Table S1: Sample characteristics and Performance of CKD-EPI equation over time by Study

A: MDRD Study

Variable	Baseline		Follow-up (months)											Closeout	Post Close out
	1	2	2	4	8	12	16	20	24	28	32	36	40		
Sample Size	840	830	744	740	713	703	654	533	436	348	246	134	30	619	479
Scr (mg/dl), mean	2.2	2.3	2.3	2.4	2.5	2.7	2.7	2.7	2.8	2.9	3.0	3.1	3.3	2.6	2.8
Measured GFR, mean	33.5	32.5	31.1	30.5	29.8	29.1	28.8	28.3	27.3	27.4	26.3	25.9	25.6	28.6	27.3
Estimated GFR, mean	35.6	34.4	33.4	33.2	31.9	31.0	30.8	29.8	29.1	29.1	28.2	27.4	25.6	31.5	30.0
Mean Error	-2.1	-1.9	-2.3	-2.6	-2.0	-1.9	-2.0	-1.5	-1.8	-1.6	-1.9	-1.5	0.0	-2.8	-2.7
Median Error	-1.5	-1.3	-1.6	-1.9	-1.3	-1.3	-1.4	-0.7	-0.9	-0.8	-1.1	-1.0	0.5	-2.2	-1.8
Mean Absolute Error	5.1	4.7	4.9	4.9	4.7	4.4	4.5	4.2	4.4	4.8	4.4	4.9	3.9	4.8	4.7
Median Absolute Error	3.7	3.5	3.7	3.6	3.3	3.0	3.1	2.9	3.2	3.2	2.8	2.8	2.4	3.4	2.9
IQR of Error	23.3	20.9	21.4	23.1	23.7	23.2	22.4	21.2	19.7	24.7	27.2	24.8	19.5	22.0	19.1
SD of Error	6.7	6.1	6.2	6.3	6.5	6.0	5.8	5.8	5.8	6.8	6.5	7.4	5.5	5.9	5.9
P_{30} (%)	87.3	86.4	83.9	83.4	84.9	84.5	84.1	85.4	84.6	82.5	85.4	80.6	86.7	81.9	83.5

Visit 1 refers to first GFR performed during the baseline phase. For 9 of the 840 participants, this occurred at the second visit. The follow-up month refers to time since randomization. Close out and post close out visits occurred at the end of the follow-up for each subject and modeled according to the follow-up time when they occurred. Error refers to measured GFR minus estimated GFR. Scr, serum creatinine; GFR, glomerular filtration rate. Units for GFR and error are ml/min per 1.73 m^2; IQR, interquartile range, SD, standard deviation, P_{30}, percentage of estimates within 30% of measured GFR

B. AASK

	Baseline	Follow-up (months)												
	1	3	6	12	18	24	30	36	42	48	54	62	66	72
Sample Size	1094	838	861	859	787	736	697	686	561	473	392	315	183	98
Scr (mg/dl), mean	1.8	1.8	1.9	1.9	2.0	2.0	1.9	2.0	1.9	2.0	2.0	2.0	2.1	2.2
Measured GFR, mean	45.6	46.0	46.0	45.7	45.4	45.2	44.7	43.9	45.2	44.8	44.6	43.2	42.3	39.2
Estimated GFR, mean	49.9	49.7	49.4	49.2	49.0	49.0	48.7	47.8	48.6	47.9	47.1	45.6	45.5	42.9
Mean Error	-4.3	-3.7	-3.4	-3.6	-3.6	-3.8	-4.0	-3.8	-3.3	-3.1	-2.5	-2.4	-3.2	-3.7
Median Error	-3.0	-3.0	-3.0	-2.9	-2.8	-2.7	-2.8	-3.2	-2.2	-2.3	-1.5	-2.5	-1.6	-2.7
Mean Absolute Error	8.3	7.9	8.2	8.1	7.4	7.8	8.2	8.0	8.1	8.1	7.3	8.1	7.9	7.2
Median Absolute Error	6.3	6.1	6.3	5.9	5.8	5.4	5.7	5.7	5.5	5.5	5.0	6.1	5.7	6.2
IQR of Error	38.4	34.4	31.6	41.6	33.4	35.7	38.2	38.2	39.0	41.7	32.0	36.1	39.2	42.3
SD of Error	10.4	9.9	10.4	10.5	9.3	10.4	10.8	10.3	11.5	11.3	10.1	11.1	10.5	9.0
P_{30} (%)	82.4	79.6	82.1	81.8	82.8	81.1	79.6	79.0	81.5	81.2	81.9	78.7	75.4	75.5

Numbers here are 69 less than the total used in the mixed model as some people had more than one measured GFR within a specified time period and there are 3 people who had 2 baseline visits. Error refers to measured GFR minus estimated GFR

Scr, serum creatinine; GFR, glomerular filtration rate. Units for GFR and error are ml/min per 1.73 m^2; IQR, interquartile range, SD, standard deviation, P_{30}, percentage of estimates within 30% of measured GFR

C. CSG

	Baseline	Follow-up (years)				
		1	**2**	**3**	**4**	
Sample Size	360	246	210	125	49	
Scr (mg/dl), mean	1.2	1.4	1.4	1.4	1.5	
Measured GFR, mean	75.3	68.2	67.2	67.5	69.2	
Estimated GFR, mean	77.3	70.5	71.4	70.8	71.7	
Mean Error	-2.0	-2.2	-4.2	-3.2	-2.5	
Median Error	-3.3	-3.7	-3.7	-4.5	-4.1	
Mean Absolute Error	12.9	12.8	10.6	13.0	12.3	
Median Absolute Error	9.2	9.7	8.7	9.6	10.1	
IQR of Error	50.0	48.7	39.4	35.0	31.0	
SD of Error	18.3	18.2	13.4	17.5	16.8	
P_{30} (%)	80.8	80.5	77.6	69.6	77.6	

Numbers here are 6 less than the total used in the mixed model as some people had more than one measured GFR within a specified time period and data from year 5 are not shown due to small sample size (N=2). .

Error refers to measured GFR –estimated GFR. Scr, serum creatinine; GFR, glomerular filtration rate. Units of GFR are ml/min per 1.73 m2 ; IQR, interquartile range, SD, standard deviation, P_{30}, percentage of estimates within 30% of measured GFR

D. DCCT

	Baseline	Follow-up (years)				
		1	**2**	**3**	**4**	**5**
Sample Size	1237	45	132	343	153	118
Scr (mg/dl), mean	0.8	0.7	0.8	0.8	0.8	0.8
Measured GFR, mean	123.9	120.6	124.7	119.8	120.8	123.2
Estimated GFR, mean	117.2	117.5	116.6	114.7	112.1	116.1
Mean Error	6.7	3.1	8.1	5.1	8.6	7.1
Median Error	5.0	0.0	8.4	3.7	7.1	4.9
Mean Absolute Error	16.5	12.7	16.6	15.3	16.0	17.0
Median Absolute Error	12.1	10.7	13.5	11.8	11.7	13.0
IQR of Error	63.0	43.4	54.6	57.9	54.2	57.4
SD of Error	21.8	16.2	19.6	20.2	20.2	22.4
P_{30} (%)	92.2	97.8	96.2	93.6	91.5	91.5

Baseline refers to the first GFR measurement of the study. Since GFR measurements were started midway through the study, these do not correspond to the study baseline. Numbers here are 11 less than the total used in the mixed model as some people had more than one measured GFR within a specified time period (N=1) and data from year 6 are not shown due to small sample size (N=10). Error refers to measured GFR minus estimated GFR

Scr, serum creatinine; GFR, glomerular filtration rate. Units for GFR and error are ml/min per 1.73 m^2; IQR, interquartile range, SD, standard deviation, P_{30}, percentage of estimates within 30% of measured GFR