

# QCT Pilot Analysis

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*17 October, 2018*

Table 1a: Correlations of pQCT and QCT measures with cortical area and thickness.

	crt_thk_r33	crt_thk_t38	crt_thk_t66
crt_thk_r33	1	0.7098	0.2778
crt_thk_t38	0.7098	1	0.2923
crt_thk_t66	0.2778	0.2923	1
crt_a_r4	<b>-0.9009</b>	-0.6583	-0.5193
crt_a_r33	0.8673	0.5596	-0.05132
crt_a_t4	-0.7918	<b>-0.8793</b>	-0.2576
crt_a_t38	0.5392	0.843	-0.2297
crt_a_t66	0.4159	0.4338	0.8109
average.cortical.thickness	0.3466	0.5908	<b>0.9217</b>
cortical.area	0.131	0.601	0.7206

	crt_a_r4	crt_a_r33	crt_a_t4
crt_thk_r33	<b>-0.9009</b>	0.8673	-0.7918
crt_thk_t38	-0.6583	0.5596	<b>-0.8793</b>
crt_thk_t66	-0.5193	-0.05132	-0.2576
crt_a_r4	1	-0.5668	0.855
crt_a_r33	-0.5668	1	-0.4966
crt_a_t4	0.855	-0.4966	1
crt_a_t38	-0.2994	0.6401	-0.6505
crt_a_t66	-0.3966	0.3496	-0.1775
average.cortical.thickness	-0.5303	0.04654	-0.4533
cortical.area	-0.2145	-0.01397	-0.2955

	crt_a_t38	crt_a_t66
crt_thk_r33	0.5392	0.4159
crt_thk_t38	0.843	0.4338
crt_thk_t66	-0.2297	0.8109
crt_a_r4	-0.2994	-0.3966
crt_a_r33	0.6401	0.3496
crt_a_t4	-0.6505	-0.1775
crt_a_t38	1	0.116
crt_a_t66	0.116	1
average.cortical.thickness	0.1249	0.831
cortical.area	0.2961	0.7854

	average.cortical.thickness	cortical.area
crt_thk_r33	0.3466	0.131
crt_thk_t38	0.5908	0.601

	average.cortical.thickness	cortical.area
crt_thk_t66	<b>0.9217</b>	0.7206
crt_a_r4	-0.5303	-0.2145
crt_a_r33	0.04654	-0.01397
crt_a_t4	-0.4533	-0.2955
crt_a_t38	0.1249	0.2961
crt_a_t66	0.831	0.7854
average.cortical.thickness	1	<b>0.9064</b>
cortical.area	<b>0.9064</b>	1

Table 1b: P-Values for correlations of pQCT and QCT measures with cortical area and thickness.

	crt_thk_r33	crt_thk_t38	crt_thk_t66
crt_thk_r33	NA	0.1793	0.651
crt_thk_t38	0.1793	NA	0.6331
crt_thk_t66	0.651	0.6331	NA
crt_a_r4	<b>0.03687</b>	0.2271	0.3699
crt_a_r33	0.05684	0.3267	0.9347
crt_a_t4	0.1104	<b>0.04943</b>	0.6757
crt_a_t38	0.3483	0.07287	0.7102
crt_a_t66	0.4861	0.4656	0.09588
average.cortical.thickness	0.5677	0.2941	<b>0.02597</b>
cortical.area	0.8337	0.2837	0.1697

	crt_a_r4	crt_a_r33	crt_a_t4
crt_thk_r33	<b>0.03687</b>	0.05684	0.1104
crt_thk_t38	0.2271	0.3267	<b>0.04943</b>
crt_thk_t66	0.3699	0.9347	0.6757
crt_a_r4	NA	0.3191	0.06482
crt_a_r33	0.3191	NA	0.3947
crt_a_t4	0.06482	0.3947	NA
crt_a_t38	0.6245	0.2447	0.2346
crt_a_t66	0.5086	0.5641	0.7752
average.cortical.thickness	0.3579	0.9408	0.4433
cortical.area	0.729	0.9822	0.6293

	crt_a_t38	crt_a_t66
crt_thk_r33	0.3483	0.4861
crt_thk_t38	0.07287	0.4656
crt_thk_t66	0.7102	0.09588
crt_a_r4	0.6245	0.5086
crt_a_r33	0.2447	0.5641
crt_a_t4	0.2346	0.7752
crt_a_t38	NA	0.8527
crt_a_t66	0.8527	NA
average.cortical.thickness	0.8413	0.08126
cortical.area	0.6286	0.1154

	average.cortical.thickness	cortical.area
crt_thk_r33	0.5677	0.8337
crt_thk_t38	0.2941	0.2837
crt_thk_t66	<b>0.02597</b>	0.1697
crt_a_r4	0.3579	0.729
crt_a_r33	0.9408	0.9822
crt_a_t4	0.4433	0.6293
crt_a_t38	0.8413	0.6286
crt_a_t66	0.08126	0.1154
average.cortical.thickness	NA	<b>0.03391</b>

	average.cortical.thickness	cortical.area
<b>cortical.area</b>	<b>0.03391</b>	NA

Table 2a: Correlations of pQCT and QCT measures cortical vBMD.

	crt_den_t4	crt_den_r33	crt_den_t38
crt_den_t4	1	0.3745	0.4492
crt_den_r33	0.3745	1	<b>0.9426</b>
crt_den_t38	0.4492	<b>0.9426</b>	1
average.cortical.bmd	0.1366	-0.5695	-0.3316
neck.cortical.bmd	-0.8103	-0.1286	-0.2016
troch.cortical.bmd	-0.8763	-0.6109	-0.6059
intertroch.cortical.bmd	-0.128	0.667	0.5089
total.hip.cortical.bmd	-0.5647	0.2674	0.1522

	average.cortical.bmd	neck.cortical.bmd
crt_den_t4	0.1366	-0.8103
crt_den_r33	-0.5695	-0.1286
crt_den_t38	-0.3316	-0.2016
average.cortical.bmd	1	0.05381
neck.cortical.bmd	0.05381	1
troch.cortical.bmd	0.3318	0.8477
intertroch.cortical.bmd	-0.3689	0.5637
total.hip.cortical.bmd	-0.1396	<b>0.9079</b>

	troch.cortical.bmd	intertroch.cortical.bmd
crt_den_t4	-0.8763	-0.128
crt_den_r33	-0.6109	0.667
crt_den_t38	-0.6059	0.5089
average.cortical.bmd	0.3318	-0.3689
neck.cortical.bmd	0.8477	0.5637
troch.cortical.bmd	1	0.04416
intertroch.cortical.bmd	0.04416	1
total.hip.cortical.bmd	0.5488	0.8568

	total.hip.cortical.bmd
crt_den_t4	-0.5647
crt_den_r33	0.2674
crt_den_t38	0.1522
average.cortical.bmd	-0.1396
neck.cortical.bmd	<b>0.9079</b>
troch.cortical.bmd	0.5488
intertroch.cortical.bmd	0.8568
total.hip.cortical.bmd	1

Table 2b: P-values for correlations of pQCT and QCT measures cortical vBMD

	crt_den_t4	crt_den_r33	crt_den_t38
crt_den_t4	NA	0.5346	0.4479
crt_den_r33	0.5346	NA	<b>0.01635</b>
crt_den_t38	0.4479	<b>0.01635</b>	NA
average.cortical.bmd	0.8266	0.3163	0.5857
neck.cortical.bmd	0.09631	0.8367	0.745
troch.cortical.bmd	0.05126	0.2737	0.2788
intertroch.cortical.bmd	0.8375	0.2188	0.3812
total.hip.cortical.bmd	0.3213	0.6636	0.807

	average.cortical.bmd	neck.cortical.bmd
crt_den_t4	0.8266	0.09631
crt_den_r33	0.3163	0.8367
crt_den_t38	0.5857	0.745
average.cortical.bmd	NA	0.9315
neck.cortical.bmd	0.9315	NA
troch.cortical.bmd	0.5854	0.06968
intertroch.cortical.bmd	0.5411	0.3224
total.hip.cortical.bmd	0.8228	<b>0.03308</b>

	troch.cortical.bmd	intertroch.cortical.bmd
crt_den_t4	0.05126	0.8375
crt_den_r33	0.2737	0.2188
crt_den_t38	0.2788	0.3812
average.cortical.bmd	0.5854	0.5411
neck.cortical.bmd	0.06968	0.3224
troch.cortical.bmd	NA	0.9438
intertroch.cortical.bmd	0.9438	NA
total.hip.cortical.bmd	0.3381	0.06364

	total.hip.cortical.bmd
crt_den_t4	0.3213
crt_den_r33	0.6636
crt_den_t38	0.807
average.cortical.bmd	0.8228
neck.cortical.bmd	<b>0.03308</b>
troch.cortical.bmd	0.3381
intertroch.cortical.bmd	0.06364
total.hip.cortical.bmd	NA

Table 3a: Correlations of total density (vBMD) measures for pQCT and QCT.

	tot_den_r4	tot_den_t4	total.bmd
tot_den_r4	1	0.6734	0.46
tot_den_t4	0.6734	1	0.7341
total.bmd	0.46	0.7341	1
l1bmd	-0.2251	0.4714	0.349
l2bmd	-0.3724	0.2535	0.1543
neck.integral.bmd	0.5454	0.7587	<b>0.9922</b>
troch.integral.bmd	0.365	0.8716	0.7031
intertroch.integral.bmd	0.7248	<b>0.9608</b>	0.8633
total.hip.integral.bmd	0.5964	<b>0.9551</b>	<b>0.8975</b>

	l1bmd	l2bmd	neck.integral.bmd
tot_den_r4	-0.2251	-0.3724	0.5454
tot_den_t4	0.4714	0.2535	0.7587
total.bmd	0.349	0.1543	<b>0.9922</b>
l1bmd	1	<b>0.9658</b>	0.258
l2bmd	<b>0.9658</b>	1	0.04963
neck.integral.bmd	0.258	0.04963	1
troch.integral.bmd	0.8132	0.6711	0.6663
intertroch.integral.bmd	0.3214	0.08759	<b>0.8957</b>
total.hip.integral.bmd	0.4607	0.2317	<b>0.9095</b>

	troch.integral.bmd	intertroch.integral.bmd
tot_den_r4	0.365	0.7248
tot_den_t4	0.8716	<b>0.9608</b>
total.bmd	0.7031	0.8633
l1bmd	0.8132	0.3214
l2bmd	0.6711	0.08759
neck.integral.bmd	0.6663	<b>0.8957</b>
troch.integral.bmd	1	0.7895
intertroch.integral.bmd	0.7895	1
total.hip.integral.bmd	0.8544	<b>0.9839</b>

	total.hip.integral.bmd
tot_den_r4	0.5964
tot_den_t4	<b>0.9551</b>
total.bmd	<b>0.8975</b>
l1bmd	0.4607
l2bmd	0.2317
neck.integral.bmd	<b>0.9095</b>
troch.integral.bmd	0.8544
intertroch.integral.bmd	<b>0.9839</b>
total.hip.integral.bmd	1

Table 3b: P-values for correlations of total density (vBMD) measures for pQCT and QCT

	tot_den_r4	tot_den_t4	total.bmd
tot_den_r4	NA	0.2127	0.4357
tot_den_t4	0.2127	NA	0.1578
total.bmd	0.4357	0.1578	NA
l1bmd	0.7158	0.4228	0.5648
l2bmd	0.537	0.6807	0.8043
neck.integral.bmd	0.3417	0.137	<b>0.000832</b>
troch.integral.bmd	0.5458	0.05416	0.1853
intertroch.integral.bmd	0.166	<b>0.009245</b>	0.05939
total.hip.integral.bmd	0.2884	<b>0.01133</b>	<b>0.03878</b>

	l1bmd	l2bmd	neck.integral.bmd
tot_den_r4	0.7158	0.537	0.3417
tot_den_t4	0.4228	0.6807	0.137
total.bmd	0.5648	0.8043	<b>0.000832</b>
l1bmd	NA	<b>0.007538</b>	0.6752
l2bmd	<b>0.007538</b>	NA	0.9368
neck.integral.bmd	0.6752	0.9368	NA
troch.integral.bmd	0.09416	0.2149	0.2194
intertroch.integral.bmd	0.598	0.8886	<b>0.03982</b>
total.hip.integral.bmd	0.4348	0.7077	<b>0.03225</b>

	troch.integral.bmd	intertroch.integral.bmd
tot_den_r4	0.5458	0.166
tot_den_t4	0.05416	<b>0.009245</b>
total.bmd	0.1853	0.05939
l1bmd	0.09416	0.598
l2bmd	0.2149	0.8886
neck.integral.bmd	0.2194	<b>0.03982</b>
troch.integral.bmd	NA	0.1122
intertroch.integral.bmd	0.1122	NA
total.hip.integral.bmd	0.06524	<b>0.002449</b>

	total.hip.integral.bmd
tot_den_r4	0.2884
tot_den_t4	<b>0.01133</b>
total.bmd	<b>0.03878</b>
l1bmd	0.4348
l2bmd	0.7077
neck.integral.bmd	<b>0.03225</b>
troch.integral.bmd	0.06524
intertroch.integral.bmd	<b>0.002449</b>
total.hip.integral.bmd	NA



Figure 1: Correlogram of pQCT and QCT measures with cortical area and thickness.

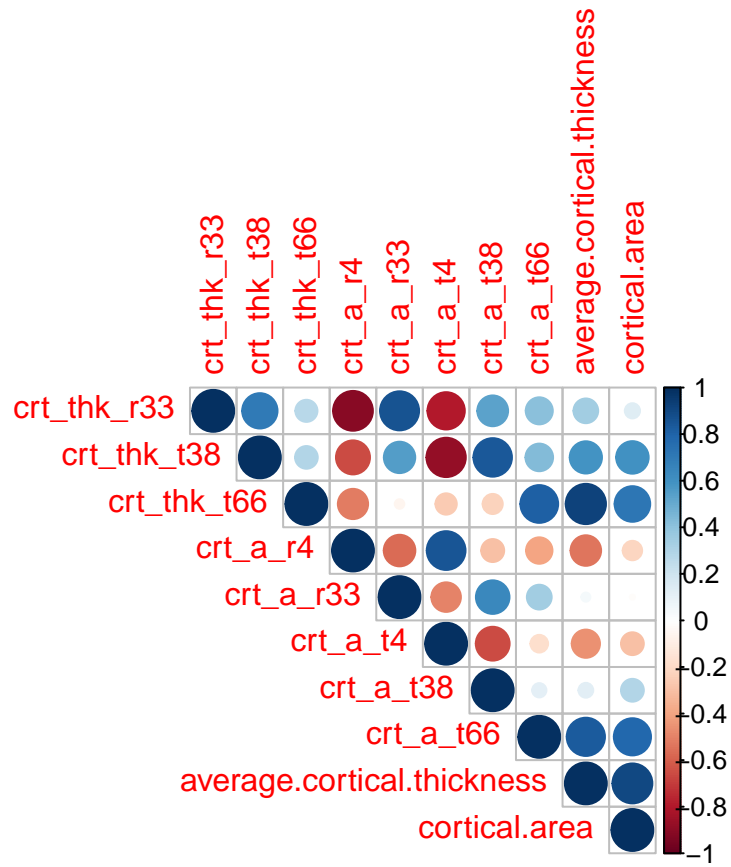


Figure 2: Correlogram of pQCT and QCT measures cortical vBMD.

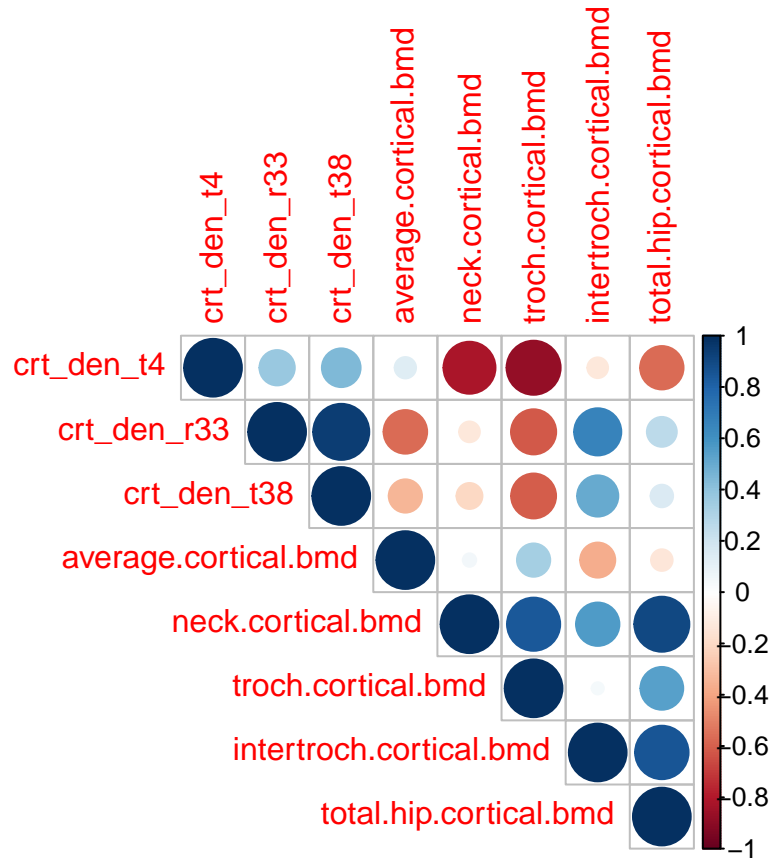


Figure 3: Correlogram of total density (vBMD) measures for pQCT and QCT.

