**Appendix 3 - *Correlations among the cortical bone parameters***

The Ct.Th and the AvgPo.V correlated within the different regions; i.e., a higher Ct.Th and an increased AvgPo.V in the anterior maxilla were associated with a higher Ct.Th and an increased AvgPo.V, respectively, in the posterior maxilla and MSF. Further, within each region the AvgPo.V was associated positively with the Ct.Po and negatively with the Po.Dn; i.e., within the same region a higher AvgPo.V was associated with a higher Ct.Po and a lower Po.Dn. These correlations have been statistically significant except for the correlation of the AvgPo.V with Po.Dn in the MSF. Finally, an increased Ct.Th at the MSF was significantly associated with a lower Po.Dn in the MSF.

Correlations (Pearson’s correlation coefficient) among the cortical bone parameters (i.e., cortical thickness, cortical porosity, average pore volume, and pore density) of the 3 volumes of interest (i.e., anterior and posterior maxilla and maxillary sinus floor).

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Parameters** | | **Ct.Th posterior** | **Ct.Th sinus** | **Ct.Po anterior** | **Ct.Po posterior** | **Ct.Po sinus** | **AvgPo.V anterior** | **AvgPo.V posterior** | **AvgPo.V sinus** | **Po.Dn anterior** | **Po.Dn posterior** | **Po.Dn sinus** |
| **Ct.Th anterior** | *rho*  *p-value* | **0.661**  **0.010** | **0.615**  **0.019** | -0.327  0.253 | -0.239  0.410 | 0.293  0.309 | 0.060  0.839 | -0.296  0.305 | 0.196  0.501 | -0.517  0.058 | 0.068  0.816 | -0.019  0.947 |
| **Ct.Th posterior** | *rho*  *p-value* |  | 0.384  0.175 | -0.372  0.190 | -0.330  0.249 | 0.138  0.637 | -0.084  0.776 | -0.299  0.300 | 0.065  0.825 | -0.377  0.183 | 0.061  0.835 | 0.091  0.758 |
| **Ct.Th sinus** | *rho*  *p-value* |  |  | -0.091  0.756 | -0.402  0.155 | -0.124  0.672 | 0.084  0.775 | -0.392  0.166 | 0.072  0.808 | -0.345  0.226 | 0.190  0.516 | **-0.628**  **0.016** |
| **Ct.Po anterior** | *rho*  *p-value* |  |  |  | 0.259  0.370 | 0.209  0.472 | **0.689**  **0.006** | 0.338  0.237 | 0.272  0.347 | 0.183  0.532 | -0.324  0.258 | -0.129  0.661 |
| **Ct.Po posterior** | *rho*  *p-value* |  |  |  |  | **0.579**  **0.030** | 0.355  0.212 | **0.900**  **< 0.001** | **0.577**  **0.031** | -0.045  0.878 | -0.291  0.312 | -0.242  0.404 |
| **Ct.Po sinus** | *rho*  *p-value* |  |  |  |  |  | 0.483  0.080 | **0.627**  **0.016** | **0.916**  **< 0.001** | -0.325  0.256 | -0.440  0.116 | 0.005  0.988 |
| **AvgPo.V anterior** | *rho*  *p-value* |  |  |  |  |  |  | **0.536**  **0.048** | **0.556**  **0.039** | **-0.565**  **0.035** | **-0.616**  **0.019** | -0.224  0.441 |
| **AvgPo.V posterior** | *rho*  *p-value* |  |  |  |  |  |  |  | **0.676**  **0.008** | -0.199  0.495 | **-0.638**  **0.014** | -0.212  0.467 |
| **AvgPo.V sinus** | *rho*  *p-value* |  |  |  |  |  |  |  |  | -0.352  0.218 | -0.478  0.084 | -0.335  0.242 |
| **Po.Dn anterior** | *rho*  *p-value* |  |  |  |  |  |  |  |  |  | 0.387  0.172 | 0.170  0.560 |
| **Po.Dn posterior** | *rho*  *p-value* |  |  |  |  |  |  |  |  |  |  | -0.062  0.834 |

*Anterior; anterior maxilla; AvgPo.V, average pore volume; Ct.Po, cortical porosity; Ct.Th, cortical thickness; Po.Dn, pore density; posterior, posterior maxilla; sinus, maxillary sinus floor.*