

## Supplementary Materials

### Cystatin C serum levels in healthy children are related to age, gender and pubertal stage

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**Online Resource 1.** Percentiles of sCrea and its effector variable age for 0- to 18-year-old-children of the LIFE Child cohort.

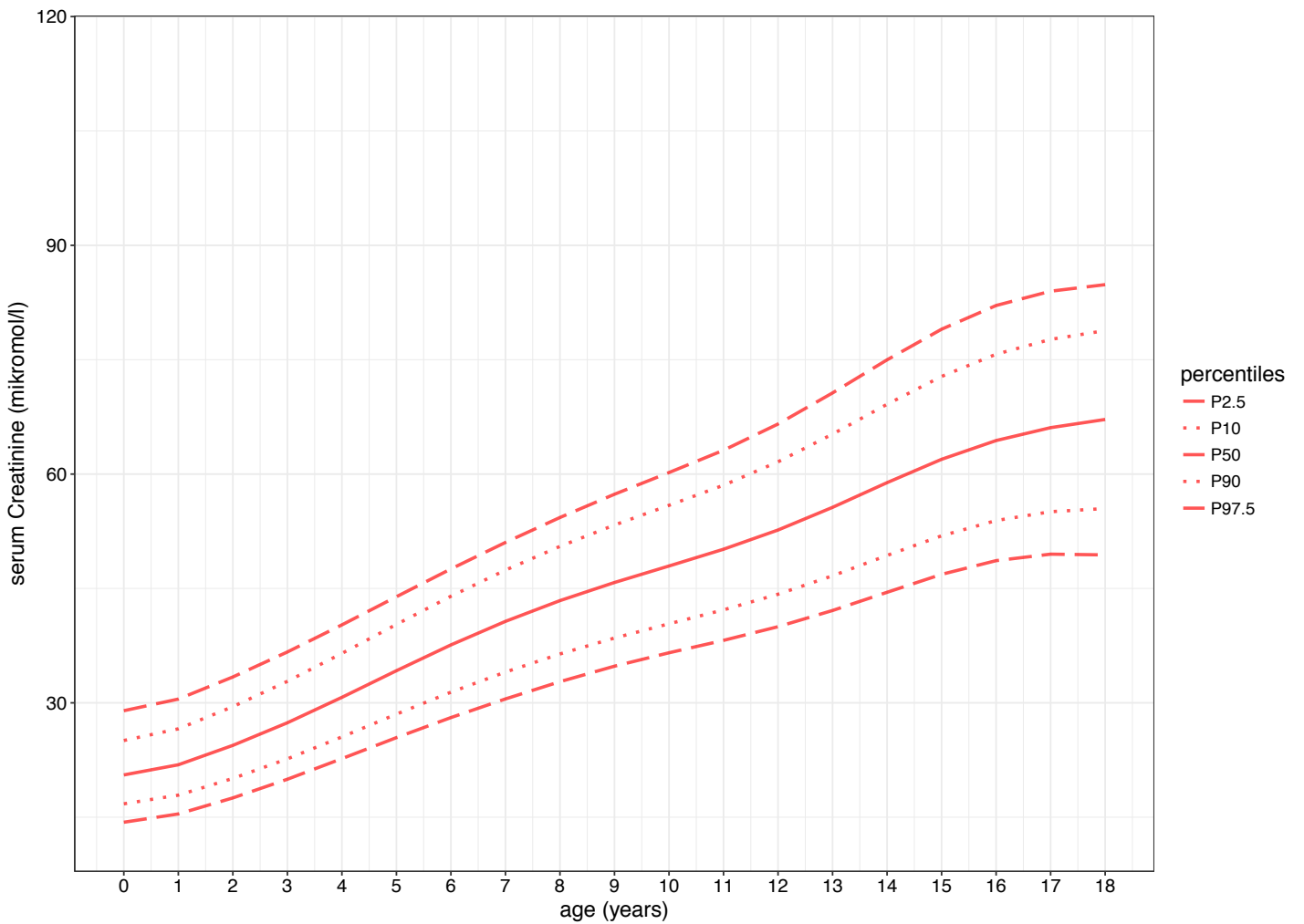
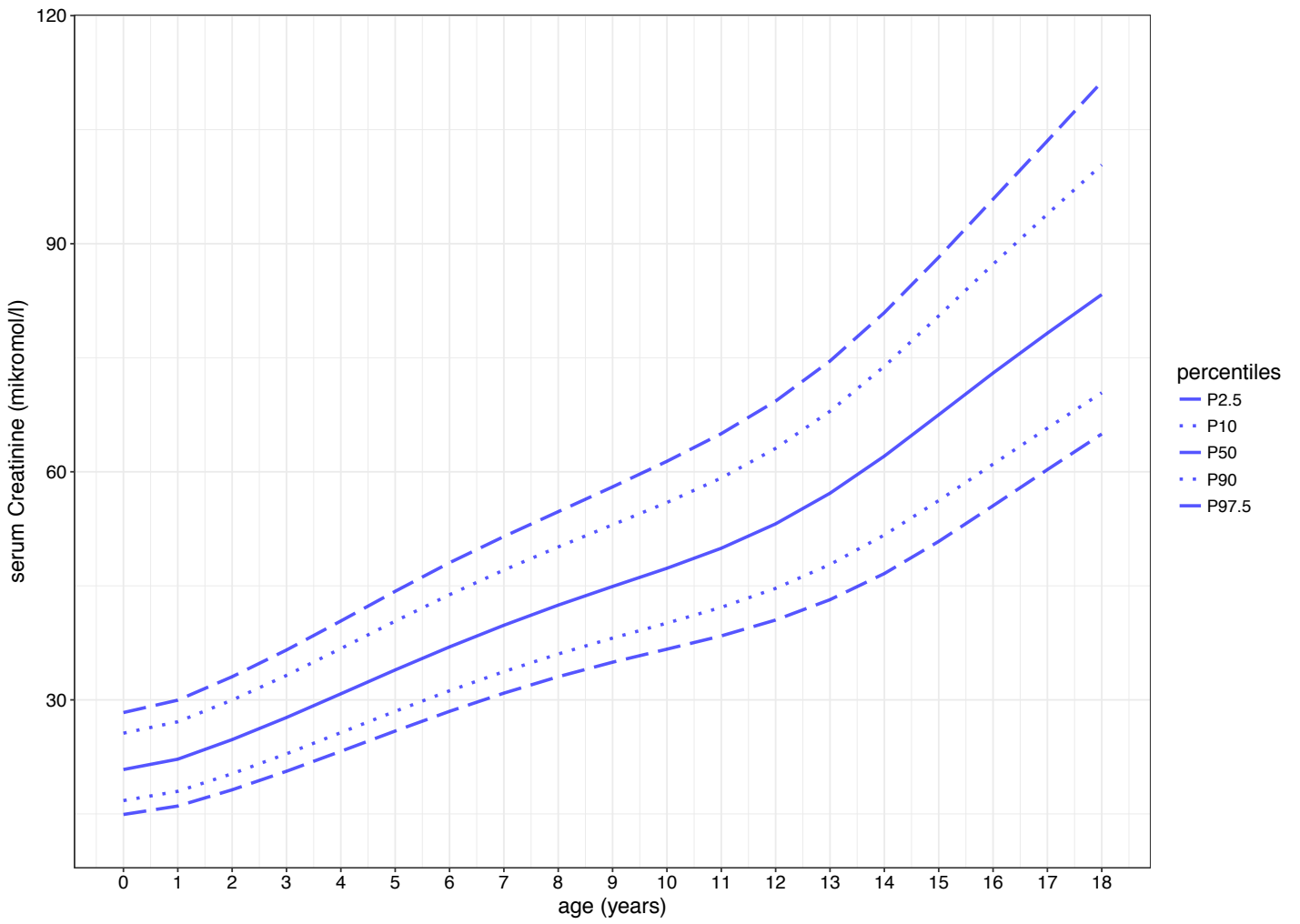
**Online Resource 2.** Passing-Bablok Regression Cystatin C 2nd generation against 1st Generation.

**Online Resource 3.** Bland-Altman-Blot absolute deviation.

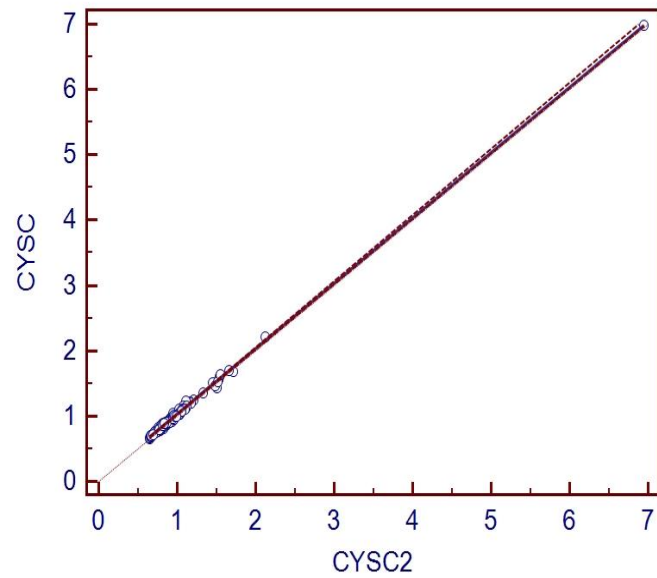
**Online Resource 4.** Percentiles of sCrea ( $\mu\text{mol/l}$ ) as a function of age based on the LIFE Child cohort with 0- to 18-year-old children.

**Online Resource 1.** Percentiles of sCrea and its effector variable age for 0- to 18-year-old-children of the LIFE Child cohort.

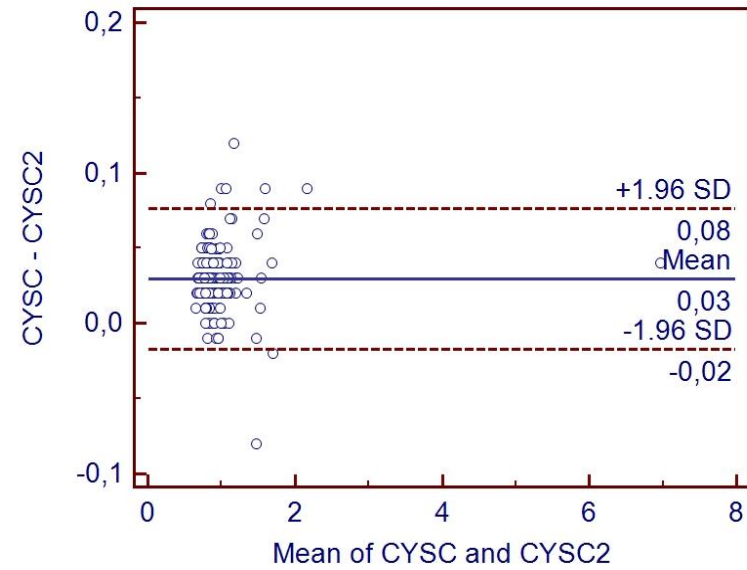
Blue = male, red = female participants. Solid line = 50th percentile, dotted line = 10th and 90th percentile, dashed line = 2.5th and 97.5th percentile. P = Percentile. The percentiles were calculated using the ChildSDS package<sup>36</sup>. Note that at the age of 12 years, the curves diverge and show different patterns for males and females thereafter. n = 6 217 observations in 2 803 participants.



**Online Resource 2.** Passing-Bablok Regression Cystatin C 2nd generation against 1st Generation



**Online Resource 3.** Bland-Altman-Blot absolute deviation



Comparative measurement of 143 serum samples between Tina-quant® Cystatin C and Tina-quant® Cystatin C 2nd generation. Using MedCalc (MedCalc Software bvba, Belgium) Passing-Bablok-regression (2) (Online Resource 2) and Bland-Altman-Blot (Online Resource 3) were calculated. Both show a good conformity between the first and the second generation.

**Online Resource 4.** Percentiles of *sCrea* ( $\mu\text{mol/l}$ ) as a function of age based on the LIFE Child cohort with 0- to 18-year-old children.

age	P2.5 M	P2.5 F	P10 M	P10 F	P50 M	P50 F	P90 M	P90 F	P97.5 M	P97.5 F	Mu M	Mu F	Sigma M	Sigma F	Nu M	Nu F	Tau M	Tau F
0	14.92	14.34	16.75	16.76	20.84	20.54	25.62	25.06	28.33	28.97	20.84	20.54	0.16	0.17	0.26	0.13	2.14	1.21
1	16.04	15.43	17.97	17.89	22.20	21.88	27.12	26.59	29.96	30.49	22.20	21.88	0.16	0.16	0.26	0.15	2.08	1.28
2	18.17	17.53	20.29	20.09	24.77	24.42	29.97	29.50	33.05	33.39	24.77	24.42	0.15	0.16	0.24	0.18	1.99	1.40
3	20.61	19.98	22.90	22.65	27.68	27.39	33.22	32.82	36.56	36.67	27.68	27.39	0.15	0.15	0.20	0.25	1.94	1.52
4	23.24	22.68	25.69	25.53	30.80	30.72	36.75	36.48	40.38	40.22	30.80	30.72	0.14	0.14	0.14	0.41	1.92	1.66
5	25.90	25.44	28.49	28.52	33.94	34.21	40.35	40.28	44.28	43.91	33.94	34.21	0.14	0.14	0.06	0.63	1.93	1.78
6	28.49	28.07	31.20	31.40	36.97	37.60	43.83	43.98	48.04	47.56	36.97	37.60	0.13	0.13	-0.03	0.83	1.96	1.89
7	30.89	30.51	33.72	34.04	39.81	40.68	47.07	47.41	51.48	51.03	39.81	40.68	0.13	0.13	-0.05	0.93	1.99	1.96
8	33.05	32.78	36.03	36.41	42.46	43.41	50.11	50.52	54.76	54.31	42.46	43.41	0.13	0.13	-0.06	0.90	1.99	2.02
9	34.95	34.81	38.13	38.50	44.91	45.78	53.03	53.32	58.02	57.35	44.91	45.78	0.13	0.13	-0.08	0.79	1.96	2.04
10	36.67	36.56	40.10	40.37	47.31	47.94	55.96	55.90	61.38	60.20	47.31	47.94	0.13	0.13	-0.08	0.70	1.91	2.04
11	38.41	38.19	42.17	42.19	49.95	50.15	59.18	58.54	65.02	63.12	49.95	50.15	0.13	0.13	-0.02	0.67	1.87	2.02
12	40.50	39.99	44.67	44.24	53.15	52.67	63.08	61.61	69.30	66.57	53.15	52.67	0.14	0.13	0.09	0.64	1.86	1.99
13	43.18	42.11	47.80	46.66	57.18	55.64	67.96	65.24	74.57	70.64	57.18	55.64	0.14	0.13	0.21	0.60	1.88	1.96
14	46.61	44.50	51.69	49.33	62.06	58.88	73.87	69.15	80.94	74.98	62.06	58.88	0.14	0.13	0.27	0.56	1.92	1.95
15	50.84	46.85	56.21	51.90	67.50	61.94	80.51	72.81	88.21	79.00	67.50	61.94	0.14	0.13	0.21	0.53	1.98	1.95
16	55.53	48.65	61.01	53.91	72.99	64.40	87.29	75.72	95.85	82.11	72.99	64.40	0.14	0.13	0.01	0.55	2.03	1.97
17	60.29	49.50	65.74	55.07	78.24	66.09	93.89	77.66	103.53	83.98	78.24	66.09	0.14	0.13	-0.27	0.71	2.08	2.01

The 2.5th, 10th, 90th, and 97.5th percentiles as well as the median are given. Blue = male, red = female participants. Abbreviations: P = percentile, M = male, F = female, Mu = location parameter,

Sigma = spread Parameter, Nu = skewness parameter, Tau = kurtosis parameter. All values were calculated applying generalized additive models for location, shape and scale as implemented in gamlss

<sup>35</sup> and childstds <sup>36</sup>. n = 6 217 observations in 2 803 participants. Note, that at the age of 12 years, *sCrea* values of male adolescents (P50) raise and are higher compared to females up to the age of 18 years.