Supplemental Digital Content 1. Comparison statistics between criterion 5C and predicted percent body fat in the cross-validation cohort by sex

							Limits of agreement			
		Mean ± *SD*	ICC	*d*	SEE	Subjective rating of SEE	Bias ± 1.96 *SD*	Lower	Upper	Trend
Females	Criterion 5C	26.2 ± 6.8								
(*n* = 32)	$\%BF_{New}$	27.5 ± 5.3	0.83†	0.21	2.88	Excellent/Very good	1.3 ± 8.7	-7.4	10.0	-0.37‡
	$\%BF_{Evans}$	28.2 ± 6.9	0.81†	0.26	3.69	Good/Fairly good	1.8 ± 10.2	-8.4	12.0	0.02
	$\%BF_{Peterson}$	29.9 ± 5.2	0.82†	0.62	3.48	Good	3.7 ± 9.5	-5.8	13.3	-0.36
	$\%BF_{JP}$	27.1 ± 7.6	0.83†	0.13	3.74	Good	0.9 ± 10.6	-9.7	11.5	0.17
	$\%BF_{BAI}$	28.5 ± 4.0	0.69†	0.43	4.09	Fairly good	2.4 ± 10.3	-8.0	12.7	-0.59‡
	$\%BF_{RFM}$	33.8 ± 6.2	0.82†	1.18	3.24	Very good	7.7 ± 9.3	-1.7	17.0	-0.13
	$\%BF_{BMI}$	28.1 ± 5.7	0.79†	0.31	3.89	Good/Fairly good	1.9 ± 10.2	-8.3	12.2	-0.22
Males	Criterion 5C	18.3 ± 6.6								
(*n* = 46)	$\%BF_{New}$	18.1 ± 5.1	0.86†	-0.03	2.80	Excellent/Very good	-0.2 ± 8.4	-8.6	8.3	-0.37‡
	$\%BF_{Evans}$	16.9 ± 6.6	0.82†	-0.20	3.94	Fairly good	-1.3 ± 10.5	-11.8	9.1	0.00
	$\%BF_{Peterson}$	22.7 ± 6.2	0.82†	0.70	3.41	Very good/Good	4.5 ± 9.5	-5.1	14.0	-0.10
	$\%BF_{JP}$	15.9 ± 7.5	0.80†	-0.33	4.27	Fairly good/Fair	-2.3 ± 11.3	-13.6	9.0	0.17
	$\%BF_{BAI}$	25.7 ± 3.4	0.63†	1.42	4.50	Fair	7.5 ± 10.7	-3.2	18.2	-0.66‡
	$\%BF_{RFM}$	23.9 ± 4.6	0.81†	1.00	3.42	Very good/Good	5.7 ± 9.3	-3.7	15.0	-0.47‡
	$\%BF_{BMI}$	22.6 ± 5.0	0.78†	0.74	3.76	Good	4.3 ± 9.8	-5.5	14.1	-0.36‡

Abbreviations: 5C, five-compartment model; ICC, intraclass correlation coefficient; *d*, Cohen's standardized effect size; SEE, standard error of the estimate; TE, total error; bias, mean difference between predicted and criterion body fat percentage; lower, lower limit (bias – 1.96 *SD*); upper, upper limit (bias + 1.96 *SD*); trend, correlation (expressed as Pearson's *r*) between the difference and average. Subjective rating of SEE is from Lohman (39).

†significant correlation ($p < 0.001$)

‡trend is significant ($p < 0.01$)