

## Online Supplementary Materials

**Title:** Concordance of computed tomography regional body composition analysis using fully automated open-source framework versus a reference semi-automated program with manual correction

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**Table S1.** DSC by Sex

	ALL (n=418)	Female (n=231)			Male (n=187)			P-value*
		N	Mean	SD	N	Mean	SD	
Muscle CSA	0.97	231	0.97	0.06	187.00	0.98	0.06	0.00
VAT CSA	0.92	231	0.91	0.19	187.00	0.92	0.15	0.12
SAT CSA	0.93	231	0.94	0.14	187.00	0.93	0.14	0.00
IMAT CSA	0.83	220	0.85	0.15	176.00	0.81	0.13	<.0001
Muscle HU	0.98	213	0.98	0.08	168.00	0.99	0.02	0.69
VAT HU	0.99	213	0.98	0.08	168.00	0.99	0.04	0.01
SAT HU	0.98	213	0.98	0.07	168.00	0.98	0.07	<.0001
IMAT HU	0.98	202	0.98	0.03	157.00	0.98	0.03	0.27

\*Mann-Whitney U Test

**Table S2.** DSC by Race/Ethnic categories

	ALL (n=420)	Black (n=223)			Other (n=28)			White (n=169)			P-value*
		N	Mean	SD	N	Mean	SD	N	Mean	SD	
Muscle CSA	0.97	223	0.98	0.05	28.00	0.94	0.10	169.00	0.97	0.06	<.0001
VAT CSA	0.92	223	0.91	0.18	28.00	0.91	0.20	169.00	0.93	0.16	0.36
SAT CSA	0.93	223	0.93	0.13	28.00	0.89	0.23	169.00	0.94	0.11	0.21
IMAT CSA	0.83	212	0.82	0.14	20.00	0.85	0.18	166.00	0.85	0.15	0.00
Muscle HU	0.98	206	0.99	0.04	23.00	0.93	0.16	154.00	0.98	0.06	0.35
VAT HU	0.99	206	0.99	0.04	23.00	0.96	0.17	154.00	0.99	0.07	0.45
SAT HU	0.98	206	0.98	0.08	23.00	0.98	0.05	154.00	0.98	0.04	0.00
IMAT HU	0.98	195	0.99	0.02	15.00	0.97	0.07	151.00	0.98	0.04	0.95

\*Kruskal-Wallis Test

**Table S3.** DSC by BMI

	ALL (n=418)	Low/Normal (n=127)			Overweight (n=149)			Obese (n=142)			P-value*
		N	Mean	SD	N	Mean	SD	N	Mean	SD	
Muscle CSA	0.97	127	0.97	0.04	149.00	0.98	0.06	142.00	0.97	0.07	0.00
VAT CSA	0.92	127	0.90	0.17	149.00	0.93	0.17	142.00	0.92	0.18	0.00
SAT CSA	0.93	127	0.91	0.18	149.00	0.95	0.09	142.00	0.94	0.13	0.03
IMAT CSA	0.83	121	0.84	0.15	143.00	0.83	0.13	132.00	0.82	0.16	0.29
Muscle HU	0.98	116	0.99	0.06	141.00	0.98	0.07	124.00	0.98	0.05	0.43
VAT HU	0.99	116	0.98	0.09	141.00	0.99	0.07	124.00	0.99	0.02	0.00
SAT HU	0.98	116	0.97	0.11	141.00	0.98	0.03	124.00	0.99	0.02	0.00
IMAT HU	0.98	110	0.98	0.03	135.00	0.98	0.03	114.00	0.98	0.04	0.76

\*Kruskal-Wallis Test

**Table S4.** Bland – Altman and proportional bias statistics for females

Comparisons		N	Bland-Altman						
Test Method	Reference Method		Bland-Altman plot (difference between AutoMATiCA and human-based technique)				Proportional bias		
			mean	SD	lower	upper	Pearson correlation coefficient	P-value	
Muscle CSA	SM	231	5.68	14.95	-23.63	35.00	0.09	0.17	No Proportional bias
VAT CSA	VAT	231	5.62	55.70	-103.55	114.80	0.11	0.10	No Proportional bias
SAT CSA	SAT	231	15.97	63.01	-107.53	139.46	0.02	0.71	No Proportional bias
IMAT CSA	IMAT	220	-2.92	8.32	-19.23	13.40	-0.34	<.0001	Proportional bias
Muscle HU	SMHU	213	-1.30	16.49	-33.61	31.01	-0.67	<.0001	Proportional bias
VAT HU	VATHU	213	-0.69	9.44	-19.19	17.80	-0.56	<.0001	Proportional bias
SAT HU	SATHU	213	0.22	6.52	-12.56	13.00	-0.43	<.0001	Proportional bias
IMAT HU	IMATHU	202	0.37	4.99	-9.41	10.15	-0.25	0.00	Proportional bias

**Table S5.** Bland – Altman and proportional bias statistics for males

Comparisons		N	Bland-Altman						
Test Method	Reference Method		Bland-Altman plot (difference between AutoMATiCA and human-based technique)				Proportional bias		
			Mean	SD	lower	upper	Pearson correlation coefficient	P-value	
Muscle CSA	SM	187	1.58	19.64	-36.92	40.08	-0.14	0.05	No Proportional bias
VAT CSA	VAT	187	2.63	27.80	-51.86	57.13	0.03	0.71	No Proportional bias
SAT CSA	SAT	187	4.61	44.39	-82.39	91.60	-0.04	0.56	No Proportional bias
IMAT CSA	IMAT	176	-4.61	5.69	-15.76	6.54	-0.57	<.0001	Proportional bias
Muscle HU	SMHU	168	0.20	5.31	-10.22	10.61	-0.26	0.00	Proportional bias
VAT HU	VATHU	168	-0.31	6.23	-12.53	11.90	-0.42	<.0001	Proportional bias
SAT HU	SATHU	168	0.76	7.56	-14.07	15.58	-0.56	<.0001	Proportional bias
IMAT HU	IMATHU	157	0.15	6.83	-13.23	13.54	-0.45	<.0001	Proportional bias

**Table S6.** Bland–Altman and proportional bias statistics for Black race/ethnic category

Comparisons		N	Bland-Altman						
Test Method	Reference Method		Bland-Altman plot (difference between AutoMATiCA and human-based technique)				Proportional bias		
			Mean	SD	lower	upper	Pearson correlation coefficient	P-value	
Muscle CSA	SM	223	2.92	13.56	-23.67	29.50	-0.06	0.38	No Proportional bias
VAT CSA	VAT	223	4.23	51.11	-95.95	104.40	0.00	0.96	No Proportional bias
SAT CSA	SAT	223	11.35	52.14	-90.84	113.54	0.05	0.47	No Proportional bias
IMAT CSA	IMAT	212	-3.96	7.01	-17.71	9.79	-0.36	<.0001	Proportional bias
Muscle HU	SMHU	206	-0.13	1.66	-3.39	3.13	-0.32	<.0001	Proportional bias
VAT HU	VATHU	206	-0.68	4.74	-9.97	8.61	-0.47	<.0001	Proportional bias
SAT HU	SATHU	206	0.04	6.62	-12.94	13.03	-0.57	<.0001	Proportional bias
IMAT HU	IMATHU	195	-0.33	2.66	-5.55	4.88	0.00	0.98	No Proportional bias

**Table S7.** Bland–Altman and proportional bias statistics for White race/ethnic category

Comparisons		N	Bland-Altman						
Test Method	Reference Method		Bland-Altman plot (difference between AutoMATiCA and human-based technique)				Proportional bias		
			Mean	SD	lower	upper	Pearson correlation coefficient	P-value	
Muscle CSA	SM	169	4.60	18.25	-31.16	40.36	-0.18	0.02	Proportional bias
VAT CSA	VAT	169	4.16	36.49	-67.37	75.69	0.15	0.05	No Proportional bias
SAT CSA	SAT	169	7.89	48.12	-86.43	102.21	0.08	0.29	No Proportional bias
IMAT CSA	IMAT	166	-3.38	7.56	-18.20	11.44	-0.49	<.0001	Proportional bias
Muscle HU	SMHU	154	-0.04	10.40	-20.42	20.34	-0.41	<.0001	Proportional bias
VAT HU	VATHU	154	0.16	9.01	-17.51	17.83	-0.46	<.0001	Proportional bias
SAT HU	SATHU	154	1.26	7.13	-12.72	15.25	-0.40	<.0001	Proportional bias
IMAT HU	IMATHU	151	0.75	7.73	-14.39	15.89	-0.52	<.0001	Proportional bias

**Table S8.** Bland–Altman and proportional bias statistics for Others race/ethnic category

Comparisons		N	Bland-Altman						
Test Method	Reference Method		Bland-Altman plot (difference between AutoMATiCA and human-based technique)				Proportional bias		
			mean	SD	lower	upper	Pearson correlation coefficient	P-value	
Muscle CSA	SM	169	4.60	18.25	-31.16	40.36	-0.18	0.02	Proportional bias
VAT CSA	VAT	169	4.16	36.49	-67.37	75.69	0.15	0.05	No Proportional bias
SAT CSA	SAT	169	7.89	48.12	-86.43	102.21	0.08	0.29	No Proportional bias
IMAT CSA	IMAT	166	-3.38	7.56	-18.20	11.44	-0.49	<.0001	Proportional bias
Muscle HU	SMHU	154	-0.04	10.40	-20.42	20.34	-0.41	<.0001	Proportional bias
VAT HU	VATHU	154	0.16	9.01	-17.51	17.83	-0.46	<.0001	Proportional bias
SAT HU	SATHU	154	1.26	7.13	-12.72	15.25	-0.40	<.0001	Proportional bias
IMAT HU	IMATHU	151	0.75	7.73	-14.39	15.89	-0.52	<.0001	Proportional bias