
| 37899.96 | 40743.16 | 39094.24 | 2.853489 | 6.798788 | 10.47312 | 9196.08 | 368.157 | 4081.256 | 0.692373 | 0.061434 | 1.093345 |
| 112627.9 | 33895.56 | 37950.79 | 8.479756 | 5.656133 | 10.1668 | 2689.33 | 1564.025 | 3133.337 | 0.20248 | 0.260988 | 0.839403 |
| 51488.73 | 17435.04 | 82882.03 | 3.876588 | 2.909375 | 22.20362 | 442.122 | 875.4087 | 1426.294 | 0.033287 | 0.146079 | 0.382096 |
| 17596.69 | 31011.43 | 23849.27 | 1.324855 | 5.174859 | 6.389083 | 609.1913 | 1354.099 | 1255.872 | 0.045866 | 0.225958 | 0.336441 |
| 13015.39 | 20582.79 | 60449.7 | 0.979929 | 3.434639 | 16.19413 | 920.0447 | 931.1037 | 1745.696 | 0.06927 | 0.155373 | 0.467662 |
| 48925.35 | 19714.81 | 69577.65 | 3.683591 | 3.289799 | 18.63945 | 1457.344 | 1847.926 | 3607.486 | 0.109723 | 0.308362 | 0.966425 |
| 21661.72 | 12096.05 | 54090.85 | 1.630911 | 2.018461 | 14.49063 | 854.5557 | 1052.775 | 1591.858 | 0.06434 | 0.175676 | 0.42645 |
| 110947.4 | 27555.21 | 39574.26 | 8.353232 | 4.598122 | 10.60172 | 2834.018 | 1077.052 | 2131.436 | 0.213373 | 0.179727 | 0.571 |
| 54030.95 | 47268.27 | 136139.4 | 4.067991 | 7.887629 | 36.47098 | 2615.367 | 1268.494 | 67277.22 | 0.196911 | 0.211673 | 18.02318 |
| 58012.63 | 56682.56 | 47779.52 | 4.367773 | 9.458586 | 12.79986 | 3987.248 | 2243.578 | 2154.076 | 0.3002 | 0.374385 | 0.577065 |
| 31932.05 | 10886.48 | 125054.2 | 2.404165 | 1.816621 | 33.50132 | 664.1043 | 635.3897 | 2734.14 | 0.05 | 0.106027 | 0.732461 |
| 12329.75 | 30257.31 | 173814.8 | 0.928307 | 5.049019 | 46.564 | 1515.416 | 1148.787 | 5827.245 | 0.114096 | 0.191697 | 1.561086 |
| 43406.96 | 13742.02 | 47352.48 | 3.268111 | 2.293123 | 12.68546 | 1603.924 | 281.697 | 3608.813 | 0.12076 | 0.047007 | 0.96678 |
| 63362.73 | 16394.72 | 36001.18 | 4.770581 | 2.735777 | 9.644511 | 2046.758 | 1840.745 | 4137.107 | 0.1541 | 0.307164 | 1.108307 |
| 69229.33 | 11087.61 | 66198 | 5.212278 | 1.850184 | 17.73407 | 1259.207 | 1101.933 | 2900.322 | 0.094806 | 0.183879 | 0.77698 |
| 13392.43 | 13227.2 | 34789.57 | 1.008317 | 2.207215 | 9.319927 | 1825.778 | 639.6757 | 4233.212 | 0.137463 | 0.106742 | 1.134053 |
| 47829.21 | 48261.07 | 97365.31 | 3.601062 | 8.053297 | 26.08361 | 3303.345 | 3430.934 | 9709.215 | 0.248709 | 0.572518 | 2.601043 |
| 33679.5 | 13630.6 | 122508.6 | 2.53573 | 2.274531 | 32.81935 | 8060.117 | 1089.648 | 11944.81 | 0.606846 | 0.181829 | 3.199946 |
| 40888.58 | 14203.14 | 120196.6 | 3.078502 | 2.370069 | 32.19999 | 3582.619 | 657.96 | 910.7127 | 0.269735 | 0.109793 | 0.243975 |
| 115372.4 | 68161.57 | 53797.42 | 8.686394 | 11.37408 | 14.41202 | 560.9113 | 2034.145 | 2268.402 | 0.042231 | 0.339437 | 0.607692 |
| 39656.97 | 11511.97 | 92896.11 | 2.985774 | 1.920996 | 24.88634 | 1241.519 | 514.6773 | 3168.843 | 0.093474 | 0.085884 | 0.848915 |
| 37414.19 | 20217.49 | 100740.4 | 2.816916 | 3.373682 | 26.98779 | 2664.835 | 1694.56 | 2593.235 | 0.200635 | 0.28277 | 0.694713 |
| 108714.4 | 40265.46 | 54744.06 | 8.18511 | 6.719075 | 14.66562 | 965.8277 | 1811.366 | 12085.97 | 0.072717 | 0.302262 | 3.237763 |
| 14894.01 | 36598.04 | 187428.5 | 1.12137 | 6.107095 | 50.21102 | 1238.076 | 1038.208 | 18964.96 | 0.093215 | 0.173245 | 5.080606 |
| 10283.41 | 23646.58 |  | 0.774238 | 3.945891 |  | 2476.766 | 1781.376 |  | 0.186476 | 0.297257 |  |
| 19251.73 | 60204.07 |  | 1.449463 | 10.04622 |  | 3147.919 | 1757.67 |  | 0.237007 | 0.293301 |  |
|  | 31314.47 |  |  | 5.225427 |  | 1648.369 | 289.6127 |  | 0.124106 | 0.048327 |  |
|  | 20116.39 |  |  | 3.35681 |  | 1767.482 | 2330.041 |  | 0.133074 | 0.388813 |  |
|  | 32473.47 |  |  | 5.418829 |  | 1662.25 | 935.1013 |  | 0.125151 | 0.15604 |  |
|  | 29361.72 |  |  | 4.899573 |  | 1722.728 | 1816.507 |  | 0.129704 | 0.303119 |  |
|  | 22826.93 |  |  | 3.809117 |  |  | 1670.382 |  |  | 0.278736 |  |
|  | 36225.42 |  |  | 6.044916 |  |  | 3435.071 |  |  | 0.573208 |  |
|  | 30429.24 |  |  | 5.07771 |  |  | 1648.091 |  |  | 0.275016 |  |
|  | 41701.53 |  |  | 6.958711 |  |  | 1644.947 |  |  | 0.274491 |  |
|  | 84296.41 |  |  | 14.06649 |  |  | 2727.766 |  |  | 0.455181 |  |
|  | 10483.94 |  |  | 1.749448 |  |  | 388.8333 |  |  | 0.064884 |  |
|  | 54247.28 |  |  | 9.052212 |  |  | 1591.046 |  |  | 0.265497 |  |
|  | 47518.83 |  |  | 7.92944 |  |  | 3061.814 |  |  | 0.510923 |  |
|  | 45608.37 |  |  | 7.610643 |  |  | 1052.222 |  |  | 0.175584 |  |
|  | 75238 |  |  | 12.55492 |  |  | 2277.862 |  |  | 0.380105 |  |
|  | 97371.8 |  |  | 16.24838 |  |  | 1361.346 |  |  | 0.227167 |  |
|  | 66994.5 |  |  | 11.17933 |  |  | 3669.491 |  |  | 0.612326 |  |
|  | 26338.3 |  |  | 4.395057 |  |  | 1070.247 |  |  | 0.178591 |  |
|  | 13170.43 |  |  | 2.197743 |  |  | 731.2463 |  |  | 0.122023 |  |
|  | 35612.23 |  |  | 5.942593 |  |  | 1253.484 |  |  | 0.209168 |  |
|  | 23070.68 |  |  | 3.84979 |  |  | 1666.363 |  |  | 0.278065 |  |
|  | 34155.59 |  |  | 5.699523 |  |  | 1823.405 |  |  | 0.304271 |  |
|  | 55096.77 |  |  | 9.193966 |  |  | 3438.943 |  |  | 0.573855 |  |
|  | 58317.56 |  |  | 9.731418 |  |  | 2019.851 |  |  | 0.337051 |  |
|  | 18232.2 |  |  | 3.042397 |  |  | 636.7353 |  |  | 0.106252 |  |
|  | 34283.79 |  |  | 5.720916 |  |  | 2672.291 |  |  | 0.445924 |  |
|  | 121892.1 |  |  | 20.34006 |  |  | 2656.301 |  |  | 0.443255 |  |
|  | 65112.6 |  |  | 10.8653 |  |  | 4655.064 |  |  | 0.776788 |  |
|  | 13523.95 |  |  | 2.256734 |  |  | 194.0443 |  |  | 0.03238 |  |
|  | 93694.39 |  |  | 15.63473 |  |  | 2741.484 |  |  | 0.45747 |  |
|  | 25734.17 |  |  | 4.294246 |  |  | 2471.136 |  |  | 0.412357 |  |
|  | 14553.54 |  |  | 2.42854 |  |  | 1852.674 |  |  | 0.309155 |  |
|  | 46869.7 |  |  | 7.82112 |  |  | 4210.18 |  |  | 0.70255 |  |
|  | 55259.76 |  |  | 9.221164 |  |  | 586.1097 |  |  | 0.097804 |  |
|  | 43096.89 |  |  | 7.191553 |  |  | 1193.475 |  |  | 0.199155 |  |
|  | 16576.64 |  |  | 2.766134 |  |  | 2027.336 |  |  | 0.3383 |  |
|  | 35735.65 |  |  | 5.963187 |  |  | 2457.558 |  |  | 0.410091 |  |
|  | 7312.358 |  |  | 1.220209 |  |  | 552.286 |  |  | 0.09216 |  |
|  | 73683.01 |  |  | 12.29544 |  |  | 2325.776 |  |  | 0.388101 |  |
|  | 48686.07 |  |  | 8.124216 |  |  | 4296.51 |  |  | 0.716956 |  |
|  | 56554.85 |  |  | 9.437275 |  |  | 5833.333 |  |  | 0.973405 |  |
|  | 20385.05 |  |  | 3.401641 |  |  | 1464.62 |  |  | 0.2444 |  |
|  | 41531.78 |  |  | 6.930384 |  |  | 2653.749 |  |  | 0.44283 |  |
|  | 45834.48 |  |  | 7.648373 |  |  | 6723.822 |  |  | 1.122 |  |
|  | 26683.24 |  |  | 4.452617 |  |  | 4774.806 |  |  | 0.796769 |  |
|  | 20877.34 |  |  | 3.48379 |  |  | 554.4123 |  |  | 0.092514 |  |
|  | 21239.43 |  |  | 3.544211 |  |  | 343.5073 |  |  | 0.057321 |  |
|  | 8774.863 |  |  | 1.464256 |  |  | 1560.357 |  |  | 0.260376 |  |
|  | 19772.23 |  |  | 3.299381 |  |  | 1169.982 |  |  | 0.195234 |  |
|  | 30674.73 |  |  | 5.118674 |  |  | 1285.437 |  |  | 0.2145 |  |
|  | 19058.36 |  |  | 3.180257 |  |  | 2047.039 |  |  | 0.341588 |  |
|  | 37199.07 |  |  | 6.207388 |  |  | 1881.287 |  |  | 0.313929 |  |
|  | 25522.16 |  |  | 4.258869 |  |  | 1319.348 |  |  | 0.220159 |  |
|  | 6290.761 |  |  | 1.049736 |  |  | 717.0993 |  |  | 0.119662 |  |
|  | 50479.79 |  |  | 8.423534 |  |  | 1767.607 |  |  | 0.29496 |  |
|  | 26182.41 |  |  | 4.369044 |  |  | 2576.7 |  |  | 0.429973 |  |
|  | 23557.14 |  |  | 3.930967 |  |  | 1017.938 |  |  | 0.169863 |  |
|  | 27246.06 |  |  | 4.546534 |  |  | 1679.612 |  |  | 0.280276 |  |
|  | 17671.78 |  |  | 2.94888 |  |  | 578.2507 |  |  | 0.096492 |  |
|  | 37861.99 |  |  | 6.318008 |  |  | 848.52 |  |  | 0.141592 |  |
|  | 135511 |  |  | 22.61264 |  |  | 8986.34 |  |  | 1.499545 |  |
|  | 30745.88 |  |  | 5.130548 |  |  | 2247.085 |  |  | 0.37497 |  |
|  | 63938.33 |  |  | 10.66935 |  |  | 1078.532 |  |  | 0.179974 |  |
|  | 19164.38 |  |  | 3.197949 |  |  | 1927.298 |  |  | 0.321607 |  |
|  | 41180.27 |  |  | 6.871728 |  |  | 2858.368 |  |  | 0.476974 |  |
|  | 41921.58 |  |  | 6.99543 |  |  | 3319.045 |  |  | 0.553847 |  |
|  | 59460.45 |  |  | 9.922131 |  |  | 3018.976 |  |  | 0.503775 |  |
|  | 25128.89 |  |  | 4.193243 |  |  | 951.646 |  |  | 0.158801 |  |
|  | 26845.28 |  |  | 4.479656 |  |  | 1512.06 |  |  | 0.252317 |  |
|  | 38207.02 |  |  | 6.375583 |  |  | 2577.732 |  |  | 0.430145 |  |
|  | 56709.25 |  |  | 9.46304 |  |  | 4094.65 |  |  | 0.683272 |  |
|  | 39805.1 |  |  | 6.642254 |  |  | 2251.943 |  |  | 0.37578 |  |
|  | 66557.95 |  |  | 11.10649 |  |  | 2619.17 |  |  | 0.437059 |  |
|  | 13527.66 |  |  | 2.257353 |  |  | 1333.733 |  |  | 0.222559 |  |
|  | 36726.68 |  |  | 6.12856 |  |  | 2968.107 |  |  | 0.495286 |  |
|  | 46520.06 |  |  | 7.762776 |  |  | 1422.325 |  |  | 0.237343 |  |
|  | 24657.92 |  |  | 4.114653 |  |  | 2473.137 |  |  | 0.412691 |  |
|  | 33835.16 |  |  | 5.646054 |  |  | 2088.192 |  |  | 0.348455 |  |
|  | 106899.6 |  |  | 17.83827 |  |  | 2297.954 |  |  | 0.383458 |  |
|  | 56102.54 |  |  | 9.361798 |  |  | 2803.212 |  |  | 0.46777 |  |
|  | 47631.13 |  |  | 7.948179 |  |  | 652.435 |  |  | 0.108871 |  |

Table S4: Osteon diameter (On.Dm) and Haversian canal diameter (HCa.Dm), both in µm2, are shown in uncorrected and corrected values (against Ct.Wi in µm). HUM = humerus, VERT = vertebra (n=2).

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Uncorrected On.Dm** | | | **Ct.Wi Corrected On.Dm (µm2)** | | | **Uncorrected HCa.Dm** | | | **Ct.Wi Corrected HCa.Dm (µm2)** | | |
| **HUM** | **RIB** | **VERT** | **HUM** | **RIB** | **VERT** | **HUM** | **RIB** | **VERT** | **HUM** | **RIB** | **VERT** |
| 333.0428 | 316.0062 | 340.2365 | 0.025075 | 0.052732 | 0.064721 | 64.57533 | 77.58083 | 55.776 | 0.004862 | 0.012946 | 0.01061 |
| 199.94 | 287.1688 | 231.6717 | 0.015053 | 0.04792 | 0.044069 | 31.03183 | 80.53833 | 36.204 | 0.002336 | 0.013439 | 0.006887 |
| 242.4745 | 179.4625 | 108.7292 | 0.018256 | 0.029947 | 0.020683 | 27.22667 | 40.7325 | 29.61117 | 0.00205 | 0.006797 | 0.005633 |
| 318.2378 | 232.9485 | 222.0588 | 0.02396 | 0.038872 | 0.042241 | 59.66933 | 39.19717 | 52.89333 | 0.004493 | 0.006541 | 0.010062 |
| 315.5647 | 377.7773 | 274.1035 | 0.023759 | 0.063039 | 0.052141 | 64.34683 | 49.25847 | 57.91083 | 0.004845 | 0.00822 | 0.011016 |
| 152.7697 | 202.8295 | 270.5458 | 0.011502 | 0.033846 | 0.051464 | 17.4465 | 47.68617 | 38.50783 | 0.001314 | 0.007957 | 0.007325 |
| 160.7467 | 380.2155 | 173.7408 | 0.012103 | 0.063446 | 0.03305 | 60.53417 | 97.57333 | 50.96167 | 0.004558 | 0.016282 | 0.009694 |
| 166.3343 | 267.8335 | 219.5158 | 0.012523 | 0.044693 | 0.041757 | 40.905 | 71.1905 | 55.71117 | 0.00308 | 0.01188 | 0.010598 |
| 233.6933 | 301.5152 | 352.3537 | 0.017595 | 0.050314 | 0.067026 | 57.6815 | 34.35017 | 50.28317 | 0.004343 | 0.005732 | 0.009565 |
| 200.3917 | 321.0243 | 268.9363 | 0.015087 | 0.053569 | 0.051158 | 44.029 | 45.506 | 66.32117 | 0.003315 | 0.007594 | 0.012616 |
| 215.0775 | 209.5735 | 364.0993 | 0.016193 | 0.034971 | 0.06926 | 55.6725 | 87.43913 | 96.05433 | 0.004192 | 0.014591 | 0.018272 |
| 290.8987 | 154.369 | 193.985 | 0.021902 | 0.025759 | 0.0369 | 52.16917 | 59.39683 | 47.25733 | 0.003928 | 0.009912 | 0.008989 |
| 174.647 | 242.7062 | 317.9788 | 0.013149 | 0.0405 | 0.060487 | 48.665 | 48.395 | 56.6515 | 0.003664 | 0.008076 | 0.010776 |
| 160.9483 | 235.9767 | 372.0132 | 0.012118 | 0.039377 | 0.070766 | 42.5245 | 42.71017 | 97.11767 | 0.003202 | 0.007127 | 0.018474 |
| 243.576 | 209.031 | 317.5775 | 0.018339 | 0.034881 | 0.060411 | 78.87717 | 65.695 | 108.1882 | 0.005939 | 0.010962 | 0.02058 |
| 162.1277 | 226.0465 | 231.3173 | 0.012207 | 0.03772 | 0.044002 | 55.99517 | 43.58933 | 66.51767 | 0.004216 | 0.007274 | 0.012653 |
| 212.2615 | 212.9738 | 252.917 | 0.015981 | 0.035539 | 0.048111 | 61.80133 | 43.73183 | 84.92183 | 0.004653 | 0.007298 | 0.016154 |
| 228.0792 | 250.545 | 273.1105 | 0.017172 | 0.041808 | 0.051952 | 94.4105 | 46.30583 | 67.96383 | 0.007108 | 0.007727 | 0.012928 |
| 185.8135 | 207.9367 | 137.0735 | 0.01399 | 0.034698 | 0.026075 | 53.3585 | 40.32667 | 32.50267 | 0.004017 | 0.006729 | 0.006183 |
| 215.5405 | 266.7237 | 211.8178 | 0.016228 | 0.044508 | 0.040293 | 48.04367 | 58.762 | 56.7825 | 0.003617 | 0.009806 | 0.010801 |
| 274.0085 | 143.7345 | 354.9482 | 0.02063 | 0.023985 | 0.067519 | 59.66417 | 39.19467 | 69.85617 | 0.004492 | 0.00654 | 0.013288 |
| 206.6172 | 272.0488 | 203.0193 | 0.015556 | 0.045397 | 0.038619 | 34.00433 | 36.88667 | 68.26267 | 0.00256 | 0.006155 | 0.012985 |
| 164.9883 | 222.8453 | 386.384 | 0.012422 | 0.037186 | 0.073499 | 54.66633 | 38.73967 | 61.83567 | 0.004116 | 0.006464 | 0.011763 |
| 198.201 | 202.4012 | 264.3833 | 0.014923 | 0.033775 | 0.050292 | 63.6025 | 42.24767 | 53.493 | 0.004789 | 0.00705 | 0.010176 |
| 548.3677 | 201.468 | 236.0017 | 0.041287 | 0.033619 | 0.044893 | 119.8843 | 45.799 | 46.35933 | 0.009026 | 0.007642 | 0.008819 |
| 303.7852 | 224.3373 | 181.2087 | 0.022872 | 0.037435 | 0.03447 | 54.05417 | 45.554 | 61.81467 | 0.00407 | 0.007602 | 0.011759 |
| 364.7082 | 231.4047 | 183.4062 | 0.027459 | 0.038614 | 0.034888 | 68.90917 | 35.05667 | 47.06367 | 0.005188 | 0.00585 | 0.008953 |
| 389.5208 | 271.3775 | 282.5945 | 0.029327 | 0.045285 | 0.053756 | 68.80883 | 62.95517 | 73.09283 | 0.005181 | 0.010505 | 0.013904 |
| 287.6562 | 192.4325 | 342.3212 | 0.021658 | 0.032111 | 0.065118 | 61.08833 | 47.55067 | 55.87317 | 0.004599 | 0.007935 | 0.010628 |
| 312.9953 | 225.6407 | 378.5667 | 0.023565 | 0.037653 | 0.072012 | 83.6495 | 24.09633 | 92.98733 | 0.006298 | 0.004021 | 0.017688 |
| 260.831 | 209.1663 | 226.3138 | 0.019638 | 0.034903 | 0.04305 | 50.42117 | 35.54323 | 69.62133 | 0.003796 | 0.005931 | 0.013244 |
| 374.9372 | 227.0612 | 294.0955 | 0.028229 | 0.03789 | 0.055944 | 32.69183 | 51.36533 | 79.07933 | 0.002461 | 0.008571 | 0.015043 |
| 425.5707 | 226.8637 | 250.2003 | 0.032041 | 0.037857 | 0.047594 | 55.65367 | 42.84283 | 61.5935 | 0.00419 | 0.007149 | 0.011717 |
| 220.2723 | 230.1018 | 315.7285 | 0.016584 | 0.038397 | 0.060059 | 23.61833 | 54.9255 | 61.185 | 0.001778 | 0.009165 | 0.011639 |
| 186.1552 | 179.1663 | 138.6177 | 0.014016 | 0.029897 | 0.026368 | 26.93717 | 35.50133 | 57.70833 | 0.002028 | 0.005924 | 0.010977 |
| 269.8498 | 208.8145 | 179.2878 | 0.020317 | 0.034845 | 0.034105 | 36.71833 | 55.25283 | 27.36217 | 0.002765 | 0.00922 | 0.005205 |
| 301.1155 | 186.6493 | 327.902 | 0.022671 | 0.031146 | 0.062375 | 64.16633 | 45.82367 | 68.5155 | 0.004831 | 0.007647 | 0.013033 |
| 218.812 | 266.2977 | 221.7723 | 0.016474 | 0.044437 | 0.042186 | 50.93933 | 56.23967 | 56.95133 | 0.003835 | 0.009385 | 0.010833 |
| 269.9462 | 249.0842 | 249.5137 | 0.020324 | 0.041565 | 0.047463 | 57.59083 | 54.557 | 120.1887 | 0.004336 | 0.009104 | 0.022863 |
| 278.2303 | 148.6897 | 310.1328 | 0.020948 | 0.024812 | 0.058995 | 86.31733 | 29.402 | 130.642 | 0.006499 | 0.004906 | 0.024851 |
| 193.0293 | 393.1377 | 263.7218 | 0.014533 | 0.065603 | 0.050166 | 64.01567 | 69.63483 | 111.9808 | 0.00482 | 0.01162 | 0.021301 |
| 271.1343 | 160.7463 | 428.1488 | 0.020414 | 0.026824 | 0.081444 | 61.099 | 30.42583 | 59.02733 | 0.0046 | 0.005077 | 0.011228 |
| 374.5502 | 193.6328 | 364.4953 | 0.0282 | 0.032311 | 0.069336 | 96.66183 | 44.758 | 97.5015 | 0.007278 | 0.007469 | 0.018547 |
| 377.3625 | 223.9012 | 344.6685 | 0.028412 | 0.037362 | 0.092335 | 89.25933 | 64.12367 | 46.7825 | 0.00672 | 0.0107 | 0.012533 |
| 322.947 | 270.0875 | 249.3927 | 0.024315 | 0.045069 | 0.066811 | 132.106 | 46.472 | 55.55433 | 0.009946 | 0.007755 | 0.014883 |
| 255.1117 | 166.7438 | 222.764 | 0.019207 | 0.027824 | 0.059677 | 82.722 | 44.70033 | 49.91433 | 0.006228 | 0.007459 | 0.013372 |
| 259.471 | 199.141 | 274.2335 | 0.019536 | 0.033231 | 0.073466 | 62.334 | 45.242 | 59.35783 | 0.004693 | 0.00755 | 0.015902 |
| 302.0353 | 137.2993 | 341.5025 | 0.02274 | 0.022911 | 0.091487 | 54.09667 | 52.29933 | 40.05 | 0.004073 | 0.008727 | 0.010729 |
| 198.7918 | 250.161 | 134.1913 | 0.014967 | 0.041744 | 0.035949 | 33.78367 | 38.048 | 44.20433 | 0.002544 | 0.006349 | 0.011842 |
| 221.62 | 214.8915 | 248.2335 | 0.016686 | 0.035859 | 0.0665 | 44.07083 | 31.0575 | 35.9545 | 0.003318 | 0.005183 | 0.009632 |
| 273.8057 | 368.9898 | 322.0745 | 0.020615 | 0.061573 | 0.086282 | 82.35067 | 43.40833 | 137.0792 | 0.0062 | 0.007244 | 0.036723 |
| 378.9007 | 313.699 | 418.5578 | 0.028527 | 0.052347 | 0.112129 | 78.01133 | 38.673 | 164.0023 | 0.005873 | 0.006453 | 0.043935 |
| 274.066 | 93.6105 | 461.1983 | 0.020634 | 0.015621 | 0.123552 | 76.75017 | 45.03817 | 54.194 | 0.005779 | 0.007515 | 0.014518 |
| 323.9927 | 286.0447 | 158.2357 | 0.024393 | 0.047732 | 0.04239 | 100.6315 | 18.83867 | 34.95583 | 0.007577 | 0.003144 | 0.009364 |
| 198.2635 | 204.6868 | 135.9087 | 0.014927 | 0.034156 | 0.036409 | 76.098 | 14.94133 | 34.96 | 0.005729 | 0.002493 | 0.009366 |
| 192.5683 | 299.7003 | 334.9867 | 0.014498 | 0.050011 | 0.089741 | 58.44733 | 51.344 | 89.38633 | 0.004401 | 0.008568 | 0.023946 |
| 198.2725 | 198.9432 | 232.1713 | 0.014928 | 0.033198 | 0.062197 | 47.29467 | 32.9305 | 73.51283 | 0.003561 | 0.005495 | 0.019694 |
| 211.7115 | 320.2788 | 202.0533 | 0.01594 | 0.053445 | 0.054129 | 71.50233 | 47.57267 | 72.78517 | 0.005383 | 0.007938 | 0.019499 |
| 163.7368 | 155.0095 | 281.3322 | 0.012328 | 0.025866 | 0.075367 | 49.23083 | 34.13033 | 41.75517 | 0.003707 | 0.005695 | 0.011186 |
| 182.941 | 234.3082 | 223.8867 | 0.013774 | 0.039099 | 0.059978 | 92.868 | 39.79133 | 25.62867 | 0.006992 | 0.00664 | 0.006866 |
| 219.3438 | 219.5468 | 216.4948 | 0.016514 | 0.036636 | 0.057998 | 109.462 | 22.4835 | 63.405 | 0.008241 | 0.003752 | 0.016986 |
| 425.7598 | 147.5423 | 339.2707 | 0.032055 | 0.02462 | 0.090889 | 65.98633 | 40.645 | 43.6405 | 0.004968 | 0.006782 | 0.011691 |
| 247.7462 | 202.4338 | 185.872 | 0.018653 | 0.03378 | 0.049794 | 22.04683 | 58.33683 | 37.55633 | 0.00166 | 0.009735 | 0.010061 |
| 150.9523 | 169.3537 | 281.4487 | 0.011365 | 0.02826 | 0.075398 | 29.09983 | 37.373 | 48.27867 | 0.002191 | 0.006236 | 0.012934 |
| 134.254 | 168.7382 | 296.727 | 0.010108 | 0.028157 | 0.079491 | 34.69433 | 48.03833 | 68.427 | 0.002612 | 0.008016 | 0.018331 |
| 267.6247 | 124.2153 | 263.731 | 0.020149 | 0.020728 | 0.070652 | 43.9895 | 29.597 | 45.05 | 0.003312 | 0.004939 | 0.012069 |
| 171.6057 | 195.4648 | 238.4122 | 0.01292 | 0.032617 | 0.063869 | 30.635 | 39.36833 | 53.40383 | 0.002307 | 0.006569 | 0.014307 |
| 396.5742 | 253.7338 | 416.6173 | 0.029858 | 0.04234 | 0.111609 | 60.54783 | 20.4075 | 290.0617 | 0.004559 | 0.003405 | 0.077706 |
| 270.7635 | 270.4662 | 252.2763 | 0.020386 | 0.045133 | 0.067583 | 56.81867 | 49.572 | 52.82033 | 0.004278 | 0.008272 | 0.01415 |
| 285.472 | 119.5593 | 420.9273 | 0.021493 | 0.019951 | 0.112764 | 72.33017 | 31.32867 | 58.578 | 0.005446 | 0.005228 | 0.015693 |
| 201.5053 | 195.095 | 494.1315 | 0.015171 | 0.032555 | 0.132375 | 32.105 | 68.2645 | 87.154 | 0.002417 | 0.011391 | 0.023348 |
| 136.1538 | 146.6838 | 231.376 | 0.010251 | 0.024477 | 0.061984 | 45.56 | 34.33933 | 72.6105 | 0.00343 | 0.00573 | 0.019452 |
|  | 144.5328 | 214.6493 |  | 0.024118 | 0.057503 |  | 27.58017 | 74.68567 |  | 0.004602 | 0.020008 |
|  | 117.9985 | 305.0477 |  | 0.01969 | 0.081721 |  | 40.79533 | 60.87267 |  | 0.006807 | 0.016307 |
|  | 129.4758 | 210.0803 |  | 0.021606 | 0.056279 |  | 56.143 | 76.25033 |  | 0.009369 | 0.020427 |
|  | 258.0858 | 345.2778 |  | 0.043067 | 0.092498 |  | 26.915 | 118.7383 |  | 0.004491 | 0.031809 |
|  | 132.9303 | 412.1667 |  | 0.022182 | 0.110417 |  | 42.37983 | 124.364 |  | 0.007072 | 0.033316 |
|  | 132.4968 | 390.5462 |  | 0.02211 | 0.104625 |  | 38.07283 | 35.0285 |  | 0.006353 | 0.009384 |
|  | 286.6485 | 268.5258 |  | 0.047833 | 0.071937 |  | 50.34533 | 52.37883 |  | 0.008401 | 0.014032 |
|  | 118.0625 | 347.8227 |  | 0.019701 | 0.09318 |  | 47.0285 | 63.79717 |  | 0.007848 | 0.017091 |
|  | 161.0728 | 358.5367 |  | 0.026878 | 0.09605 |  | 38.66533 | 61.62567 |  | 0.006452 | 0.016509 |
|  | 236.5457 | 264.39 |  | 0.039472 | 0.070829 |  | 48.39367 | 129.5668 |  | 0.008075 | 0.03471 |
|  | 209.1728 | 521.3255 |  | 0.034905 | 0.13966 |  | 50.39517 | 160.4613 |  | 0.008409 | 0.042987 |
|  | 172.7418 |  |  | 0.028825 |  |  | 19.41467 |  |  | 0.00324 |  |
|  | 287.9343 |  |  | 0.048047 |  |  | 37.15117 |  |  | 0.006199 |  |
|  | 202.6133 |  |  | 0.03381 |  |  | 25.17167 |  |  | 0.0042 |  |
|  | 165.3757 |  |  | 0.027596 |  |  | 54.05317 |  |  | 0.00902 |  |
|  | 217.7272 |  |  | 0.036332 |  |  | 49.521 |  |  | 0.008264 |  |
|  | 194.9577 |  |  | 0.032532 |  |  | 47.2995 |  |  | 0.007893 |  |
|  | 180.3725 |  |  | 0.030099 |  |  | 46.12267 |  |  | 0.007696 |  |
|  | 223.091 |  |  | 0.037227 |  |  | 44.423 |  |  | 0.007413 |  |
|  | 205.2693 |  |  | 0.034253 |  |  | 67.229 |  |  | 0.011218 |  |
|  | 241.411 |  |  | 0.040284 |  |  | 48.29567 |  |  | 0.008059 |  |
|  | 347.6353 |  |  | 0.05801 |  |  | 62.113 |  |  | 0.010365 |  |
|  | 115.8987 |  |  | 0.01934 |  |  | 23.53183 |  |  | 0.003927 |  |
|  | 280.002 |  |  | 0.046724 |  |  | 66.86717 |  |  | 0.011158 |  |
|  | 232.3708 |  |  | 0.038776 |  |  | 69.77233 |  |  | 0.011643 |  |
|  | 238.3488 |  |  | 0.039773 |  |  | 42.75467 |  |  | 0.007134 |  |
|  | 323.6458 |  |  | 0.054007 |  |  | 45.43617 |  |  | 0.007582 |  |
|  | 361.4953 |  |  | 0.060323 |  |  | 38.06117 |  |  | 0.006351 |  |
|  | 297.7967 |  |  | 0.049693 |  |  | 58.37717 |  |  | 0.009741 |  |
|  | 192.6972 |  |  | 0.032155 |  |  | 40.33933 |  |  | 0.006731 |  |
|  | 133.266 |  |  | 0.022238 |  |  | 62.65067 |  |  | 0.010454 |  |
|  | 222.929 |  |  | 0.0372 |  |  | 31.40417 |  |  | 0.00524 |  |
|  | 181.678 |  |  | 0.030317 |  |  | 52.4965 |  |  | 0.00876 |  |
|  | 224.653 |  |  | 0.037488 |  |  | 64.262 |  |  | 0.010723 |  |
|  | 275.739 |  |  | 0.046012 |  |  | 51.689 |  |  | 0.008625 |  |
|  | 268.7258 |  |  | 0.044842 |  |  | 47.22867 |  |  | 0.007881 |  |
|  | 167.0997 |  |  | 0.027884 |  |  | 32.96833 |  |  | 0.005501 |  |
|  | 219.5488 |  |  | 0.036636 |  |  | 34.854 |  |  | 0.005816 |  |
|  | 403.28 |  |  | 0.067295 |  |  | 69.01767 |  |  | 0.011517 |  |
|  | 307.4823 |  |  | 0.051309 |  |  | 75.366 |  |  | 0.012576 |  |
|  | 131.7117 |  |  | 0.021979 |  |  | 61.6325 |  |  | 0.010285 |  |
|  | 356.3357 |  |  | 0.059462 |  |  | 62.666 |  |  | 0.010457 |  |
|  | 182.0647 |  |  | 0.030381 |  |  | 15.7285 |  |  | 0.002625 |  |
|  | 132.7562 |  |  | 0.022153 |  |  | 74.536 |  |  | 0.012438 |  |
|  | 240.7058 |  |  | 0.040166 |  |  | 39.51817 |  |  | 0.006594 |  |
|  | 264.8268 |  |  | 0.044192 |  |  | 26.643 |  |  | 0.004446 |  |
|  | 240.8307 |  |  | 0.040187 |  |  | 75.98867 |  |  | 0.01268 |  |
|  | 149.1553 |  |  | 0.024889 |  |  | 55.95767 |  |  | 0.009338 |  |
|  | 206.0683 |  |  | 0.034387 |  |  | 26.30233 |  |  | 0.004389 |  |
|  | 97.85267 |  |  | 0.016329 |  |  | 50.8635 |  |  | 0.008488 |  |
|  | 314.0542 |  |  | 0.052406 |  |  | 49.3305 |  |  | 0.008232 |  |
|  | 264.2908 |  |  | 0.044102 |  |  | 57.62367 |  |  | 0.009616 |  |
|  | 282.6105 |  |  | 0.047159 |  |  | 96.707 |  |  | 0.016137 |  |
|  | 166.9677 |  |  | 0.027862 |  |  | 95.216 |  |  | 0.015889 |  |
|  | 243.5108 |  |  | 0.040635 |  |  | 42.78267 |  |  | 0.007139 |  |
|  | 234.4397 |  |  | 0.039121 |  |  | 79.73183 |  |  | 0.013305 |  |
|  | 182.0992 |  |  | 0.030387 |  |  | 57.3395 |  |  | 0.009568 |  |
|  | 159.8672 |  |  | 0.026677 |  |  | 38.883 |  |  | 0.006488 |  |
|  | 163.0988 |  |  | 0.027216 |  |  | 45.11733 |  |  | 0.007529 |  |
|  | 109.3683 |  |  | 0.01825 |  |  | 51.1585 |  |  | 0.008537 |  |
|  | 159.5745 |  |  | 0.026628 |  |  | 42.96233 |  |  | 0.007169 |  |
|  | 206.2247 |  |  | 0.034413 |  |  | 51.68933 |  |  | 0.008625 |  |
|  | 225.776 |  |  | 0.037675 |  |  | 22.154 |  |  | 0.003697 |  |
|  | 164.7825 |  |  | 0.027497 |  |  | 27.11167 |  |  | 0.004524 |  |
|  | 184.8975 |  |  | 0.030854 |  |  | 59.30483 |  |  | 0.009896 |  |
|  | 93.90267 |  |  | 0.015669 |  |  | 41.42267 |  |  | 0.006912 |  |
|  | 251.064 |  |  | 0.041895 |  |  | 48.5335 |  |  | 0.008099 |  |
|  | 183.6233 |  |  | 0.030641 |  |  | 46.34067 |  |  | 0.007733 |  |
|  | 184.241 |  |  | 0.030744 |  |  | 27.31617 |  |  | 0.004558 |  |
|  | 196.1892 |  |  | 0.032738 |  |  | 35.94267 |  |  | 0.005998 |  |
|  | 143.1293 |  |  | 0.023884 |  |  | 30.86483 |  |  | 0.00515 |  |
|  | 213.6435 |  |  | 0.035651 |  |  | 37.80867 |  |  | 0.006309 |  |
|  | 450.33 |  |  | 0.075146 |  |  | 108.4218 |  |  | 0.018092 |  |
|  | 198.4908 |  |  | 0.033122 |  |  | 59.96383 |  |  | 0.010006 |  |
|  | 290.4032 |  |  | 0.048459 |  |  | 37.38417 |  |  | 0.006238 |  |
|  | 157.1452 |  |  | 0.026223 |  |  | 60.84833 |  |  | 0.010154 |  |
|  | 227.1797 |  |  | 0.037909 |  |  | 47.9965 |  |  | 0.008009 |  |
|  | 242.5222 |  |  | 0.04047 |  |  | 67.19317 |  |  | 0.011212 |  |
|  | 281.3122 |  |  | 0.046942 |  |  | 55.0505 |  |  | 0.009186 |  |
|  | 179.5187 |  |  | 0.029956 |  |  | 68.47117 |  |  | 0.011426 |  |
|  | 186.7668 |  |  | 0.031166 |  |  | 32.475 |  |  | 0.005419 |  |
|  | 240.185 |  |  | 0.04008 |  |  | 44.77 |  |  | 0.007471 |  |
|  | 280.1415 |  |  | 0.046747 |  |  | 58.1145 |  |  | 0.009698 |  |
|  | 232.3108 |  |  | 0.038766 |  |  | 79.55333 |  |  | 0.013275 |  |
|  | 281.034 |  |  | 0.046896 |  |  | 61.98817 |  |  | 0.010344 |  |
|  | 131.3407 |  |  | 0.021917 |  |  | 43.5585 |  |  | 0.007269 |  |
|  | 225.4942 |  |  | 0.037628 |  |  | 55.74533 |  |  | 0.009302 |  |
|  | 232.425 |  |  | 0.038785 |  |  | 54.4645 |  |  | 0.009088 |  |
|  | 183.7015 |  |  | 0.030654 |  |  | 41.84617 |  |  | 0.006983 |  |
|  | 208.3895 |  |  | 0.034774 |  |  | 59.7755 |  |  | 0.009975 |  |
|  | 395.1842 |  |  | 0.065944 |  |  | 61.8955 |  |  | 0.010328 |  |
|  | 287.297 |  |  | 0.047941 |  |  | 30.024 |  |  | 0.00501 |  |
|  | 251.0978 |  |  | 0.041901 |  |  | 52.98033 |  |  | 0.008841 |  |

Table S5: Bone area (B.Ar) in µm2. HUM = humerus, VERT = vertebrae (n=2).

|  |  |  |
| --- | --- | --- |
| **B.Ar (µm2)** | | |
| **HUM** | **RIB** | **VERT** |
| 74065.97 | 57804.08 | 86096.05 |
| 32546.57 | 61422.16 | 40573.01 |
| 41526.4 | 24906.4 | 9926.763 |
| 75911.58 | 37461.24 | 30891.14 |
| 72694.93 | 114086.7 | 53850.74 |
| 21235.16 | 28517.36 | 59796.11 |
| 17026.57 | 97392.64 | 20273.94 |
| 20069.36 | 61107.7 | 36980.01 |
| 36613.1 | 73503.92 | 95287.21 |
| 31250.47 | 80180.06 | 41831.28 |
| 33687.37 | 28236.86 | 100029.7 |
| 55354.76 | 14079.33 | 26048.06 |
| 20769.11 | 43395.36 | 84270.78 |
| 17823.97 | 44836.38 | 98584.19 |
| 36802.07 | 31505.46 | 60621.68 |
| 17957.15 | 33940.65 | 37563.17 |
| 31404.94 | 39830.34 | 41086.7 |
| 30465.68 | 46222.91 | 57086.7 |
| 21358.01 | 35338.82 | 13473.83 |
| 39513.53 | 51896.51 | 34186.27 |
| 54286.25 | 14145.19 | 89260.79 |
| 30700.5 | 52509.54 | 27045.43 |
| 19211.28 | 33202.48 | 107087.5 |
| 27949.46 | 29123.16 | 49108.64 |
| 215092.1 | 27220.68 | 43943.27 |
| 67288.7 | 34872.31 | 21808.77 |
| 95240.24 | 34939.08 | 21856.75 |
| 117582.9 | 54685.1 | 62770.25 |
| 58244.39 | 28929.97 | 92995.3 |
| 50570.65 | 37621.46 | 92826.07 |
| 112582.5 | 32554.39 | 31945.4 |
| 24998.98 | 37848.94 | 60134.79 |
| 35371.91 | 38999.2 | 21862.45 |
| 121685.2 | 39979.42 | 40946.56 |
| 72049.09 | 22542.01 | 71746.29 |
| 53810.23 | 29122.08 | 12488.5 |
| 59605.79 | 23856.11 | 74191.85 |
| 36310.76 | 49149.95 | 30588.98 |
| 53014.82 | 42020.2 | 41480.34 |
| 58725.65 | 17096.66 | 56501.26 |
| 24448.42 | 119119.3 | 43846.71 |
| 53252.4 | 17722.34 | 122359.1 |
| 83337.12 | 24202.37 | 106804.7 |
| 42699.22 | 32114.48 | 87631.66 |
| 82760.36 | 55372.76 | 44829.21 |
| 50340.64 | 18917.45 | 33474.19 |
| 64748.3 | 28353.3 | 59142.42 |
| 32551.61 | 14027.6 | 84100.65 |
| 30336.57 | 44945.26 | 12393.98 |
| 56794.48 | 30282.52 | 48748.57 |
| 93236.67 | 93498.48 | 44344.42 |
| 49154.22 | 75910.6 | 108261.9 |
| 68076.69 | 8132.514 | 154073.2 |
| 23574.11 | 54586.72 | 17512.5 |
| 26687.4 | 29395.21 | 13146.52 |
| 28751.03 | 64619.94 | 78659.02 |
| 30422.3 | 28489.74 | 37842.74 |
| 15235.31 | 64150.68 | 27488.81 |
| 20371.67 | 18203.06 | 59563.75 |
| 28703.88 | 40375.01 | 35012.99 |
| 109938.6 | 32331.54 | 34817.46 |
| 51046.61 | 16559.63 | 81455.74 |
| 16987.5 | 29657.33 | 22593.4 |
| 12095.34 | 19651.69 | 58704 |
| 47468.01 | 17866.89 | 65970.16 |
| 20807.16 | 11043.28 | 52498.99 |
| 108113.4 | 26478.16 | 37442.82 |
| 51415.58 | 45999.78 | 68862.21 |
| 54025.39 | 54438.98 | 45625.45 |
| 31267.94 | 10251.09 | 122320.1 |
| 10814.34 | 29108.52 | 167987.6 |
| 41803.03 | 13460.33 | 43743.67 |
| 61315.97 | 14553.97 | 31864.07 |
| 67970.12 | 9985.679 | 63297.68 |
| 11566.66 | 12587.52 | 30556.35 |
| 44525.86 | 44830.13 | 87656.09 |
| 25619.38 | 12540.95 | 110563.8 |
| 37305.96 | 13545.18 | 119285.9 |
| 114811.5 | 66127.42 | 51529.01 |
| 38415.45 | 10997.29 | 89727.27 |
| 34749.36 | 18522.93 | 98147.21 |
| 107748.6 | 38454.1 | 42658.09 |
| 13655.93 | 35559.84 | 168463.5 |
| 7806.647 | 21865.2 |  |
| 16103.81 | 58446.4 |  |
|  | 31024.85 |  |
|  | 17786.34 |  |
|  | 31538.37 |  |
|  | 27545.21 |  |
|  | 21156.55 |  |
|  | 32790.35 |  |
|  | 28781.15 |  |
|  | 40056.58 |  |
|  | 81568.64 |  |
|  | 10095.1 |  |
|  | 52656.23 |  |
|  | 44457.01 |  |
|  | 44556.15 |  |
|  | 72960.14 |  |
|  | 96010.45 |  |
|  | 63325.01 |  |
|  | 25268.05 |  |
|  | 12439.19 |  |
|  | 34358.75 |  |
|  | 21404.31 |  |
|  | 32332.18 |  |
|  | 51657.82 |  |
|  | 56297.71 |  |
|  | 17595.47 |  |
|  | 31611.5 |  |
|  | 119235.7 |  |
|  | 60457.53 |  |
|  | 13329.9 |  |
|  | 90952.9 |  |
|  | 23263.03 |  |
|  | 12700.86 |  |
|  | 42659.52 |  |
|  | 54673.65 |  |
|  | 41903.41 |  |
|  | 14549.3 |  |
|  | 33278.09 |  |
|  | 6760.072 |  |
|  | 71357.24 |  |
|  | 44389.56 |  |
|  | 50721.52 |  |
|  | 18920.43 |  |
|  | 38878.03 |  |
|  | 39110.65 |  |
|  | 21908.44 |  |
|  | 20322.93 |  |
|  | 20895.92 |  |
|  | 7214.506 |  |
|  | 18602.25 |  |
|  | 29389.29 |  |
|  | 17011.32 |  |
|  | 35317.79 |  |
|  | 24202.82 |  |
|  | 5573.661 |  |
|  | 48712.18 |  |
|  | 23605.71 |  |
|  | 22539.2 |  |
|  | 25566.45 |  |
|  | 17093.53 |  |
|  | 37013.47 |  |
|  | 126524.6 |  |
|  | 28498.8 |  |
|  | 62859.8 |  |
|  | 17237.08 |  |
|  | 38321.9 |  |
|  | 38602.54 |  |
|  | 56441.47 |  |
|  | 24177.24 |  |
|  | 25333.22 |  |
|  | 35629.29 |  |
|  | 52614.6 |  |
|  | 37553.16 |  |
|  | 63938.78 |  |
|  | 12193.93 |  |
|  | 33758.57 |  |
|  | 45097.74 |  |
|  | 22184.78 |  |
|  | 31746.97 |  |
|  | 104601.6 |  |
|  | 53299.32 |  |
|  | 46978.69 |  |

Table S6: Bone area percentage (B.Ar%) and Haversian canal area percentage (HCa.Ar%). HUM = humerus, VERT = vertebrae (n=2).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **B.Ar%** | | | **HCa%** | | |
| **HUM** | **RIB** | **VERT** | **HUM** | **RIB** | **VERT** |
| 96.06043 | 92.12508 | 97.52891 | 3.939569 | 7.874919 | 2.47109 |
| 97.87016 | 92.30587 | 97.36976 | 2.129841 | 7.694135 | 2.630244 |
| 98.54248 | 95.19093 | 94.00308 | 1.45752 | 4.809066 | 5.996919 |
| 97.76128 | 96.77111 | 93.96292 | 2.238716 | 3.228893 | 6.037076 |
| 96.36896 | 98.24134 | 95.37165 | 3.631036 | 1.758655 | 4.628345 |
| 98.96307 | 94.01298 | 98.27161 | 1.03693 | 5.987018 | 1.728391 |
| 84.78696 | 92.84048 | 90.61431 | 15.21304 | 7.159522 | 9.385693 |
| 93.67498 | 93.34323 | 93.90734 | 6.325018 | 6.656767 | 6.092656 |
| 93.17325 | 98.62574 | 97.7726 | 6.826753 | 1.374262 | 2.227403 |
| 95.50741 | 97.93236 | 92.06964 | 4.492593 | 2.067636 | 7.930358 |
| 94.27379 | 82.79596 | 94.76397 | 5.726205 | 17.20404 | 5.236027 |
| 96.45095 | 81.75052 | 93.93821 | 3.549054 | 18.24948 | 6.061794 |
| 91.7642 | 95.74029 | 97.08509 | 8.2358 | 4.259708 | 2.914908 |
| 92.63266 | 96.87548 | 93.71843 | 7.367338 | 3.124517 | 6.281574 |
| 88.99971 | 92.11521 | 86.88203 | 11.00029 | 7.884787 | 13.11797 |
| 87.38181 | 95.93949 | 91.67097 | 12.61819 | 4.06051 | 8.329031 |
| 92.85702 | 96.34833 | 87.49452 | 7.14298 | 3.651671 | 12.50548 |
| 84.44274 | 96.48296 | 94.04684 | 15.55726 | 3.517038 | 5.953161 |
| 91.63368 | 96.67038 | 94.51184 | 8.366324 | 3.329615 | 5.488158 |
| 95.77635 | 95.01178 | 93.52102 | 4.223649 | 4.988221 | 6.478983 |
| 98.04135 | 92.2405 | 96.05152 | 1.95865 | 7.759496 | 3.948482 |
| 97.33689 | 97.83198 | 88.59278 | 2.66311 | 2.168017 | 11.40722 |
| 89.22438 | 96.77086 | 97.2912 | 10.77562 | 3.229144 | 2.708796 |
| 88.34714 | 95.93169 | 95.89334 | 11.65286 | 4.068312 | 4.10666 |
| 96.27628 | 94.40134 | 96.13914 | 3.72372 | 5.598663 | 3.860862 |
| 95.39202 | 95.59464 | 88.45055 | 4.607984 | 4.405356 | 11.54945 |
| 95.99949 | 97.49903 | 93.1554 | 4.000509 | 2.500972 | 6.844597 |
| 97.04395 | 94.68897 | 93.65168 | 2.956046 | 5.311027 | 6.348316 |
| 95.49614 | 94.36834 | 97.30007 | 4.503859 | 5.631663 | 2.69993 |
| 96.37622 | 98.83407 | 93.79501 | 3.623783 | 1.165933 | 6.204994 |
| 99.29028 | 97.09463 | 89.52327 | 0.709717 | 2.905374 | 10.47673 |
| 98.1617 | 94.85955 | 93.07286 | 1.838303 | 5.140455 | 6.927137 |
| 98.75488 | 96.3845 | 97.18313 | 1.245116 | 3.615496 | 2.816867 |
| 98.14046 | 94.44966 | 93.61762 | 1.85954 | 5.550342 | 6.382378 |
| 94.07453 | 95.68862 | 96.27917 | 5.925472 | 4.31138 | 3.720832 |
| 97.90442 | 92.13407 | 82.86624 | 2.095583 | 7.86593 | 17.13376 |
| 94.5294 | 93.75625 | 95.36788 | 5.470597 | 6.243749 | 4.632124 |
| 94.91904 | 95.28207 | 91.1768 | 5.080956 | 4.717928 | 8.823204 |
| 95.27422 | 94.8665 | 80.35241 | 4.725778 | 5.133502 | 19.64759 |
| 91.83144 | 96.39972 | 81.95037 | 8.168561 | 3.600277 | 18.04963 |
| 88.94691 | 97.30284 | 80.75775 | 11.05309 | 2.697162 | 19.24225 |
| 94.31061 | 96.61006 | 97.72285 | 5.689388 | 3.389938 | 2.277147 |
| 94.08389 | 93.945 | 93.77268 | 5.916111 | 6.054997 | 6.227324 |
| 89.61802 | 96.20324 | 97.81837 | 10.38198 | 3.796763 | 2.181634 |
| 85.72105 | 94.653 | 94.97511 | 14.27895 | 5.347005 | 5.024891 |
| 94.56422 | 90.75522 | 94.47049 | 5.435782 | 9.244779 | 5.529514 |
| 96.79485 | 95.34692 | 95.80771 | 3.205153 | 4.653084 | 4.192291 |
| 97.4361 | 94.83804 | 98.32968 | 2.563902 | 5.161965 | 1.67032 |
| 96.07306 | 97.48015 | 89.2403 | 3.926938 | 2.519848 | 10.7597 |
| 92.79731 | 99.15946 | 97.83096 | 7.202694 | 0.840536 | 2.169039 |
| 94.87693 | 98.65716 | 75.70118 | 5.12307 | 1.342843 | 24.29882 |
| 91.47901 | 98.26357 | 83.86761 | 8.520991 | 1.73643 | 16.13239 |
| 89.79723 | 97.87966 | 98.44778 | 10.20277 | 2.120343 | 1.552217 |
| 85.16434 | 96.39759 | 94.42355 | 14.83566 | 3.602413 | 5.576448 |
| 90.48564 | 95.39914 | 93.53251 | 9.514363 | 4.600865 | 6.467489 |
| 94.59602 | 95.34945 | 92.5372 | 5.403982 | 4.65055 | 7.462797 |
| 87.98074 | 96.06861 | 90.06674 | 12.01926 | 3.931392 | 9.933257 |
| 88.03229 | 97.36691 | 95.274 | 11.96771 | 2.633087 | 4.726001 |
| 76.81443 | 96.69701 | 99.2583 | 23.18557 | 3.302991 | 0.741703 |
| 75.73591 | 99.0964 | 89.56047 | 24.26409 | 0.903604 | 10.43953 |
| 97.6122 | 95.38575 | 91.74369 | 2.387801 | 4.614248 | 8.256314 |
| 99.14132 | 94.97903 | 98.27913 | 0.858677 | 5.020973 | 1.720873 |
| 96.53803 | 95.63355 | 94.73413 | 3.461966 | 4.36645 | 5.265872 |
| 92.9311 | 95.4763 | 97.11215 | 7.068901 | 4.523699 | 2.887849 |
| 97.02129 | 90.62671 | 94.81516 | 2.978708 | 9.373289 | 5.184835 |
| 96.055 | 91.29654 | 97.05707 | 3.945004 | 8.703463 | 2.942934 |
| 97.44562 | 96.09129 | 94.61408 | 2.55438 | 3.908707 | 5.385916 |
| 95.1595 | 97.31639 | 50.58212 | 4.840497 | 2.683606 | 49.41788 |
| 93.12693 | 96.04185 | 95.49163 | 6.873068 | 3.958145 | 4.508366 |
| 97.92026 | 94.1635 | 97.81364 | 2.079743 | 5.836502 | 2.186363 |
| 87.70927 | 96.20327 | 96.64744 | 12.29073 | 3.796727 | 3.352559 |
| 96.30491 | 97.95011 | 92.37883 | 3.695086 | 2.049895 | 7.62117 |
| 96.76978 | 88.77233 | 88.50841 | 3.230223 | 11.22767 | 11.49159 |
| 98.18111 | 90.06158 | 95.61872 | 1.818893 | 9.938416 | 4.381284 |
| 86.36709 | 95.16394 | 87.83195 | 13.63291 | 4.836064 | 12.16805 |
| 93.09346 | 92.89089 | 90.02805 | 6.906543 | 7.109114 | 9.971945 |
| 76.06818 | 92.00587 | 90.24982 | 23.93182 | 7.99413 | 9.750181 |
| 91.23809 | 95.3675 | 99.24231 | 8.761907 | 4.632498 | 0.757686 |
| 99.51383 | 97.0157 | 95.78344 | 0.486174 | 2.984299 | 4.216563 |
| 96.86936 | 95.5292 | 96.58883 | 3.130645 | 4.470802 | 3.411169 |
| 92.87748 | 91.61835 | 97.42582 | 7.122523 | 8.381652 | 2.574175 |
| 99.11159 | 95.50144 | 77.92277 | 0.888408 | 4.49856 | 22.07723 |
| 91.68742 | 97.16321 | 89.88149 | 8.312579 | 2.836785 | 10.11851 |
| 75.91495 | 92.46666 |  | 24.08505 | 7.533337 |  |
| 83.64864 | 97.08048 |  | 16.35136 | 2.919521 |  |
|  | 99.07515 |  |  | 0.924853 |  |
|  | 88.4172 |  |  | 11.5828 |  |
|  | 97.12041 |  |  | 2.879586 |  |
|  | 93.81335 |  |  | 6.186651 |  |
|  | 92.68241 |  |  | 7.317592 |  |
|  | 90.51751 |  |  | 9.482487 |  |
|  | 94.58386 |  |  | 5.416143 |  |
|  | 96.05543 |  |  | 3.944573 |  |
|  | 96.76408 |  |  | 3.235922 |  |
|  | 96.29115 |  |  | 3.708849 |  |
|  | 97.06705 |  |  | 2.932952 |  |
|  | 93.55663 |  |  | 6.443371 |  |
|  | 97.69292 |  |  | 2.307081 |  |
|  | 96.97246 |  |  | 3.027541 |  |
|  | 98.60191 |  |  | 1.398091 |  |
|  | 94.5227 |  |  | 5.477302 |  |
|  | 95.93654 |  |  | 4.063462 |  |
|  | 94.44782 |  |  | 5.552181 |  |
|  | 96.48019 |  |  | 3.519814 |  |
|  | 92.77714 |  |  | 7.222862 |  |
|  | 94.66147 |  |  | 5.338527 |  |
|  | 93.75836 |  |  | 6.241643 |  |
|  | 96.53646 |  |  | 3.463538 |  |
|  | 96.50763 |  |  | 3.492366 |  |
|  | 92.20538 |  |  | 7.79462 |  |
|  | 97.82078 |  |  | 2.179224 |  |
|  | 92.85075 |  |  | 7.149253 |  |
|  | 98.56518 |  |  | 1.43482 |  |
|  | 97.07402 |  |  | 2.925985 |  |
|  | 90.39745 |  |  | 9.60255 |  |
|  | 87.26994 |  |  | 12.73006 |  |
|  | 91.01727 |  |  | 8.982734 |  |
|  | 98.93936 |  |  | 1.060645 |  |
|  | 97.23072 |  |  | 2.769284 |  |
|  | 87.76992 |  |  | 12.23008 |  |
|  | 93.12295 |  |  | 6.87705 |  |
|  | 92.44722 |  |  | 7.552775 |  |
|  | 96.84354 |  |  | 3.156462 |  |
|  | 91.17507 |  |  | 8.824928 |  |
|  | 89.68553 |  |  | 10.31447 |  |
|  | 92.81522 |  |  | 7.184778 |  |
|  | 93.61032 |  |  | 6.389684 |  |
|  | 85.33021 |  |  | 14.66979 |  |
|  | 82.1056 |  |  | 17.8944 |  |
|  | 97.34443 |  |  | 2.655569 |  |
|  | 98.38269 |  |  | 1.61731 |  |
|  | 82.21788 |  |  | 17.78212 |  |
|  | 94.0827 |  |  | 5.917296 |  |
|  | 95.80946 |  |  | 4.190541 |  |
|  | 89.2591 |  |  | 10.7409 |  |
|  | 94.94265 |  |  | 5.057349 |  |
|  | 94.83058 |  |  | 5.169422 |  |
|  | 88.60075 |  |  | 11.39925 |  |
|  | 96.49839 |  |  | 3.501613 |  |
|  | 90.15866 |  |  | 9.841342 |  |
|  | 95.67885 |  |  | 4.321146 |  |
|  | 93.83539 |  |  | 6.164607 |  |
|  | 96.72783 |  |  | 3.272169 |  |
|  | 97.75891 |  |  | 2.241087 |  |
|  | 93.36855 |  |  | 6.631448 |  |
|  | 92.69143 |  |  | 7.308572 |  |
|  | 98.31317 |  |  | 1.686832 |  |
|  | 89.94333 |  |  | 10.05667 |  |
|  | 93.05889 |  |  | 6.94111 |  |
|  | 92.08273 |  |  | 7.91727 |  |
|  | 94.92272 |  |  | 5.077284 |  |
|  | 96.21294 |  |  | 3.78706 |  |
|  | 94.3675 |  |  | 5.632497 |  |
|  | 93.25325 |  |  | 6.746751 |  |
|  | 92.77957 |  |  | 7.220427 |  |
|  | 94.34258 |  |  | 5.657424 |  |
|  | 96.06483 |  |  | 3.935172 |  |
|  | 90.1407 |  |  | 9.859303 |  |
|  | 91.91839 |  |  | 8.08161 |  |
|  | 96.94256 |  |  | 3.057444 |  |
|  | 89.97021 |  |  | 10.02979 |  |
|  | 93.82834 |  |  | 6.171662 |  |
|  | 97.85036 |  |  | 2.149638 |  |
|  | 95.00341 |  |  | 4.996587 |  |
|  | 98.63023 |  |  | 1.369766 |  |

Figure S1: Distribution of osteon population density (OPD) values of the fossil individual. Graph on the left (A) shows the uncorrected OPD values, while the right (B) shows Ct.Wi corrected OPD values.

A B



Figure S2: Distribution of osteon area (On.Ar) values (µm2) of the fossil individual. Graph on the left (A) shows the uncorrected On.Ar values, while the right (B) shows Ct.Wi corrected On.Ar values.

A B

Diagram

Description automatically generated Diagram

Description automatically generated

Figure S3: Distribution of Haversian canal area (HCa.Ar) values (µm2) of the fossil individual. X-axis of both graphs do not show vertebrae outliers. Graph on the left (A) shows the uncorrected HCa.Ar values, while the right (B) shows Ct.Wi corrected HCa.Ar values.

A B

Diagram

Description automatically generated A picture containing diagram

Description automatically generated

Figure S4: Distribution of osteon diameter (On.Dm) values (µm) of the fossil individual. Graph on the left (A) shows the uncorrected On.Dm values, while the right (B) shows Ct.Wi corrected On.Dm values.

A B

Diagram

Description automatically generated with medium confidenceDiagram

Description automatically generated

Figure S5: Distribution of Haversian canal diameter (HCa.Dm) values (mm) of the fossil individual. Graph on the left (A) shows the uncorrected HCa.Dm values, while the right (B) shows Ct.Wi corrected HCa.Dm values.

A B

Diagram

Description automatically generatedDiagram

Description automatically generated

Figure S6: Distribution of fossil (black) and modern (red) elephant osteon area (On.Ar) in µm2. Left graph (A) shows values for the humerus, while right graph (B) are rib osteon values.

A B

 

Figure S7: Distribution of fossil (black) and modern (red) elephant Haversian canal area (HCa.Ar) in µm2. Left graph (A) shows values for the humerus, while right graph (B) are rib osteon values.

A B

 

Figure S8: Distribution of fossil (black) and modern (red) elephant osteon diameter (On.Dm) in µm. Left graph (A) shows values for the humerus, while right graph (B) are rib osteon values. X-axis of graph B does not show modern outlier values.

A B

 

Figure S9: Distribution of fossil (black) and modern (red) elephant Haversian canal diameter (HCa.Dm) in µm. Left graph (A) shows values for the humerus, while right graph (B) are rib osteon values.

A B

 

Figure S10: Distribution of B.Ar % and HCa % values of the fossil elephant. Left graph (A) shows values for B.Ar %, while right graph (B) are HCa % values.

A B

 